Labor Protection Regulation and the Privatization Method

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Abstract

We argue that the extent to which the labor force is legally protected impacts not only a country's decision of whether to privatize state-owned enterprises or not as shown by Subramanian and Megginson (2011), but also its choice of whether to privatize through share issues in the public stock exchange or through asset sales to a small group of investors. We advance several arguments suggesting that strong legal protection of labor shapes the costs and benefits of workers, investors, and governments in a way that makes share issue privatizations (SIPs) more likely than asset sale privatizations. We test this hypothesis on a sample of 4,400 privatization transactions, which occurred from 1989 through 2008 in 55 countries. Using various measures of labor protection, and controlling for political, legal, and economic factors, we find that the stronger the legal protection of labor and the more likely that a government uses SIPs. We also argue that the effect of labor protection on the privatization method depends on the extent to which investors are legally protected. Specifically, we test and find evidence in favour of the hypothesis that strong labor protection is not associated with SIPs in institutional environments where investor protection is weak.

1. Introduction

Do labor market institutions and regulations affect countries and businesses' economic decisions and structures, and in turn, their efficiency? This overarching theme has recently drawn the interest of numerous scholars who attempted to examine it through various angles. One strand of the literature examines the effect of employment protection legislation on countries/states' economic performance. In this regard, studies investigated the effect of labor protection regulations on economic performance indicators such as manufacturing production (Besley and Burgess, 2004; Holmes, 1998), productivity (Besley and Burgess, 2004; Autor et al., 2007; Bassanini et al., 2009), innovation (Acharya et al., 2010), and unemployment (Blanchard and Giavazzi, 2003; Botero et al., 2004; MacLeod and Nakavachara, 2007). Another strand of the literature explores the impact of labor protection legislation on corporate decisions and outcomes (e.g., Atanassov and Kim, 2009; Chen et al., 2011; Chen et al., 2011a,b; Cheng, 2011; Chu et al., 2011). Throughout this literature, labor enjoying a strong legal protection is shown to acquire enough power relative to other stakeholders such as investors and managers to be able to impact corporate decisions and outcomes.[1]

In this paper, we focus on another important channel through which labor regulations may affect countries' economic decisions and structures. Specifically, we use a cross-country setting to investigate whether the extent to which labor is legally protected affects the decision to privatize state-owned enterprises (SOEs) through the public stock exchange – share issue privatizations (SIPs) – or the private capital market – asset sales.[2] Recent research shows that legal, political, and economic factors play an important role in a government's choice to divest a SOE through a SIP or an asset sale. In

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[1] For instance, Atanassov and Kim (2009) show that the relative influence of labor vis-à-vis investors affects the nature of the restructuring decisions made by poorly performing firms. In particular, they show that the likelihood of value-reducing asset sales increases as collective bargaining and labor relations' laws grant more power to labor unions, suggesting that these asset sales are countenanced by workers. Empirical evidence also suggests that stronger labor protection results in higher firm cost of equity capital, as Chen et al. (2011*a*) show that the cost of equity is significantly higher for U.S firms operating in more unionized industries and Chu et al. (2011) report that firms operating in countries with more protective labor legislation face a higher cost of equity. Furthermore, Chen et al. (2010), Chen et al. (2011b), and Cheng (2011) document that labor union strength impacts the pricing of corporate debt.

[2] Megginson (2010) provides an overview of the privatization techniques that can be used by governments to sell SOEs, with a special emphasis on SIPs and asset sales. In a SIP, partial or full government ownership of an SOE is transferred to investors through the sale of stock shares in the public stock exchange. In an asset sale, a SOE is sold directly to existing operating companies or investor groups.

particular, Megginson et al. (2004) highlight the importance of the legal protection of minority shareholders and the political orientation of the government to the choice of the privatization method (PM hereafter); SIPs are more likely in legal settings that provide a greater protection to shareholder rights and minority interests, while asset sales are more likely when the government has a political right orientation. Guedhami and Pittman (2011) show that disclosure standards and legal institutions that discipline auditors have an impact on the method selected to privatize a SOE; SIPs are more likely in countries that mandate strict disclosure standards and under jurisdictions that relax the burden of proof in civil lawsuits and criminal prosecutions against auditors.

Surprisingly, however, this literature overlooks the potential impact of country-labor protection legislations on the design of privatization transactions, although, as stressed by Chong et al. (2011), labor restructuring is one of the most difficult and sensitive issues surrounding privatizations. Megginson and Netter (2001) note that labor matters around privatizations are among the most important though least investigated in the literature. In the present paper we attempt to fill this gap in the privatization literature by providing the first evidence that apart from economic, legal, and political factors identified by prior research, a country's labor protection legislation is another factor that significantly affects a government's choice of the PM.[3] The impact of legal labor protection on the choice of the PM is a timely and important topic. States in both developed and developing countries have emerged from the recent financial crisis with important public deficits, but also with greater ownership stakes in national companies. This has revived the argument that many countries will have to embark into a new wave of privatizations to raise the amounts of cash needed to reduce their fiscal deficits. However, crucial to this debate is the willingness of labor forces to adhere to such

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[3] Privatization is an economic policy that has marked the political economy of developed and developing countries alike, over the last three decades. According to Megginson (2010), since 1977, the total proceeds collected by governments around the world from the sale of SOEs to private investors and corporations amount to $2.0 trillion. In designing privatization transactions, and in particular through the choice of the privatization technique, governments seek to achieve economic, social, and political objectives. For instance, through asset sales, governments may attempt to attract foreign direct investments into the country or to ensure that strategic economic sectors remain domestically owned. In choosing SIPs, governments seek rather to develop their public equity markets (Boutchkova and Megginson, 2000; Bortolotti et al., 2007), to enhance retail domestic investors' share ownership (Keloharju et al., 2008), and to benefit employees from the privatization by offering them a share of the offered privatization-shares at discounted prices (Degeorge et al., 2004).

privatization plans and designs, given the dire economic times that most economies are going through.

Privatization research shows that the privatization of a SOE can be a painful event for workers, as it results in layoffs of excess labor (La Porta and Lopez-de-Silanes, 1999; Ramamurti, 1997; D'Souza and Megginson, 1999; Boardman et al., 2002; Sun and Tong, 2003; Okten and Arin, 2006, Chong et al., 2011). Workers based in jurisdictions that grant them a strong legal protection therefore seek to oppose privatizations (Subramanian and Megginson, 2011). Nevertheless, when such privatizations become ineluctable, the labor force may seek to influence the choice of the privatization method by the government. As the institutional and legal environments grant strong protection to labor, the latter acquires enough power relative to the government and to potential investors to be able to dictate its preference for one privatization method or the other. We advance several arguments leading us to expect that strong legal protection of labor is conducive to SIPs rather than to asset sales privatizations.

In particular, we argue that privatization of SOEs is costly to labor, but this cost is lower in SIPs relative to asset sales. We posit that this difference in cost results particularly from the post-privatization governance structure, which is more favorable to workers in SIPs compared to asset sales. Precisely, workers may expect to continue to enjoy more of their pre-privatization benefits in SIPs relative to asset sales since it is more likely that the government retains a significant ownership or control stake in a SIP rather than in an asset sale (Jones et al., 1999; Megginson et al., 2004; Boubakri et al., 2005a; Guedhami and Pittman, 2006; Bortolotti and Faccio, 2009; Boubakri et al., 2011; Guedhami and Pittman, 2011, among others) or that the government continues to run the privatized firm (Boubakri et al., 2008 and Ben-Nasr et al., 2012). Furthermore, workers may prefer a SIP as it results in a diffuse ownership structure (Dyck, 2001), where there is more potential for building labor benefit-enhancing alliances with managers (Pagano and Volpin, 2005; Bertrand and Mullainthan, 2003; Kim and Atanassov, 2009). Legally empowered workers therefore lobby for SIPs, and they are likely to obtain them given the relative costs and benefits of each PM to the government and investors (a more detailed discussion of these costs and benefits follows in Section

2). We also argue that legal protection of investors affects the impact of strong legal protection of labor on the choice of the PM. In countries where investor protection is weak, strong labor protection may not make SIPs more likely than asset sales, as investors are more reluctant to participate in share purchases for fear of being expropriated by controlling shareholders and insiders. In other words, we expect that the positive effect of labor protection on the likelihood of SIPs disappears in settings of weak investor protection. We discuss the incentives of labor, the government, and investors, and the relative costs of each PM to each of these stakeholders in more detail in Section 2. These theoretical discussions lead to testable hypotheses about how the PM is affected by the legal protection of labor and by the interaction between labor protection and investor legal protection.

We test our hypotheses on a sample of 4,400 privatizations, which occurred from 1989 through 2008 in 55 developed and developing countries. Using various measures of legal protection of labor, and controlling for country-level political, legal, and economic factors as well as for transaction-level characteristics, we document that the likelihood of SIPs increases with the extent of labor protection. Specifically, we find that moving from the 10th (Uruguay) to the 90th percentile (Finland) of the employment laws index developed by Botero et al. (2004), increases the likelihood of SIPs by 13.44 percent. Likewise, moving from the 10th (Peru) to the 90th percentile (Morocco) of the Fraser Institute's Labor Market Regulation Index raises the likelihood of SIPs by 5.89 percent. The documented positive association between labor protection and SIPs is robust to a battery of tests. We also find results in favor of our second hypothesis stating that in institutional environments where investor protection is weak, strong labor protection does not lead to the choice of SIPs. This finding suggests that the impact of labor protection on the choice of the privatization method is not independent from the extent to which investors are legally protected.

Our theoretical analysis and empirical evidence on the role of labor regulation in affecting the choice between privatizing a SOE through a SIP and privatizing it in an asset sale contributes to the financial economics literature in two significant ways. First, it adds to recent corporate governance research on the role of labor as an influential

stakeholder. While the role of legal protection of investors in shaping corporate governance has been the focus of much of research in law and finance, it is only recently that the role of labor in such a matter appeared in the literature. [4] Faleye et al. (2006), Atanassov and Kim (2009), Chen et al. (2011), Chu et al. (2011), Bova et al. (2012), and Kim and Ouimet (2010) provide evidence that empowered labor acquires enough influence relative to investors and managers to be able to shape firms' decisions and outcomes.[5] We add to this literature by documenting that strong legal protection of labor empowers workers to the point where they can influence another important economic decision that governments and firms face, namely the choice of privatizing a SOE through a share issue or an asset sale. In doing so, we highlight the importance of labor protection regulation in shaping the workings and structure of a country's capital markets.

Second, we add to the privatization literature by showing that stringent labor protection laws not only deter SOE privatizations as documented by Subramanian and Megginson (2011), but also affect the choice of the privatization technique. By focusing on the privatization method of SOEs, our research intersects, thus, with Dyck and Zingales's (2004), Megginson et al.'s (2004), and Guedhami and Pittman's (2011) evidence that the choice of the privatization method reflects the nature of the legal, political, and institutional environment. We augment their findings with evidence that the choice of the privatization method also depends on a country's labor protection regulation.

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[4] See for instance, La Porta et al. (2000; 2002), Durnev and Kim (2005) and Doidge et al. (2004; 2007), on the role of legal protection of investors in corporate governance. Denis and McConnell (2003) provide a survey of this literature.

[5] Using a sample of poorly performing firms from 41 countries, Atanassov and Kim (2009) document that labor protection laws determine labor's influence relative to investors and managers, which, in turn, affects the restructuring decisions made by these firms. In a U.S. cross-industry analysis, Chen et al. (2011) report a positive effect of unionization on firm cost of equity capital, whereas Chu et al. (2011) use a cross-country setting, and find evidence that firm cost of equity capital increases with the extent of legal protection of labor. Faleye et al. (2006) investigate the effects of labor equity ownership and control on corporate decisions and value in a sample of 226 U.S firms, and report evidence suggesting that publicly traded firms whose employees have a greater voice in corporate governance deviate more from value maximization, spend less on new capital, take fewer risks, grow more slowly, create fewer new jobs, and exhibit lower labor and total factor productivity. Bova et al. (2012) find that more employee stock ownership leads to less corporate risk-taking. Kim and Ouimet (2010) find that employee share ownership plans (ESOP) affect employee compensation and shareholders value, but that this effect depends on the size of the ESOP.

The remainder of the paper is organized as follows. In Section 2, we discuss relevant theoretical issues and develop the hypotheses. Section 3 describes the empirical design, sample construction, and reports descriptive statistics. Section 4 presents empirical results and robustness checks. Section 5 concludes.

2. Related Literature and Hypotheses

2.1. Labor protection and the privatization method

Labor regulations may affect a government's decision to privatize a firm through private or public capital markets for various reasons. While a government seeks to sell a firm in the market where it can get the highest price, other stakeholders such as workers may also have a say in the PM decision. Specifically, a privatizing government is likely to account for employees' preferences in terms of PM when labor enjoys a better legal protection. In a context that provides strong protection to workers, labor bargaining power is high and is likely to influence a government's decisions related to the different aspects of the privatization design, including the PM. On the demand side, labor regulation may also affect investors' willingness to purchase a SOE through asset sales or SIPs. Whether strong labor protection results in more privatizations through asset sales or share issues depends on the interplay between three factors: (1) the costs and benefits of each PM to labor, (2) the costs and benefits of each PM to the privatizing government, and (3) the relative costs of strong labor protection incurred by investors in each PM.

The costs of privatization to labor result from the difference between the post-and-pre-privatization employees' benefits and welfare. Employees of SOEs typically enjoy comfortable working conditions where monitoring is loose (Laffont and Tirole, 1993), salaries are relatively high (Panagarya, 2008) and the threat of dismissal is low (Banerji and Sabot, 1994; Kikeri, 1998; Donahue, 1989; Shleifer and Vishny, 1994). Privatization usually results in adjustments in the cost of labor by investors seeking to improve the efficiency of the acquired firm (Boycko et al., 1996). These adjustments may include the layoff of excess labor (Bhaskar and Khan, 1995; La Porta and Lopez-de-Silanes, 1999; Ramamurti, 1997; D'Souza and Megginson, 1999; Boardman et al., 2002; Sun and Tong, 2003; Okten and Arin, 2006; Chong et al., 2011), salary cuts and/or the increase in the

number of working hours (Shaikh, 1996), and more monitoring. Labor thus uses its bargaining power with the government to reduce to a minimum these costs of privatization. [6]

We argue that there are several reasons that lead to believe that the costs of a SIP to labor are lower than the costs of an asset sale privatization. First, it is more likely that the government retains a significant ownership or control stake in a SIP rather than in an asset sale (Jones et al., 1999; Megginson et al., 2004; Boubakri et al., 2005a; Guedhami and Pittman, 2006; Bortolotti and Faccio, 2009; Boubakri et al., 2011; Guedhami and Pittman, 2011, among others) or that the government continues to run the privatized firm (Boubakri et al., 2008 and Ben-Nasr et al., 2012).[7] This has direct implications for the employees' costs of the privatization. In particular, the employees would expect to continue to enjoy their pre-privatization benefits in the presence of the government as one of the owners. [8] This is likely to be the case especially when the rest of the shareholders are diffuse and none of them holds a significant control stake in the firm to be able to influence the management decisions related to the post-privatization labor cost and conditions (Perotti, 1995). In the presence of a strong bargaining power of labor,

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[6] Bhaskar and Khan (1995) find that privatization has a large negative effect on white-collar workers of 62 Jute mills of which 31 were privatized. La Porta and Lopez-de-Silanes (1999) find that privatized firms in Mexico reduced their labor force by half. Ramamurti (1997) documents a 78.8 percent decline in employment due to the restructuring and privatization of Ferrocarilla Argentinos. D'Souza and Megginson (1999) show that post-privatization employment declines in 64 percent of the firms included in their sample. Boardman et al. (2002) report evidence of decline in post-privatization employment of canadian firms. Sun and Tong (2003) indicate that SOE restructuring resulted in the lay-off of 24 – 25 million workers in China. Okten and Arin (2006) find that a switch from public to private ownership decreases the number of workers employed by cement firms in Turkey by 21 percent. Chong et al. (2011) report that 78 per cent of their sample of privatized firms reduced their labor force over a three-year pre-privatization period. Several other studies show, however, that privatization leads to a post-privatization increase in employment at the privatized firms (Galal et al., 1992; Megginson et al., 1994; Boubakri and Cosset, 1998).

[7] In their sample of 630 SIPs from 59 countries, Jones et al. (1999) report that the entire SOE was sold in only 11.5% of SIPs while a majority of SOE shares was sold in only 28.9% of the SIPS, implying that in most of the cases the SIP results in the government retaining a majority of the ownership shares. In a sample of 1866 privatizations, Guedhami and Pittman (2011) find that the average percentage of ownership stake sold by the government in an asset sale is 79.11 percent (median: 100 percent), while it is only 37.85 percent in a SIP.

[8] Boubakri et al. (2008) find that politically connected firms are more likely to increase employment after privatization than their non-politically counterparts. Gupta (2005) finds results suggesting "that partial privatization [through share issues] does not cause the government to abandon the political objective of maintaining surplus employment". Sun and Tong (2003) report evidence that SIP in China does not lead to massive layoff and instead, it leads to increased employment. Sun and Tong also report results suggesting that post-privatization state ownership has negative consequences for performance of newly privatized Chinese firms through SIP.

the government – owner may side with workers to reduce the costs of post-privatization adjustments sought by investors.

Second, the workers may prefer a SIP as it results in a diffuse ownership structure that gives them more room for negotiation on their post-privatization working conditions. According to Dyck (2001, p. 77), "Share-issue privatizations are more likely to introduce firms without an initial controlling shareholder". In such governance structure, the control over firm resources is within the hands of managers whose interest is not necessarily aligned with that of atomistic shareholders (Jensen and Meckling, 1976). Specifically, if managers place a great value on control and own only a small equity stake they can have an incentive to build an alliance with workers, by paying them high wages and not monitoring them strictly (Pagano and Volpin, 2005), or by their reluctance to trim an unproductive workforce (Bertrand and Mullainathan, 2003). [9] For a manager with a low equity stake, this is a better way to motivate employees as most of the cost of the wage bill is borne by other shareholders, while that of monitoring is borne entirely by the manager himself. This is not the case when the firm is acquired by private investors who hold a large equity stake, and bear most of the costs of high wages and low monitoring. They will therefore cut wages and step up monitoring upon acquisition of the firm. Workers who expect such behavior from post-privatization managers will lobby in favor of a SIP as it benefits them. Their lobbying is more likely to succeed in a context of strong labor protection. [10]

The above arguments support the view that a government facing strong labor protection may succumb to labor's preference and become more inclined towards SIPs.

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[9] Pagano and Volpin (2005) examine the possible alliance between managers and workers against takeover threats. Their model shows that managers can transform employees into a "shark repellent" through long-term labor contracts and thereby reduce the firm's attractiveness to raiders.

[10] Moreover, SIPs are likely to result in equity ownership by the employees, for instance, through the creation of employee share ownership schemes by governments seeking labor support for their privatization programs. An employee share ownership scheme endows employees with voting rights and strengthens their bargaining power in future wage negotiations. When employees accumulate a large share of the control rights, they will become able to elect representatives to the board of directors to defend their interests. With sufficient voting power detained by employees, managers may also choose to side with labor, whenever there is a conflict of interest between shareholders and employees (Pagano and Volpin, 2005; Kim and Ouimet, 2008; Atanassov and Kim, 2009). However, employee share ownership is not common when privatizations occur through private asset sales. Potential benefits associated with the possibility to hold ownership rights are therefore missed by employees in case a firm is privatized through private asset sale. Employees will prefer a privatization through share issuance, and lobby for it. Their preference is likely to be accounted for by the privatizing government in a context of strong labor protection.

However, looking at the demand side mitigates this view since small investors facing a strong labor protection may be reluctant to participate in a SIP because they face a high likelihood that the firm's resources can be expropriated by labor or due to possible collusion between labor and management. The price that they are willing to pay to purchase the shares of a firm privatized through the public market will account for the costs of strong labor protection (Subramanian and Megginson, 2011). In the end, the government that chooses to accommodate workers' preferences for SIP will have to sacrifice some revenues to be able to accomplish the privatization in the public market. [11] The government may be willing to sacrifice more privatization value if it faces a high political cost due to a possible deadlock with labor on the PM. This cost is expected to grow with labor protection.

The above paragraph discusses the potential costs that small shareholders purchasing the shares of a privatized firm in a public offer may suffer in the presence of strong labor protection. Yet, large shareholders who purchase a privatized firm through a private sale also face costs due to strong labor protection, though of a different kind. For large shareholders, concentrated ownership is a source of private benefits (e.g., La Porta et al., 1997; Dyck and Zingales, 2004). These private benefits of control may be reduced in the presence of strong labor protection since employees and unions have a strong bargaining power. For instance, strong workers and unions may ask for more transparency by managers and investors, which reduces the private benefits of control. This can deter private buyers from acquiring a privatized SOE especially when they are placing great value on the private benefits of control. Moreover, concentrated ownership is a source of greater costs to large shareholders who bear a large fraction of the total cost associated with the difficult task of laying-off excess labor and reducing wages when labor protection is strong. Large shareholders may therefore be more reluctant to invest in a private sale of a SOE compared to small shareholders investing in a SIP and bearing only a small share of the total costs due to strong labor protection.

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[11] Prior research shows that privatization IPOs are underpriced. Dewenter and Malatesta (1997) have reported that SIPs are, at least in some countries, more underpriced than private sector IPOs. Ljungqvist et al. (2003) report that privatization IPOs are systematically more underpriced than are private-sector IPOs. Jones et al. (1999) find that the mean (median) level of underpricing is 34% (12%) for initial share-issue privatizations and 9% (3%) for seasoned ones, whereas Keloharju et al. (2008) report that the average underpricing of share-issue privatization IPOs is 14.2%.

The arguments discussed above lead us to conjecture that, in a context of strong labor protection, not only workers and governments may be more inclined towards SIP (the supply side of the privatization), but also investors may be more willing to participate in a SIP rather than in a private sale of an SOE (the demand side). Based on the above arguments, our first hypothesis expressed in the alternative form is stated as follows:

H1: Strong labor protection regulation is more likely to lead governments to privatize SOEs through SIPs rather than private sales of assets.

2.2. Labor Protection, Investor Protection, and the PM

In the previous sub-section, we have discussed several reasons that may lead workers to prefer a SIP rather than an asset sale privatization. Further, we have advanced that the final choice of the PM also depends on the preferences of investors who are expected to participate in a SIP, namely small investors. Whereas governments may themselves prefer SIPs, which can involve large numbers of domestic investors and foster the development of their capital markets (Mc Lindon, 1996; Subramanyam and Titman, 1999; Boutchkova and Megginson, 2000; Megginson et al., 2004), the participation of small investors in SIPs depends on whether they feel protected against potential expropriation by controlling shareholders (insiders/block holders).[12]

Corporate governance research has shown that the legal environment plays an important role in minimizing the incentives and capabilities of controlling shareholders to exploit their positions to divert corporate resources (e.g., Dyck and Zingales, 2004). Where the legal and regulatory environments provide strong investor protection against expropriation, controlling shareholders are less capable of tunneling corporate resources to their own benefit. However, in institutional settings characterized by weak corporate governance and investor protection, small investors can be preys of controlling

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[12] The literature on corporate governance around the world shows that the major agency conflict is the one between minority shareholders and dominant controlling shareholders; the latter can use their power to extract private benefits from the firm at the expense of other shareholders (Shleifer and Vishny, 1997; LaPorta et al., 2002). This agency conflict between small – outside – investors on the one hand and corporate insiders and controlling shareholders on the other hand may be particularly severe surrounding privatization operations (Coffee, 1999; Denis and McConnell, 2003; Boubakri et al., 2005a,b). Dyck (2001, p. 59) notes that corporate governance research suggests that privatization transactions:"…have allowed profits to be diverted to the grabbing hands of insiders in privatized firms".

shareholders, as the latter can reap most of the benefits of equity ownership. In such settings, small investors may be reluctant to participate in SIPs as they anticipate that controlling shareholders have strong incentives to exploit their control to extract corporate resources. This may force the government to privatize a SOE through an asset sale rather than an issue of shares in the public stock exchange. Dyck (2001, p. 77) reports evidence on the "…tendency of governments to use asset sales rather than share issues in privatization programs when formal governance chains are weak. Asset sales are usually associated with the sale of a majority stake to a single or to a consortium of investors that have been approved under some prequalification screening process…Among countries with relatively weak formal protections, very few countries use share issues for a large proportion of privatizations." Consistent with this point of view, Megginson et al. (2004) show that a strong legal tradition and good protection of minority shareholders increases the likelihood that the government chooses to privatize a SOE through a SIP. Dyck and Zingales (2004) find evidence that in countries where shareholders can extract large private benefits of control – measured by the premium paid in control transactions –, governments resort more to asset sales relative to share issues when divesting SOEs, suggesting that the choice of the privatization method is contingent upon the extent to which minority shareholders are protected.

It follows that in countries with weak investor protection, strong labor protection may not lead the government to divest SOEs through SIPs. We therefore expect a mitigating effect of weak investor protection on the expected positive relation between strong labor protection and the likelihood of SIPs. This translates into the following hypothesis:

H2: In institutional environments of weak legal protection of investors, strong legal protection of labor does not lead to share-issue privatizations.

3. Data and descriptive statistics

3.1. The sample

To construct our international sample of privatization transactions, we used the World Bank privatization database, which covers developing countries. We complement

it with the Privatization Barometer database, which focuses on developed countries and transition economies. For each privatization transaction, these databases provide, among others, information on the date, country of origin, industry, total transaction value, and whether the privatization was achieved through the public (SIP) or the private market (asset sale). The list of privatizations that we obtain is then merged with Botero et al.'s, (2004) labor database and with the Fraser Institute's labor market regulation index (Area 5B). Our initial sample contains 5,814 privatization transactions, which occurred between 1989 and 2008. We, then, exclude observations from countries without (i) political data from the World Bank's Database of Political Institutions (DPI) and (ii) institutional data from the International Country Risk Guide (ICRG). We end-up with a final sample of 4,400 privatizations from 55 countries. Table 1 defines the variables used in our empirical analysis as well as their sources.

[Insert Table 1 about here]

Table 2 presents summary statistics for the privatization transactions included in our sample. Consistent with previous studies on the methods of privatization (e.g., Megginson et al., 2004, and Guedhami and Pittman, 2001), we find that asset sales are more frequent than SIPs. Among the 4,400 privatization transactions included in our sample, 1,191 (27.07%) are SIPs and 3,209 (72.93%) are asset sales. Of the $1,461.5 billion raised by our sample governments through privatizations of SOEs over our sample period, $652.5 billion were raised through SIPs and $809.01 billion were raised through asset sales in the private capital market. A privatization transaction generates an average (median) revenue to the government of $328.48 ($31.80 million). Analyzing the size of privatization transactions across PMs shows that the average and median amounts of SIP offers are greater than the average and median amounts of asset sales' offers. In particular, the average (median) size of a SIP offering is more than twice as large as the average (median) size of an asset sale. The average (median) offer size amounts to $542.71 million ($62 million) in a SIP, while it is only of $248.96 million ($26.07 million).

[Insert Table 2 about here]

In Table 3, we provide descriptive statistics on the privatization transactions, across the two PMs, by year (panel A), geographical region (panel B), and legal origin (panel C). Panel A shows that most of the privatizations took place in the nineties – 1990 to 1999. Privatization transactions during this period, which Megginson (2010) calls "privatization's Golden Era", account for 63.19% of all privatizations included in our sample. Panel A also shows that, whether in the nineties or after the turn of the new century, asset sales are more frequent than SIPs; the former account for 72.93% of the privatizations recorded during the whole sample period. This is also consistent with Megginson's (2010; p.8) observation that "Taken as a whole…global trends seem to favor asset sales as the privatization method of choice for most governments". Panel B presents the distribution of the privatization transactions, classified by privatization method, by geographical region. Europe and Central Asia is the most active region in terms of privatization transactions (57.45%), followed by Latin America and the Caribbean region with 14.77% of the transactions. The third region in terms of the number of privatizations is East and South Asia and the Pacific region (14.45%), and the last region is Africa and the Middle East with just 13.32% of the transactions. The sample privatization transactions are thus spread all over the geographical regions, characterized by different levels of labor protection as well as diverse legal and political environments. Panel C reports the distribution of the privatization transactions by legal origin. It shows that the majority of privatizations occur in civil law countries (83.68%). The importance of the public sector (SOEs) in countries with a civil law tradition compared with common law origin countries (La Porta et al., 1999) may explain such difference in the privatization activity.

[Insert Table 3 about here]

3.2. Labor Variables

To test our two hypotheses stating that legal protection of labor affects the choice of the PM, we use two main variables to proxy for the strength of protection provided to labor in a given country. The first variable is the Employment Laws Index (EMPLOY) calculated by Botero et al. (2004). This index measures the protection of labor based on the availability of alternative employment contracts, the cost of increasing hours

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worked, the cost of firing workers, and dismissal procedures. This time invariant index varies from 0 to 1, with higher values indicating stronger employment protection. The second measure of labor protection that we use in our analysis is the Fraser Institute's Labor Market Regulation Index (LMR), which is a time variant index that comprises information on 17 labor market regulations, such as minimum wages, unemployment benefits, collective bargaining power, etc. For the sake of consistency with Botero et al.'s, (2004) index, we subtract the original index from 10. The resulting index ranges from 0 to 10, with higher scores indicating stronger employment protection.

[Insert Table 4 about here]

Table 4 reports descriptive statistics for the full sample. The average EMPLOY is 0.52 (median: 0.52), while the minimum is 0.16 and the maximum is 0.83. Table 5 provides descriptive statistics by country. It shows a wide cross-country variation in EMPLOY with the minimum observed in Jamaica (0.16) and the maximum in Russia (0.83). In Table 4, LMR appears with a mean of 5.07 (median: 5.30), and a variation between a minimum of 1.52 and a maximum of 7.30. Table 5 shows that Nigeria is the country with the lowest sample period average LMR (1.90), while Germany has the largest sample period average LMR (6.60).[13] Based on this index, Germany has the greatest protection of labor, while Nigeria has the lowest one. In our robustness tests, we also use another labor protection variable – COLLECTIVE –, built by Botero et al. (2004), which measures the protection of collective relations laws as the average of (*i*) labor union power and (*ii*) collective disputes.

[Insert Table 5 about here]

3.3. Legal and Political Variables

The literature on the PM highlights the importance of a country's legal and political factors in the choice between privatizing a SOE in the public or the private capital market (e.g., Megginson et al., 2004; Dyck and Zingales, 2004; and Guedhami and

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[13] Prior to 2000, Fraser Institute's Labor Market Regulation Index is available for a five year period. We, therefore, use the simple average of 1985 index and 1990 index for the years 1986 through 1989, the simple average of 1990 index and 1995 index for the years 1991 through 1994, and the simple average of 1995 index and 2000 index for the years 1996 through 1999.

Pittman, 2011). Consistent with this literature, we control for the legal environment – degree of investor protection and disclosure standards –, in our regression analysis, using three variables. First, we control for the country's legal origin using a dummy variable that takes on one for common law countries and zero otherwise – COMMON. This variable is collected from La Porta et al., 1998, who show that English common law countries have the strongest legal protection of investors. Such legal protection is expected to enhance small investors' incentives to participate in a SIP (Megginson et al., 2004; Guedhami and Pittman, 2011) since the risk of expropriation by controlling owners is reduced.[14] Second, we use the law and order index of ICRG (LAW&ORDER), which assesses the strength and impartiality of the legal system, as well as the popular observance of the law. A high score of this index indicates that a country enjoys an effective system where law enforcement is strong. The third variable that we use is a proxy for disclosure standards from La Porta et al. (2006), namely the disclosure requirements index (DISCREQ), which measures a country's quality of disclosure by securities' issuers; a higher score of DISCREQ is associated with a higher disclosure quality. We expect a positive effect of each of these variables on the likelihood of SIPs, as better protected investors should be more willing to invest in a privatization shares offered on a stock exchange.

We also control for the potential effect of a country's political environment on the PM, as the privatization literature emphasizes the role of politics in the privatization decision (Dinc and Gupta, 2011; Subramanian and Megginson, 2011) and design (e.g., Bortolotti et al., 2003; Megginson et al., 2004; Bortolotti and Faccio, 2009). In particular, it is widely documented that the political orientation of the government – left versus right – impacts the choice of the PM. Moreover, Botero et al. (2004) show that labor regulations are more protective of workers when leftist governments are in power. Thus, our empirical design needs to control for the government's political orientation to ensure

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[14] Bortolotti et al. (2003) also show that a country's legal institutions matter to the privatization process. Their empirical analysis shows that the transfer of ownership is more limited– hence the privatization is more partial – in civil-law countries compared to common-law countries. They interpret this finding as evidence that, where law affords weak protection to shareholders, governments are more reluctant to relinquish control, and privatization remains partial. In the same vein, Bortolotti et al. (2002) find that more privatization shares are sold abroad if investor protection in the home market is poor, suggesting that a country's legal environment is important for the privatization process.

that any labor protection – PM association that we may find is not capturing the simultaneous effect of such government political orientation on labor protection regulation and the PM. Besides the economic orientation of its government, a country's political stability may also affect investors' willingness to bid for large equity stakes of privatized firms. A stable political system guarantees better property and contract rights (Clague et al., 1996), which enhances investors' willingness to commit substantial investments in privatized firms.

We use two measures to capture a country's political environment: LEFT and GOVSTAB. LEFT is a dummy variable that takes on one when a country's government has a leftist orientation and zero otherwise. We retrieve this variable from the Database of Political Institutions (DPI) compiled by the Development Research Group of the World Bank. GOVSTAB is an index that we retrieve from the International Country Risk Guide (ICRG) database. This index is an assessment both of the government's ability to carry out its declared programs, such as privatizations, and its ability to stay in office. It is the sum of scores attributed to three subcomponents, which are government unity, legislative strength, and popular support. The index ranges from zero to twelve, with higher scores indicating greater political stability – lower political risk.

3.4 Other Control Variables

Apart from political and legal factors, we also control for other country and firm factors shown by prior research to impact the choice of the PM. First, we control for a country's level of economic development using the natural logarithm of GDP per capita (LNGDPC). A country's level of economic development may affect the PM in two alternative ways (Megginson et al., 2004). In low income countries, citizens lack the necessary wealth to invest in the shares of companies privatized through the stock exchange, which makes SIPs less likely. Alternatively, low income countries may decide to privatize more through share issues to spur the development of their equity markets.

Second, we use the stock market turnover ratio (TURNOVER) as a control for a country's stock market development. TURNOVER is measured as the ratio of the value

of total shares traded to average real market capitalization, and it is an indicator of the activity or liquidity of a stock market relative to its size (Beck et al., 2000). A greater ratio indicates a more developed financial market. The privatization literature identifies two alternative ways in which the level of stock market development may affect a government's privatization method. On the one hand, countries where the stock market is less developed may be more prone to use SIPs to promote widespread direct shareholding among their citizens, and in turn, foster the development of liquid domestic capital markets (e.g., Perotti and Oijen, 2001; Subrahmanyam and Titman, 1999). On the other hand, the cost of a SIP to the privatizing government – due to greater underpricing of offered shares – may be higher in less developed stock markets suffering from a greater amount of information asymmetry (Dewenter and Malatesta, 1997). This is likely to induce the privatizing government to opt for asset sales to maximize sale proceeds.

Following prior privatization research, we also control for the timing of the privatization transaction (Boubakri et al., 2005a,b; Guedhami and Pittman, 2011) by including a dummy variable (LATE) equal to one if the privatization transaction took place after the sample period median year (1998), and zero otherwise. Later privatizations are thought to suffer from less information asymmetry, which enables small investors to participate in the offers through public stock exchanges. Based on the findings of Megginson et al. (2004) and Guedhami and Pittman (2011) that larger privatization stakes are more likely to be offered through SIPs, we include the natural logarithm of the size of the privatization transaction as a control variable (SIZE). Finally, we control for the possibility that a government's willingness to use one privatization technique or the other may depend on the firm's industry affiliation, by using industry dummy variables.

[Insert Table 6 about here]

Table 6 reports Pearson correlation coefficients between the variables used in the regression analysis. Statistically significant correlation coefficients at the 1% level are shown in bold. Consistent with our predictions, our two labor protection variables – EMPLOY and LMR – are positively correlated with SIP; the coefficient estimates are

statistically significantly different from zero at the 1% level. Moreover, the correlation coefficients among our explanatory variables are generally low, implying that multi-collinearity is not a major concern for our analysis.

4. Empirical Evidence

In this section, we report the key results of the paper. We begin by documenting the empirical association between the labor protection measures and the PM. We then check the robustness of our results. Finally, we turn to the empirical analysis of the impact of the legal environment on the relation between labor protection and the PM.

4.1. Labor Protection and the Privatization Method

To test the relation between labor protection and a government's choice to privatize a SOE through a SIP or through an asset sale, we specify a logit model, where the probability of a SIP is a function of labor protection variables and control variables. We estimate numerous specifications of the following model:

$$
\begin{aligned}
SIP_i^c = {} & \beta_0 + \beta_1 LABOR^c + \beta_2 LEGAL^c + \beta_3 POLITICAL^c + \beta_4 ECONFIN^c \\
& + \beta_5 FIRM_i + \sum_{j=1}^{J-1} \alpha_j IND_i + \varepsilon_i^c,
\end{aligned}
\tag{1}
$$

where for each firm i in country c, SIP equals one if the firm is privatized through a share issue and zero if through an asset sale; LABOR is a measure of legal protection of labor; LEGAL is a measure of legal protection of investors; POLITICAL is a set of political environment measures; ECONFIN is a set of economic and financial development indicators; FIRM is a set of the privatized firm characteristics; IND is a set of industry dummies; and ε is an error term.

In table 7, we report the results of logistic regressions that explain the choice of the PM from 1989 through 2008. We estimate the regressions with robust standard errors, clustered by firm, but our results remain robust to clustering by country, industry, and year. Columns 1 through 5 present results of our estimations based on EMPLOY as a labor protection variable, whereas columns 6 through 10 show results of estimations when we use LMR as a labor protection measure. Overall, our empirical results are

strongly in favor of our hypothesized relation between labor protection regulation and the PM. Specifically, we find strong evidence supporting our argument that strong labor protection is more likely to lead a privatizing government to choose the public stock exchange rather than the private capital market to transfer its stake to private investors. In the basic regression specification (columns (1) and (6)), where we do not include the legal institutional variables, the coefficient estimate on the labor protection variable is positive and statistically significant at the 1% level, suggesting that labor plays a substatial role not only in a government's decision of whether to privatize or not (Subramanian and Megginson, 2011), but also in its selection of the privatization technique. As much as economic magnitude is concerned, our estimations suggest that, moving from the 10th (Uruguay) to the 90th percentile (Finland) of EMPLOY increases the liklehood of privatizing through a share issue by 13.44%. Similarly, moving from the 10th (Peru) to the 90th percentile (Morocco) of LMR increases the liklehood of a SIP by 5.89%.

[Insert Table 7 about here]

In regressions (2) – (4) and (7) – (9), we augement our regression equation with legal controls included separately to avoid multicollinearity. Crucially, the coefficient estimates on the two labor protection variables continue to be positive and statistically significant at the 1% level in the presence of controls for the legal protection of investors. Consistent with prior literature (e.g., Dyck and Zingales, 2004; Guedhami and Pittman, 2011) and our expectations, COMMON loads positive and statistically significant. Importantly, this does not prevent the labor variables' coefficients from remaining positive and significant, suggesting that our labor variables are not capturing a country's legal origin, but rather the extent of labor protection. Likewise, including other proxies of investor protection in regressions (2), (3), (8), and (9) does not affect the initially reported relation between labor protection and the likelihood of SIPs; the coefficient estimates on the labor variables continue to be positive and statistically significant at the 1% level. The results on DISCREQ are consistent with our expectations that the likelihoof of using SIPs would increase in the degree of a country's disclosure requirements. LAW&ORDER, however, fails to load significantly. Interestingly, in the

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horse-race regressions (5) and (10), which include the three legal controls together, EMPLOY and LMR continue to be positive and significant at the 1% level.

Turning to the political environment controls, the results are strongly supportive of the argument that political institutions have an impact on the government's choice of the PM. In particular, we find strong evidence that SIPs are more likely to occur under left-wing governments, consistent with the idea that investors' willingness to make substantial investments required in asset sales decrease with a government's tendency to control over economic activity (i.e., a left-oriented government). The coefficient estimate on LEFT is constantly positive and statistically significant at the 1% level across all the model specifications. Furthermore, we find evidence that a greater government stability is conducive to less SIPs, in line with the argument that investors are more willing to commit significant amounts of their wealth in asset sale privatizations when the country enjoys a greater political stability; the coefficient estimate on GOVSTAB is always negative, and in most of the specifications significant at least at the 5% level.

For the variables controlling for a country's economic and financial development, the results suggest a strong and robust impact on the choice of the PM. In particular, we find that our measures of economic – LNGDPC – and financial – TURNOVER – development appear almost always with negative and signficant coefficients (except in model 9). This result is consistent with the argument that low income countries may opt more for SIPs to foster the development of their financial markets, and in turn, their economic performance.

Finally, larger SOEs have a greater probability of being privatized through the public stock exchange, as the coefficient estimate on SIZE is constantly positive and significant at the 1% level, confirming Megginson et al. (2004) and Guedhami and Pittman (2011)'s findings. Late privatizations are less likely to be privatized through SIPs; the coefficient estimate on LATE is negative and significant at the 1% level. As regards the fit of our regression models, the Pseudo R^2 ranges from 8.6% to 14.6%, which is comparable to prior studies on privatization methods (Megginson et al., 2004; Dyck and Zingales, 2004; and Guedhami and Pittman, 2011).

4.2. Robustness Tests

Consistent with our arguments developed in Section 2.1, the evidence in Section 4.1 suggests that better legal protection of labor leads to more privatizations through public stock exchanges rather than through asset sales. We now turn to checking whether our results are robust to alternative measures of labor protection and legal and political institutional environment, as well as to addressing concerns about correlated omitted variables, endogeneity, and sample composition. In sum, the robustness tests that we conduct – some of which are reported in Table 8 – confirm our previous findings that more labor protection is more likely to result in privatizations through share issues. Throughout this Section, our interpretations will be focused on whether the documented relation between our labor protection variables and the PM is sensitive to any changes in the variables and/or methodology adopted in the previous Section.

4.2.1. Alternative/additional measures of labor protection, legal, political, and economic environment

Botero et al. (2004) suggest another measure of a country's labor protection, which encompasses laws on the protection of collective relations. This measure, which varies between zero and one, is calculated as the average of (*i*) labor union power and (*ii*) collective disputes; greater values indicate an environment where labor has a stronger power. We use this measure – COLLECTIVE – as an alternative proxy for the level of labor protection, and re-run the five regressions reported in Table 7. We do not report the results for the sake of parsimony. In all the regressions, COLLECTIVE appears with a positive and statistically significant coefficient estimate at the 1% level, suggesting that greater protection of employees' union-and-collective action rights leads to a greater likelihood of privatizing SOEs through public stock markets. Our results, thus, indicate that the documented effect of labor protection on the likelihood of SIPs is not sensitive to the labor protection measure. We also use other proxies for labor regulation from Aleksynska and Schindler (2011). Specifically, we use the ratio of minimum wage to mean wage (MW_MNW) and the advance notice period after 20 years, in months (EPL_AN20Y) as alternative labor protection measures. We re-run the five regressions reported in Table 7 using MW_MNW and EPL_AN20Y as alternative proxies for labor protection. The unreported results show that MW_MNW as EPL_AN20Y appear with

positive and significant at the 1% level coefficient estimates, across all regressions, corroborating our earlier findings.[15]

We also test the robustness of our results to alternative measures of legal protection of investors. In model (1) of Table 8, we add to the basic model of Table 7 a proxy for the quality of accounting standards, as measured by the CIFAR index. According to Dyck and Zingales (2004) firms in countries with better accounting standards have lower private benefits of control, which should enhance small investors' willingness to participate in SIPs. Our results indicate that, as expected, the likelihood of SIPs increases with the value of the CIFAR index. More crucially for our analysis, our labor protection variables continue to load positive and significant at the 1% level. In unreported tests, we also use Djankov et al.'s (2008) recently developed measure of legal protection of minority shareholders against expropriation by corporate insiders as an alternative measure of legal protection of investors: the anti-self-dealing index (ANTISELF). This index ranges from 0 to 1, with greater values implying a better legal protection of minority shareholders.[16] Again, adding this alternative measure of legal protection to the basic models (1) and (6) of Table 7 does not alter our labor protection – likelihood of SIP relation; both EMPLOY and LMR continue to appear with positive and significant coefficients at the 1% level. ANTISELF is positively and significantly related to SIP at the 1% level in Models (1) and (6), respectively.

Besides the political environment controls that we use in Table 7, one could also argue that the nature of a country's political governance may affect both the degre of labor protection and privatization decisions and design. In particular, it is reasonable to argue that more autocratic political regimes are more prone to subjugate the labor force by limiting its rights, which reduces the extent of labor protection. At the same time, more autocratic regimes may have less incentives to privatize SOEs through share issues, as more participation in the public stock exchange can result in further demand

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[15] Our results are also robust to the use of the advance notice period after 9 months and the advance notice period after 4 years from Aleksynska and Schindler (2011).

[16] Djankov et al., 2008, calculated the anti-self-dealing index for 72 countries based on legal rules prevailing in 2003. The index focuses on private enforcement mechanisms, such as disclosure, approval, and litigation that govern a specific self-dealing transaction. These authors argue that this index is a better proxy of the legal protection of investors than the previously introduced index of anti-director rights.

for legal reforms aimed at engancing transparency and investor protecion.[17] If this is the case, then our positive relation between labor protection variables and SIPs may be just a spurious correlation due to an omitted control for this common factor – the nature of the political regime. Based on this suspicion, we add to the basic models ((1) and (6)) reported in Table 7 a measure of autocracy (AUTOCRACY) retrieved from Marshall and Jaggers (2012). A greater value of AUTOCRACY indicates a more autocratic political regime in the country. In column (2) of Table 8, we report results of regression estimations that include AUTOCRACY. Consistent with our argument, AUTOCRACY loads negative in both specifications, and significant at the 1% level for the LMR regression. However, this affects neither the sign nor the significance of the coefficient estimates of our labor protection variables.[18]

The fiscal situation is another factor that may affect a government's privatization decision and design. Bortolotti et al. (2004) show that countries encumbered by high public debt are more likely to privatize SOEs. One could argue that a country's fiscal situation also affects the choice of the PM, as heavily indebted governments may choose to privatize large SOEs through the public stock market. In column (3) of Table 8, we report results of regressions where we include the ratio of central government debt to GDP (GOVDEBT) as a control for a country's public debt. Consistent with this argument, GOVDEBT appears with a positive and significant coefficient estimate. Importantly, including this additional control does not affect the labor protection – SIP association; EMPLOY and LMR continue to be positively and significantly associated with SIPs.

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[17] Autocratic political regimes are generally characterized by their tendency towards favoritism, nepotism, and clientelism. Thus, these regimes are more likely to privatize SOEs through asset sales to close groups, such as family members of the autocrats, friends, and other groups that will provide future support.

[18] In unreported results, we also use the extent of institutionalized constraints on the decision-making power of chief executives (EXCONST) obtained from Marshall and Jaggers (2012) as a proxy for a country's political regime. A high degree of constraints imposed on the executive is likely to be a source of additional empowerment for the labor force. It is also likely to lead the government to retain a larger fraction of the privatized firm (Boubakri et al., 2011), and to privatize through share issues rather than asset sales. The omission of this country-common factor may also lead to finding a positive, but spurious correlation between labor protection variables and SIPs. Yet, our labor protection – SIPs relation is still positive and significant at the 1% level in the presence of EXCONST, implying that our previous results are not due to the omission of this potentially correlated variable.

While our regression analysis presented in Table 7 controls for a country's level of economic development using the natural logarithm of the GDP per capita, our results could still be only a spurious correlation which reflects an omitted variable bias due to the failure to control for country-wide economic factors that are correlated with both labor protection regulations and SIPs. In particular, the privatization empirical literature (Megginson et al., 2004; Guedhami and Pittman, 2011) shows that greater income inequality – measured by the GINI coefficient – leads to less SIPs, corroborating thus Biais and Perotti's (2002) conjecture that greater inequality makes SIPs difficult since the government has to suffer more underpricing to meet the low investment capabilities of the median investor. Our concern is that labor may be less protected in countries with greater income inequality. An omitted income inequality measure which is correlated in the same direction with SIPs and labor protection may result in a spurious correlation between labor protection and SIPs. We check the sensitivity of our previously documented relation between labor protection and SIPs to the addition of the GINI coefficient as a measure of a country's degre of income inequality. As shown in column (4), our labor protection variables continue to load positive and highly significant, indicating that we are not capturing a spurious correlation due to the omission of an income inequality control. In step with prior privatization research, the GINI coefficient estimate is negative and significant at the 1% level.[19]

In addition to the above controls, we also control for a country's openness to trade. Subramanian and Megginson (2011) note that "since trade liberalization in a country may result in job losses, governments may enact stringent EPL (employment protection laws) following trade liberalization" (p. 18). Moreover, trade liberalization may coincide with other structural reforms such privatization and/or plans to strengthen public equity markets by the sale of SOE shares. Thus, omitting the impact of trade reforms may create some suspicion that the effect of labor protection on SIPs is endogenous. To control for this potential source of endogeneity, we include the ratio of the country's total exports and imports over GDP (OPENNESS) and currency exchange rate to the $US (EXCHANGE RATE) in our regression equations. The results are reported in column (5) of Table 8, and show that the coefficents for EMPLOY and LMR remain positive and

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[19] A greater GINI coefficient indicates a greater income inequality in the country.

significant at the 1% level, suggesting that our earlier results are not dirven by trade reforms. We also find a positive and significant coefficient at the 1% level for OPENNESS in the EMPLOY regression, suggesting that countries with more liberalized trade are more likely to privatize through SIP.

Moroever, the role of the state in the econmoy affects the design of privatization programs (Subramanian and Megginson, 2011; Guedhami and Pittman, 2011). We use the government share of GDP (GOV SHARE OF GDP) from Penn World Tables to control for the state involvement in the economy. The results, reported in Model (6) of Table 8, show a negative and significant coefficient at the 1% level for GOV SHARE OF GDP, suggesting that governments that are more involved in production are less likely to privatize through SIPs. More importantly for our purposes, we still find a positive coeffcient for EMPLOY and LMR at the 1% level. Finally, we control for GDP growth. Economic growth may affect labor regulations (Saint-Paul, 2002). We include GDP Growth from World Bank Development Indicators as an additional control. The results, reported in column (7) of Table 8, show that coefficients for EMPLOY and LMR are positive and highly significant, suggesting that our earlier findings are not driven by GDP growth. We also find a negative and significant coeffcient of GDP growth at the 5% level in the LMR regression, suggesting that governments are less likely to privatize through SIPs during higher growth periods.

4.2.2. Sample Composition

Our results reported in Tables 7 and 8 suggest that larger privatization offers are more likely to be made through share issues; we find a strong positive association between SIZE and the likelihood of SIPs. We are thus concerned that our results may be driven by the presence of very large transactions in our sample. In fact, large transactions are a source of concern to our analysis for two reasons: (i) our results may be due to a mechanical association between large transactions and SIPs, and (ii) besides their positive association with SIPs, large transactions may also be positively associated with our labor protection variables.[20] To check whether our results are due to the

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[20] Large transactions usually reflect previous heavy government involvement in economic activities. In such countries, it is also likely that labor protection is strong.

presence of large privatization transactions, we exclude such transactions from the sample – above $1 billion. Results of regressions based on a sample that discards large transactions are reported in column (8). They suggest that the documented positive association between labor protection and SIPs is not driven by large transaction privatizations; the coefficient estimates on our labor variables continue to be positive and significant at the 1% level. As a further check of whether our results are driven by the size of the privatization transaction, we discard privatizations of telecom and utilities companies, as these have the largest asset values.[21] Our results reported in column (9) show that the labor protection variables continue to be positively and significantly associated with SIPs, providing us assurance that the presence of telecom and utilities companies is not behind our initially reported labor protection –privatization method association.

4.2.3. Endogeneity and Selection Bias

One potential concern is that labor regulations variables may not be exogenous. In fact, labor regulations may be determined by unobserved variables that also affect the decision to privatize through SIPs, and this can lead to biased and inconsistent estimates. We address this issue using an instrumental variable approach. Following Botero et al. (2004) and Chu et al. (2011), we use legal origin as an instrument for EMPLOY and LMR. Legal origins are considered to be exogenous as they reflect countries' historical developments such as colonization. Botero et al. (2004) show that countries with French or other civil law systems have more rigid labor regulations than countries with English common law systems. We use legal origin as an instrument for both EMPLOY and LMR. Specifically, we use a dummy variable, which is equal to one (1) for firms from French civil law countries, and zero (0) otherwise. We re-estimate Models (1) and (6) of Table 7, using the two-stage least squares regression technique. In the first-stage regression, we predict LABOR using the country's legal origin as well as the other independent variables used in each model. Consistent with Botero et al's (2004) finding, our results – unreported for the sake of space – show a positive and significant coefficient at the 1% level for the French civil law dummy. In the second-stage regression, we use the first-

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[21] The mean (median) of a Telecom privatization offer is $5.52 billion ($6.11 billion), whereas the mean (median) of a Utilities offer equals $4.38 billion ($4.48 billion).

stage fitted values of LABOR as explanatory variables to estimate the PM logit model. The unreported results show a positive and significant coefficents at the 1% level for EMPLOY and LMR, supporting our earlier findings.

Selection bias can also be suspected to drive our results. This concern is based on the idea that, in order to make privatizations attractive, a government may divest the healthiest and easiest firms first (Megginson and Netter, 2001). Also, a government may be reluctant to relinquish control in large firms and/or in economically and politically strategic sectors (Boubakri et al., 2005b; Bortolotti and Faccio, 2009). The PM might also be affected by this selection bias (Guedhami and Pittman, 2011). To limit this potential bias in our analysis, our regressions include various variables that can capture the unobserved factors that determine the PM – size, industry affiliation, and the timing of privatization. Additonally, in an unreported analysis, we control for government control relinquishement that may also capture some unobserved factors that affect the privatization design. Specifically, we include a dummy variable equal to one (1) if the government relinquishes control (*i.e.,* sells more than 50% of the shares) in the privatized firm and zero (0) otherwise.[22] The results show that the coefficients for EMPLOY and LMR are still positive and significant at the 1% level, corroborating our earlier findings.[23]

4.3. Labor Protection, Legal Protection, and the Privatization Method

In section 2.2, we put forth arguments that led us to hypothesize that, in weak investor protection institutional environments, strong labor protection does not make SIPs more likely than asset sales (H2). In particular, we argued than under weak investor protection, small investors – who typically participate in SIPs – may be reluctant to bid for the shares of privatized SOEs, for fear of being expropriated by controlling shareholders. The risk premium that they might require from the privatizing government would increase the cost of a SIP – due to greater underpricing –, and subsequently lead to the choice of the private capital market to achieve the privatization transaction. To test this hypothesis, we split the sample into two sub-samples: HIGH and

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[22] The introduction of CONTROL reduced our sample size. This is due to the fact that the share sold is not available in the last version of the World Bank Privatization Database.

[23] Our results are also robust to the introduction of an alternative proxy for control relinquishment i.e., a dummy variable equal to one (1) if the share sold is equal to 100% (full privatization) and zero (0), otherwise (partial privatization).

LOW. HIGH is the sub-sample that includes countries where our investor protection measures – LAW&ORDER and DISCREQ – are higher than the median value of the full sample, and LOW is the sub-sample that comprises countries where the values of these measures are below the full sample median. According to our hypothesis (H2), there should be no significant impact of our labor protection variables on the likelihood of SIPs in the LOW sub-sample. In other words, the probability of a SIP does not increase with labor protection in environments of low investor protetcion.

For each sub-sample, we re-run the basic regressions reported previously in columns (1) and (6) of Table 7, and report the results in Table 9. In short, the results are supportive of our hypothesis relating the effect of labor on the privatization method to the institutional investor protection setting. In high investor protection environments – HIGH –, whether investor protection is measures by LAW&ORDER or DISCREQ, strong labor protection continues lo lead to a greater probability of privatizing SOEs through share issues. Specifically, the effect of labor on the likelihood of SIPs continues to be positive and significant at least at the 5% level for both labor protection measures – EMPLOY and LMR. However, this effect disappears in the LOW sub-sample, indicating that, in low investor protection environments, the strength of labor protection does not lead to the choice of share issues as a privatization channel; whether we use LAW&ORDER or DISCREQ as a measure of investor protection, the effect of our labor protection variables on the likelihood is indistinguishable from zero.

It is also worth noticing that apart from a few exceptions, most of the control variables continue to load with the same signs and statistical significance as in Tablel 7, implying that country-wide political and economic factors as well as firm-controls play a substantial role in the privatization method decision in both low and high investor protecion environments. The overall fit of the model – Pseudo R^2 – also increases compared to the basic model in Table 7, for both HIGH and LOW sub-samples. This suggests that our model fits better the data when we split the sample according to the extent of investor protection.

In an unreported analysis, we also use the legal origin – COMMON – to split the sample into sub-samples of high and low investor protection countries. In this analysis,

our labor protection variables appear indistinguishable from zero in both sub-samples. When combined with the evidence obtained from the analysis made across LAW&ORDER and DISCREQ, this result suggests that investors value the enacted laws and regulations rather than a country's legal origin.

5. Conclusion

This paper studies the role of labor protection regulations in the choice made by governments to privatize SOEs through share issues on public stock exchanges (SIPs) or through the sale of assets to a small group of investors. Subramanian and Megginson (2011) report evidence that stringent employment protection laws significantly deter privatization. We argue that besides the decision of whether to privatize SOEs or not, labor protection laws and regulations can also affect the privatization design, especially the choice of the privatization technique. In other words, apart from the political, legal, and economic factors identified by Megginson et al. (2004), Dyck and Zingales (2004), and Guedhami and Pittman (2011) a country's labor-related factors are likely to impact the choice of the PM. In particular, we argue that, in institutional settings where labor enjoys a strong legal protection, the costs and benefits faced by workers, investors, and privatizing governments are more likely to result in SIPs. Our empirical results lend support to this argument. Specifically, we document strong evidence of a positive impact of different labor protection measures on the likelihood of SIPs. This effect is robust to a battery of sensitivity checks. This result suggests that workers are an important stakeholder whose interests and preferences are accounted for by privatizing governments.

We also hypothesize that the effect of labor protection on the choice of the privatization method depends on the extent of investor legal protection. Specifically, we argue that in low investor protection environments, strong legal protection of labor is not likely to lead to SIPs, as small investors, who typically participate in bidding for privatization shares, fear expropriation by post-privatization controlling shareholders. Our empirical results indicate that while the previously documented positive effect of labor protection on the likelihood of SIPs continues to show out in settings of strong

investor protection, it, however, disappears in settings where investor protection provided to investors is weak.

These results suggest that strong legal protection increases the use of SIPs, and hence helps in achieving one of the objectives of privatization, namely the development of local equity markets. This positive impact of strong legal protection of labor on SIPS is however conditional on the extent of legal investor protection. It follows that governments willing to exploit this positive side of labor protection regulations need to enhance their legislations in a way that provides a better legal protection of investors.

References

Aleksynska M. and M. Schindler, 2011, Labor Market Regulations in Low-, Middle- and High-income Countries: A New Panel Database, Working Paper No. 11/154, IMF, Washington, D.C.

Acharya, V.V., R.P. Baghai, and K.V. Subramanian, 2010, Labor laws and innovation, NBER Working Paper No. 16484.

Atanassov, J., and E.H. Kim, 2009, Labor laws and corporate governance: International evidence from restructuring decisions, Journal of Finance, 64, 341 -374.

Autor, D.H., W.R. Kerr, and A.D. Kugler, 2007, Does employment protection reduce productivity? Evidence from U.S. states, The Economic Journal, 117, 189-217.

Banerji, A., and R.H. Sabot, 1994, Wage distortions, overmanning, and reform in developing country public enterprises, World Bank, Washington, D.C.

Bassanini, A., L. Nunziata, and D. Venn, 2009, Job protection legislation and productivity growth in OECD countries, Economic Policy 24, 351-402.

Beck, T., A. Demirgüç-Kunt, and R. Levine, 2000. A new database on financial development and structure. World Bank Economic Review 14, 597–605.

Bertrand, M., and S. Mullainathan, 2003, Enjoying the quiet life? Corporate governance and managerial preferences, Journal of Political Economy 111, 1043–1075.

Besley, T. and R. Burgess, 2004, Can labor regulation hinder economic performance? Evidence from India, The Quarterly Journal of Economics 119, 91-134.

Ben-Nasr, H., N. Boubakri, and J.C. Cosset. 2012. The political determinants of the cost of equity: Evidence from newly privatized firms, Journal of Accounting Research 50, 605-646.

Bhaskar, V., and M. Khan, 1995, Privatization and Employment: A Study of the Jute Industry in Bangladesh, American Economic Review 85, 267 - 273.

Biais, B., and E. Perotti, 2002, Machiavellian Privatization, American Economic Review, 92, 240-258.

Blanchard, O., and F. Giavazzi, 2003, Macroeconomic effects of regulation and deregulation in goods and labor markets, Quarterly Journal of Economics, 118, 879-907.

Boardman, A.E., C. Laurin, and A.R. Vining, 2002, Privatization in Canada: Operating and Stock Price Performance with International Comparisons, Canadian Journal of Administrative Sciences 19, 137 – 154.

Bortolotti B, de Jong F, Nicodano G, Schindle I. 2007. Privatization and stock market liquidity. Journal of Banking and Finance 31, 297-316.

Bortolotti, B.,and M. Faccio. 2009. Government control of privatized firms. Review of Financial Studies 22 (8): 2907-2939.

Bortolotti, B., M. Fantini, and C. Scarpa, 2002. Why do governments privatize abroad? International Review of Finance 3, 131–161.

Bortolotti, B., M. Fantini, and D. Siniscalco, 2003, Privatisation around the world: Evidence from panel data, Journal of Public Economics 88, 305–332.

Botero, J., S. Djankov, R. La Porta, F. Lopez-De-Silanes, and A. Shleifer, 2004, The Regulation of labor, Quarterly Journal of Economics, 119 (4), 1339-1382.

Boubakri, N., and J.C. Cosset, 1998, The financial and operating performance of newly privatized firms: Evidence from developing countries, The Journal of Finance 53, 1081-1110.

Boubakri, N., J.C. Cosset, and O. Guedhami, 2005a, Post-privatization corporate governance: The role of ownership structure and investor protection, Journal of Financial Economics 76, 369-399.

Boubakri, N., J.C. Cosset, and O. Guedhami, 2005b, Liberalization, corporate governance and the performance of privatized firms in developing countries, Journal of Corporate Finance 11, 767- 790.

Boubakri, N., J.C. Cosset, and W. Saffar, 2008, Political connections of newly privatized firms, Journal of Corporate Finance 14, 654-673.

Boubakri, N., J.C. Cosset, O. Guedhami, and W. Saffar, 2011, The political economy of residual ownership in privatized firms: Evidence from emerging markets, Journal of Corporate Finance 17, 244-258.

Boutchkova, M.K., and W.L. Megginson, 2000, Privatization and the rise of global capital markets, Financial Management 29, 31-76.

Bova, F., Kolev, K., Thomas, J., and F. Zhang, 2012, Non-executive employee ownership and corporate risk-taking, Yale School of Management Working Paper.

Boycko, M., A., Shleifer, and R.W. Vishny, 1996, A Theory of Privatization, The Economic Journal 106, 309-319.

Chen, H.J. M. Kacperczyk, and H. Ortiz-Molina, 2011a, Labor unions, operating flexibility, and the cost of equity, Journal of Financial and Quantitative Analysis 46, 25-58.

Chen, H.J. M. Kacperczyk, and H. Ortiz-Molina, 2011b, Do nonfinancial stakeholders affect the pricing of risky debt? Evidence from Unionized workers, Review of Finance, 1-37.

Chen, T.K., Chen, Y.S., and H.H. Liao, 2011. Labor unions, bargaining power and corporate bond yield spreads: Structural credit model perspectives, Journal of Banking and Finance 35, 2084-2098.

Cheng, L., 2011, Organized labor and debt contracting: firm level evidence from collective bargaining, The Ohio State University, Fisher College of Business Working Paper.

Chong, A., J. Guillen, and F. López-de-Silanes, 2011, Privatization and labor policies, Journal of Public Economics 95, 1119-1130.

Chu, T., I.M. Haw, and X. Zhang, 2011, Conflict of interest between labor and controlling shareholders: International evidence from the cost of equity capital, working paper, Texas Christian University.

Coffee, J.C., 1999, Privatization and corporate governance: the lessons from securities market failure, Journal of Corporate Law 25, 1-39.

Clague, C., P. Keefer, S. Knack, and M. Olson, 1996, Property and contract rights in autocracies and democracies, Journal of Economic Growth 1, 243-276.

Degeorge F, Jenter D, Moel A, and P. Tufano. 2004. Selling company shares to reluctant employees: France Telecom's experience. Journal of Financial Economics 71, 169-202.

Djankov, S., R. La Porta, F. Lopez-de-Silanes, and A. Shleifer, 2008, The law and economics of self-dealing, Journal of Financial Economics 88, 430-465.

D'Souza, J. and W.L. Megginson, 1999, The Financial and Operating Performance of Privatized Firms during the 1990s, The Journal of Finance 54, No. 4, 1397-1438.

D'Souza, J., W.L. Megginson, and R. Nash., 2005, Effect of institutional and firm-specific characteristics on post-privatization performance: Evidence from developed countries, Journal of Corporate Finance 11, 747-766.

Denis, D.K., and J.J. McConnell, 2003, International corporate governance, Journal of Financial and Quantitative Analysis 38, 1–36.

Dewenter, K, and P. Malatesta, 1997, Public offerings of state-owned and privately-owned enterprises: an international comparison, Journal of Finance 52, 1659–1679.

Dinc, S., and N. Gupta, 2011, The decision to privatize: Finance and Politics, The Journal of Finance 66, 241-269.

Doidge, C., G.A. Karolyi, and R.M. Stulz, 2004, Why are foreign firms listed in the U.S. worth more? Journal of Financial Economics 71, 205–238.

Doidge, C., G.A. Karolyi, and R.M. Stulz, 2007, Why do countries matter so much for corporate governance? Journal of Financial Economics 86, 1–39.

Donahue, J.D., 1989, The Privatization Decision: Public Ends, Private Means, New York: Basic Books, Harper Collins.

Durnev, A., and E.H. Kim, 2005, To steal or not to steal: Firm attributes, legal environment, and valuation, The Journal of Finance 60, 1461–1494.

Dyck, A., 2001, Privatization and corporate governance: principles, evidence, and future challenges, The World Bank Research Observer 16, 59–84.

Dyck, A., and L. Zingales, 2004, Private benefits of control: An international comparison, The Journal of Finance 59, 537 – 600.

Faleye, O., V. Mehrotra, and R. Morck, 2006, When labor has a voice in corporate Governance, Journal of Financial and Quantitative Analysis 41, 489-510.

Galal, A., L. Jones, P. Tandon, and I. Vogelsang, 1992, Welfare Consequences of Selling Public Enterprises, World Bank, Washington, D.C. (World Bank Book).

Guedhami, O., and J.A. Pittman, 2006, Ownership concentration in privatized firms: The role of disclosure standards, auditor choice, and auditing infrastructure, Journal of Accounting Research 44, 889-929.

Guedhami, O., and J.A. Pittman, 2011, The choice between private and public capital markets: The importance of disclosure standards and auditor discipline to countries divesting state-owned enterprises, Journal of Accounting and Public Policy 30, 395-430.

Gupta, N., 2005, Partial Privatization and firm performance, The Journal of Finance 60, 987-1015.

Haw, I., T. Chu, and X. Zhang., 2011, Conflict of interest between labor and controlling shareholders: International evidence from the cost of equity capital, working paper, Texas Christian University.

Holmes, T.J, 1998, The effect of state policies on the location of manufacturing: Evidence from state borders, Journal of Political Economy 106, 667-705.

Huyghebaert, N., and Q. Quan, 2009, Share issuing privatizations in China: Sequencing and its effects on public share allocation and underpricing, Journal of Comparative Economics 37, 306–320.

Jensen and Meckling, 1996

Jones, S.L., W.L. Megginson, R.C. Nash, and J.M., Netter, 1999. Share issue privatizations as financial means to political and economic ends, Journal of Financial Economics 53, 217–253.

Keloharju, M., Knupfer, S., and S. Torstila, 2008, Do Retail Incentives Work in Privatizations? Review of Financial Studies 21, 2061-2095.

Kikeri, S., 1998, Privatization and Labor: What Happens to Workers When Governments Divest? World Bank Technical Paper No. 396.

Kim, E.H., and P. Ouimet, 2008, Employee Capitalism or Corporate Socialism? Broad-Based Employee Stock Ownership, AFA 2010 Atlanta Meetings Paper.

Laffont, J.C., and J. Tirole, 1993, A theory of incentives in procurement and regulation, MIT Press, Cambridge, MA.

La Porta, R., and F. Lopez-de-Salines, 1999, The Benefits of Privatization: Evidence from Mexico, Quarterly Journal of Economics 114, 1193 – 1242.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny, 1997, Legal determinants of external finance, Journal of Finance 51, 1131-1150.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny, Law and Finance, Journal of Political Economy 106, 1113-1150.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny, 1999, Corporate ownership around the world, The Journal of Finance 53, 471-517.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny, 2000, Investor protection and corporate governance, Journal of Financial Economics 58, 3–27.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R.W. Vishny, 2002, Investor protection and corporate valuation, The Journal of Finance 57, 1147-1170.

La Porta, R., F., Lopez-de-Silanes, and A., Shleifer, 2006. What works in securities laws? Journal of Finance 61, 1-33.

Ljungqvist, A. P., T. Jenkinson, and W. J. Wilhelm, Jr. 2003, Global integration in primary equity markets: The role of U.S. banks and U.S. investors, Review of Financial Studies 16, 63-99.

MacLeod W.B. and V. Nakavachara, 2007, Can Wrongful Discharge Law Enhance Employment?,The Economic Journal, 117, 218-278.

McLindon, M., 1996, Privatization and Capital Market Development: Strategies to Promote Economic Growth, Praeger Publishers, Westport, CT.

Marshall, M., and K. Jaggers, 2012. Polity IV project: political regime characteristics and transitions, 1800–2010. Center for Global Policy, School of Public Policy, George Mason University.

Megginson, W.L., 2010, Privatization and Finance, Annual Review of Financial Economics 2, 145-174.

Megginson, W.L., R.C. Nash, J.M. Netter, and A.B. Poulsen, 2004, The choice of private versus public capital markets: Evidence from Privatizations, Journal of Finance 59, 2835 - 2870.

Megginson, W.L., R.C. Nash, and M. Van Randddenborgh, 1994, The financial and operating performance of newly privatized firms: An international empirical analysis, Journal of Finance 49, 403 - 452.

Megginson, W., and J. Netter. 2001. From state to market: a survey of empirical studies on privatization. Journal of Economic Literature 39, 321–389.

Okten, C., and P. Arin, 2006, The effects of privatization on efficiency: How does privatization work? World Development 34, 1537-1556.

Omran, M., 2009, Post-privatization corporate governance and firm performance: The role of private ownership concentration, identity and board composition, Journal of comparative Economics 37, 658 - 673.

Pagano, M., and P.F. Volpin, 2005, Managers, workers, and corporate control, The Journal of Finance 60, 841 - 868.

Panagariya, A., 2008, India: An Emerging giant (Oxford University Press, New York).

Perotti, E., 1995, Credible privatization, American Economic Review 85 (4), 847-859.

Ramamurti, R., 1997, Testing the limits of privatization: Argentine railroads, World Development 25, 1973 - 1993.

Perotti, E., and P. Van Oijen, 2001, Privatization, stock market development, and political risk, Journal of International Money and Finance 20, 43-69.

Saint-Paul, G., 2002, The Political Economy of Employment Protection, The Journal of Political Economy 110, 672-704.

Shleifer and Vishny, Politicians and Firms, 1994, The Quarterly Journal of Economics 109, 995-1025.

Shleifer and Vishny, 1997, A Survey of Corporate Governance, Journal of Finance 52, 775-783.

Shaikh, H., 1996, Argentina privatization program: A review of five cases, World Bank, Private Sector Development Department, Washington, D.C.

Shleifer, A., and R. Vishny, 1997, A survey of corporate governance, Journal of Finance 52, 737-783.

Subramanian, K., and W. Megginson, 2011, Employment Protection Laws and Privatization, Working Paper available at: http://ssrn.com/abstract=1748454.

Subrahmanyam, A., and S. Titman, 1999, The going public decision and the development of financial markets, Journal of Finance 54, 1045-1082.

Sun, Q., and W.H.S. Tong, 2003, China share issue privatization: the extent of its success, Journal of Financial Economics 70, 183- 222.

Table 1

Variables: Descriptions and Sources

Variable	Description	Source
EMPLOY	Measures the protection of labor and employment laws as the average of (1) Alternative employment contracts, (2) Cost of increasing hours worked, (3) Cost of firing workers, and (4) Dismissal procedures. It is a time invariant measure that varies between 0 and 1, with greater values indicating stronger labor protection.	Botero et al. (2004)
LMR	Fraser Institute's Labor Market Regulation Index. It is a time variant index that covers labor regulations, such as minimum wages, hiring and firing practices, the share of the labor force whose wages are set by centralized collective bargaining, and unemployment benefits system. To facilitate interpretation and be consistent with other institutional variables, we reverse the order of Fraser Institute's Index by subtracting each value from 10. Higher values of LMR indicate more protective labor regulations.	Fraser Institute
LEFT	A dummy variable equal to one (1) for left-oriented governments, and zero (0) otherwise.	Database of Political Institutions
GOVSTAB	The International Country Risk Guide (ICRG) Government Stability Index. The index ranges from 0 to 12, with higher values indicating greater government stability.	ICRG
SIZE	The logarithm of the amount of the privatization offer in millions of U.S. $	Authors' calculation
LATE	A dummy variable equal to 1 if the firm's privatization year is lower than the median privatization year (1998), and 0 otherwise.	Authors' calculation
LNGDPC	The logarithm of GDP per capita.	World Development Indicators
TURNOVER	The ratio of the value of traded shares over market capitalization.	World Development Indicators
COMMON	A dummy variable equal to one for firms from English common law countries, and 0 otherwise.	Botero et al. (2004)
LAW&ORDER	The ICRG Law and Order Index. The index ranges from 0 to 6, with higher values indicating stronger law and order.	ICRG
DISCREQ	Disclosure requirements index.	La Porta et al. (2006)

TABLE 2

Summary Statistics for Privatizations Transactions

	Full sample	SIPs	Assets Sales
Number of Privatizations	4,400	1,191	3,209
Average (median) amount of offering	328.48	542.71	248.96
in US $ million	(31.80)	(62.00)	(26.07)
Total value of all offerings (US $ million)	1,461,498.67	652,488.01	809,010.66

Notes: This table reports some descriptive statistics for a sample of 4,400 privatization transactions, which took place between 1989 and 2008, in 55 countries. In particular, we report the number of transactions, the average and median value of a privatization transaction, and the total value of all offerings across the two privatization methods – SIPs and asset sales. Privatization transactions' characteristics are collected from the World Bank privatization database and the Privatization Barometer database.

TABLE 3

Sample Description

Panel A: By Year							Panel B: By Region						
Year	SIP=1	%	SIP=0	%	Full	%	Region (countries)	SIP=1	%	SIP=0	%	Full	%
1989	34	0.77%	15	0.34%	49	1.11%	Africa and the Middle East (10)	179	4.07%	407	9.25%	586	13.32%
1990	31	0.70%	21	0.48%	52	1.18%	East and South Asia and the Pacific (7)	206	4.68%	430	9.77%	636	14.45%
1991	60	1.36%	91	2.07%	151	3.43%	Latin America and the Caribbean (12)	109	2.48%	541	12.30%	650	14.77%
1992	64	1.45%	151	3.43%	215	4.89%	Europe and Central Asia (26)	697	15.84%	1831	41.61%	2528	57.45%
1993	79	1.80%	146	3.32%	225	5.11%	Total (55)	1191	27.07%	3209	72.93%	4400	100.00%
1994	85	1.93%	241	5.48%	326	7.41%	**Panel C: By Legal Origin**	SIP=1	%	SIP=0	%	Full	%
1995	154	3.50%	272	6.18%	426	9.68%	Civil law (42)	933	21.20%	2749	62.48%	3682	83.68%
1996	101	2.30%	216	4.91%	317	7.20%	Common Law (13)	258	5.86%	460	10.45%	718	16.32%
1997	128	2.91%	316	7.18%	444	10.09%	Total (55)	1191	27.07%	3209	72.93%	4400	100.00%
1998	127	2.89%	218	4.95%	345	7.84%							
1999	65	1.48%	215	4.89%	280	6.36%							
2000	30	0.68%	180	4.09%	210	4.77%							
2001	25	0.57%	161	3.66%	186	4.23%							
2002	16	0.36%	99	2.25%	115	2.61%							
2003	26	0.59%	114	2.59%	140	3.18%							
2004	41	0.93%	149	3.39%	190	4.32%							
2005	50	1.14%	161	3.66%	211	4.80%							
2006	49	1.11%	159	3.61%	208	4.73%							
2007	15	0.34%	149	3.39%	164	3.73%							
2008	11	0.25%	135	3.07%	146	3.32%							
Total	1191	27.07%	3209	72.93%	4400	100.00%							

Notes; This table reports the distribution of privatization transactions by privatization method for the different years, regions, and country law origins. The full sample includes 4,400 privatization transactions that occurred between 1989 and 2008, in 55 countries.

TABLE 4

Descriptive Statistics

Variable	Mean	Median	Stdev	Min	Max
EMPLOY	0.52	0.52	0.17	0.16	0.83
LMR	5.07	5.30	1.24	1.52	7.30
LEFT	0.41	0.00	0.49	0.00	1.00
GOVSTAB	8.07	8.00	1.93	1.83	12.00
SIZE	3.35	3.46	2.52	-7.93	10.00
LATE	0.50	0.00	0.50	0.00	1.00
LNGDPC	8.30	8.31	1.31	5.31	11.04
TURNOVER	64.41	46.97	54.61	0.00	328.62
COMMON	0.16	0.00	0.37	0.00	1.00
LAW&ORDER	4.39	4.50	1.26	0.00	6.00
DISCREQ	0.55	0.50	0.20	0.00	0.92

Notes: This table presents descriptive statistics for the regression variables used in our multivariate analysis to examine the impact of labor regulations on the choice of the privatization method for a sample of 4,400 privatization transactions that occurred between 1989 and 2008 in 55 countries. Descriptions and sources of these variables are provided in Table 1.

TABLE 5

Descriptive Statistics by Country

Country	N	EMPLOY	LMR	LEFT	GOVSTAB	SIZE	LATE	LNGDPC	TURNOVER	COMMON	LAW&ORDER	DISCREQ
Argentina	63	0.34	5.68	0.00	7.45	3.75	0.17	8.89	31.34	0.00	4.44	0.50
Austria	58	0.50	5.19	0.64	8.41	4.44	0.48	10.22	46.53	0.00	6.00	0.25
Belgium	22	0.51	4.72	0.00	7.62	5.23	0.55	10.31	31.48	0.00	5.41	0.42
Bolivia	49	0.37	5.30	0.00	8.08	-0.41	0.10	6.84	1.55	0.00	3.00	NA
Brazil	177	0.57	5.33	0.78	7.88	5.03	0.49	8.34	61.96	0.00	2.60	0.25
Bulgaria	92	0.52	4.67	0.00	9.35	2.04	0.87	7.52	9.69	0.00	3.93	NA
Chile	26	0.47	4.86	0.00	8.62	3.92	0.58	8.48	10.47	0.00	4.82	0.58
China	311	0.43	5.55	1.00	9.99	4.29	0.62	6.98	147.84	0.00	4.65	NA
Colombia	29	0.34	5.37	0.00	6.63	4.96	0.55	7.99	12.16	0.00	1.57	0.42
Czech Republic	92	0.52	NA	0.64	7.48	3.70	0.75	8.87	51.16	0.00	5.25	NA
Denmark	14	0.57	3.95	0.36	8.04	4.90	0.71	10.63	80.61	0.00	6.00	0.58
Ecuador	14	0.40	6.37	1.00	6.09	1.39	0.21	7.59	5.13	0.00	3.68	0.00
Egypt	152	0.37	5.75	0.00	8.91	3.28	0.60	7.14	34.76	0.00	3.92	0.50
Finland	73	0.74	5.96	0.41	8.80	4.65	0.56	10.20	77.26	0.00	6.00	0.50
France	114	0.74	5.20	0.35	8.07	5.59	0.61	10.25	82.14	0.00	5.26	0.75
Germany	183	0.70	6.60	0.25	7.66	4.12	0.43	10.21	112.13	0.00	5.61	0.42
Ghana	58	0.29	3.72	0.00	8.43	-0.01	0.14	5.93	3.43	1.00	2.96	NA
Greece	58	0.52	6.21	0.71	8.84	4.87	0.74	9.55	56.79	0.00	3.81	0.33
Hungary	197	0.38	4.14	0.80	7.48	3.34	0.34	8.51	46.29	0.00	5.26	NA
India	139	0.44	3.44	0.69	6.72	3.47	0.52	6.15	91.16	1.00	3.48	0.92
Indonesia	27	0.68	5.04	0.00	8.12	5.26	0.74	6.96	42.37	0.00	2.94	0.50
Ireland	15	0.34	3.46	0.00	9.45	5.32	0.87	10.37	54.26	1.00	6.00	0.67
Italy	141	0.65	5.52	0.12	7.26	5.22	0.62	10.04	85.70	0.00	4.99	0.67
Jamaica	16	0.16	3.48	1.00	7.82	2.07	0.31	7.82	7.56	1.00	2.58	NA
Jordan	16	0.70	2.53	0.00	10.18	3.62	0.88	7.72	37.79	0.00	4.06	0.67

Kazakhstan	8	0.78	2.91	0.00	11.03	4.47	1.00	7.48	6.29	0.00	4.00	NA
Kenya	38	0.37	2.37	0.00	6.97	0.88	0.24	6.01	5.13	1.00	3.36	0.50
Latvia	24	0.72	5.01	0.00	8.48	3.40	1.00	8.19	19.64	0.00	4.41	NA
Lithuania	36	0.62	5.49	0.00	8.49	2.66	1.00	8.25	17.94	0.00	4.00	NA
Malaysia	25	0.19	2.56	0.00	9.39	5.26	0.24	8.24	38.65	1.00	3.90	0.92
Mexico	71	0.59	5.28	0.89	7.04	3.09	0.27	8.42	40.09	0.00	2.88	0.58
Morocco	79	0.26	6.48	0.00	9.27	2.45	0.32	7.17	23.00	0.00	5.49	NA
Netherlands	43	0.73	5.17	0.56	8.47	5.73	0.63	10.24	106.33	0.00	6.00	0.50
Nigeria	136	0.19	1.90	0.00	7.10	1.93	0.63	6.21	8.68	1.00	1.91	0.67
Panama	12	0.62	4.10	0.00	7.96	4.27	0.58	8.27	3.51	0.00	2.96	NA
Peru	137	0.46	3.23	0.00	7.33	1.92	0.20	7.64	31.82	0.00	2.80	0.33
Philippines	48	0.48	3.66	0.00	7.73	2.26	0.31	7.02	27.97	0.00	3.42	0.83
Poland	447	0.64	5.51	0.66	7.98	2.26	0.51	8.34	76.51	0.00	4.98	NA
Portugal	89	0.81	6.10	0.39	7.87	4.51	0.38	9.28	48.08	0.00	5.15	0.42
Romania	52	0.33	4.06	0.29	8.34	3.84	0.69	7.89	30.24	0.00	4.39	NA
Russia	75	0.83	5.50	0.00	10.26	4.59	0.72	8.34	38.88	0.00	3.75	NA
Slovakia	126	0.66	NA	0.71	6.29	2.35	0.31	8.59	65.14	0.00	5.41	NA
South Africa	22	0.32	4.42	0.91	8.88	3.57	0.73	8.05	33.79	1.00	2.14	0.83
Spain	95	0.74	5.94	0.51	8.08	4.46	0.51	9.68	129.38	0.00	4.87	0.50
Sri Lanka	77	0.47	4.06	0.68	7.45	1.25	0.23	6.60	13.73	1.00	2.98	0.75
Sweden	74	0.74	6.01	0.66	8.09	4.26	0.66	10.34	90.86	0.00	6.00	0.58
Thailand	23	0.41	5.21	0.00	8.36	5.05	0.52	7.70	79.61	1.00	4.43	0.92
Tunisia	65	0.82	3.61	1.00	10.55	0.88	0.83	7.78	16.01	0.00	4.87	NA
Turkey	232	0.40	5.42	0.04	7.81	2.34	0.40	8.24	127.73	0.00	3.96	0.50
Uganda	6	0.35	2.49	0.00	9.13	2.32	1.00	5.62	2.31	1.00	4.00	NA
Ukraine	19	0.66	5.15	0.00	7.49	2.85	1.00	7.05	9.25	0.00	4.00	NA
United Kingdom	149	0.28	2.91	0.22	6.96	3.93	0.22	9.99	57.95	1.00	5.83	0.83
Uruguay	3	0.28	2.84	0.33	7.99	2.90	0.67	8.54	2.69	0.00	2.67	0.00

Venezuela	39	0.65	6.02	0.00	8.37	1.92	0.51	8.17	16.80	0.00	4.00	0.17
Zimbabwe	14	0.25	5.33	0.00	7.96	2.59	0.57	6.53	20.51	1.00	2.93	0.50

Notes: This table reports averages by country of labor (EMPLOY and LMR), political (LEFT and GOVSTAB), legal (COMMON, LAW&ORDER, and DISCREQ), economic (LNGDPC and TURNOVER) and firm-level (LATE and SIZE) variables used in the multivariate analysis of the labor protection – privatization method relation. The full sample includes 4,400 privatization transactions that occurred between 1989 and 2008 in 55 countries. Descriptions and data sources for these variables are provided in Table 1.

TABLE 6
Pearson Correlation Matrix

Variable	SIP	LMR	EMPLOY	LEFT	GOVSTAB	SIZE	LATE	LNGDPC	TURNOVER	COMMON	LAW&ORDER
LMR	**0.04**										
EMPLOY	**0.06**	**0.51**									
LEFT	**0.08**	**0.07**	**0.15**								
GOVSTAB	**-0.12**	0.02	**0.06**	**0.20**							
SIZE	**0.13**	0.02	**0.16**	**0.06**	**0.11**						
LATE	**-0.14**	**-0.19**	**0.12**	**0.12**	**0.57**	**0.21**					
LNGDPC	-0.03	**0.17**	**0.50**	0.03	0.01	**0.34**	**0.16**				
TURNOVER	**-0.07**	**0.25**	**0.17**	**0.15**	**0.14**	**0.21**	0.09	**0.19**			
COMMON	**0.09**	**-0.60**	**-0.53**	**-0.10**	**-0.15**	**-0.11**	-0.08	**-0.34**	**-0.20**		
LAW&ORDER	-0.01	**0.31**	**0.33**	**0.10**	0.04	**0.12**	**-0.13**	**0.54**	**0.31**	**-0.28**	
DISCREQ	**0.14**	**-0.50**	**-0.28**	-0.04	**-0.10**	-0.01	0.01	**-0.17**	0.03	**0.67**	**0.08**

Notes: This table presents Pearson pairwise correlation coefficients between the regression variables. The full sample includes 4,400 privatization transactions that occurred between 1989 and 2008 in 55 countries. Bold face indicates statistical significance at the 1% level. Descriptions and data sources for these variables are provided in Table 1.

TABLE 7
Labor Protection and the Privatization Method

Variable	Panel A: LABOR= EMPLOY					Panel B: LABOR= LMR				
	Basic	COMMON	LAW&ORDER	DISCREQ	ALL	Basic	COMMON	LAW&ORDER	DISCREQ	ALL
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
LABOR	1.582	2.492	1.587	1.850	1.688	0.095	0.255	0.091	0.404	0.319
	(5.561)***	(7.517)***	(5.590)***	(4.728)***	(3.618)***	(2.663)***	(4.986)***	(2.519)***	(6.626)***	(4.089)***
LEFT	0.531	0.533	0.533	0.593	0.610	0.431	0.426	0.432	0.600	0.677
	(6.434)***	(6.476)***	(6.439)***	(5.133)***	(5.119)***	(4.875)***	(4.820)***	(4.879)***	(5.453)***	(5.945)***
GOVSTAB	-0.101	-0.079	-0.099	-0.045	-0.044	-0.061	-0.051	-0.068	-0.023	-0.029
	(-4.531)***	(-3.488)***	(-4.363)***	(-1.454)*	(-1.323)*	(-2.307)**	(-1.910)**	(-2.564)***	(-0.697)	(-0.856)
LNGDPC	-0.257	-0.221	-0.248	-0.461	-0.447	-0.120	-0.089	-0.156	-0.421	-0.485
	(-6.889)***	(-6.301)***	(-5.503)***	(-10.081)***	(-7.507)***	(-3.311)***	(-2.553)**	(-3.515)***	(-8.674)***	(-7.735)***
TURNOVER	-0.005	-0.004	-0.005	-0.002	-0.002	-0.005	-0.005	-0.005	-0.002	-0.002
	(-6.204)***	(-5.583)***	(-5.815)***	(-2.030)**	(-2.023)**	(-5.402)***	(-5.474)***	(-5.491)***	(-1.617)*	(-1.795)*
SIZE	0.218	0.222	0.218	0.297	0.296	0.222	0.223	0.224	0.308	0.309
	(10.854)***	(10.912)***	(10.824)***	(10.927)***	(10.862)***	(10.057)***	(10.015)***	(10.075)***	(10.780)***	(10.771)***
LATE	-0.575	-0.636	-0.588	-0.697	-0.714	-0.427	-0.365	-0.373	-0.486	-0.459
	(-6.032)***	(-6.712)***	(-5.781)***	(-5.083)***	(-4.807)***	(-4.109)***	(-3.506)***	(-3.356)***	(-3.481)***	(-3.056)***
COMMON		0.880			-0.177		0.869			-0.543
		(7.305)***			(-0.923)		(5.552)***			(-2.447)**
LAW&ORDER			-0.016		-0.032			0.067		0.059
			(-0.376)		(-0.506)			(1.420)		(0.763)
DISCREQ				1.709	1.971				2.891	3.250
				(6.210)***	(5.100)***				(7.805)***	(6.705)***
INTERCEPT	0.757	-0.361	0.739	0.820	0.803	-0.538	-1.839	-0.461	-1.799	-1.120
	(2.400)**	(-1.059)	(2.326)**	(2.049)**	(1.669)*	(-1.380)	(-4.137)***	(-1.174)	(-3.522)***	(-1.658)*
INDUSTRY CONTROLS	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

Pseudo. R2	0.086	0.097	0.086	0.137	0.137	0.067	0.076	0.068	0.146	0.146
N	4400	4400	4400	2636	2636	3584	3584	3584	2369	2369

Notes: This table presents logit regression results of the impact of labor regulations and control variables on the likelihood to privatize SOEs through SIPs. Panel A reports the results of regressions estimated using EMPLOY (the employment index from Botero et al. (2004)) as a proxy for labor regulations. Panel B reports the results of regressions estimated using LMR (Fraser Institute's Labor Market Regulation Index) as a proxy for labor regulations. The full sample includes 4,400 privatization transactions that occurred between 1989 and 2008 in 55 countries. Descriptions and data sources for the regression variables are provided in Table 1. z-statistics based on robust standard errors adjusted for clustering by firm are shown below each estimate – in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively, one-tailed when directional predictions are made, and two-tailed otherwise.

TABLE 8
Labor Protection and the Privatization Method: Additional Tests

Panel A: LABOR= EMPLOY

Variable	CIFAR	AUTOCRACY	GOVDEBT	GINI	OPENNESS	GOV SHARE OF GDP	GDPG	Excluding Large Transactions	Excluding Utility and Telecom
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
LABOR	2.198	1.570	2.725	1.098	1.704	1.616	1.606	1.387	1.809
	(4.863)***	(5.502)***	(5.907)***	(3.456)***	(6.090)***	(5.750)***	(5.503)***	(4.586)***	(5.440)***
LEFT	0.387	0.529	0.613	0.414	0.474	0.650	0.530	0.671	0.686
	(3.174)***	(6.428)***	(4.919)***	(4.705)***	(5.634)***	(7.130)***	(6.401)***	(7.563)***	(7.365)***
GOVSTAB	-0.022	-0.096	-0.072	-0.094	-0.107	-0.105	-0.099	-0.101	-0.092
	(-0.653)	(-4.064)***	(-2.003)**	(-3.912)***	(-4.715)***	(-4.669)***	(-4.383)***	(-4.398)***	(-3.487)***
LNGDPC	-0.605	-0.272	-0.516	-0.367	-0.229	-0.296	-0.258	-0.317	-0.353
	(-9.354)***	(-6.194)***	(-9.182)***	(-9.318)***	(-5.803)***	(-7.401)***	(-6.040)***	(-7.992)***	(-8.090)***
TURNOVER	-0.002	-0.005	-0.006	-0.006	-0.004	-0.003	-0.005	-0.006	-0.006
	(-1.577)	(-5.964)***	(-5.141)***	(-6.910)***	(-4.729)***	(-3.310)***	(-5.762)***	(-6.679)***	(-6.073)***
SIZE	0.302	0.220	0.399	0.227	0.207	0.228	0.217	0.208	0.185
	(9.841)***	(10.902)***	(11.586)***	(9.856)***	(10.201)***	(11.196)***	(10.893)***	(9.369)***	(8.214)***
LATE	-0.510	-0.581	-0.425	-0.466	-0.706	-0.616	-0.584	-0.528	-0.432
	(-3.513)***	(-6.063)***	(-3.164)***	(-4.508)***	(-6.964)***	(-6.413)***	(-6.080)***	(-5.299)***	(-3.846)***
CIFAR	0.023								
	(2.800)***								
AUTOCRACY		-0.005							
		(-0.579)							
GOVDEBT			0.022						
			(9.891)***						
GINI				-0.036					
				(-7.562)***					

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OPENNESS					0.004				
					(2.538)**				
EXCHANGE RATE					0.000				
					(0.056)				
GOV SHARE OF GDP (%)						-0.085			
						(-5.926)***			
GDPG							0.000		
							(0.131)		
INTERCEPT	1.106	0.920	0.162	3.142	0.378	1.647	0.739	1.342	1.360
	(2.162)**	(2.267)**	(0.384)	(7.877)***	(1.137)	(4.551)***	(2.192)**	(4.145)***	(3.714)***
INDUSTRY CONTROLS	YES	YES	YES	YES	YES	YES	YES	YES	YES
Pseudo. R2	0.124	0.092	0.190	0.092	0.085	0.094	0.086	0.089	0.082
N	2210	4400	1979	3692	4217	4217	4389	4062	3083

PANEL B : LABOR = LMR

LABOR	0.160	0.120	0.163	0.098	0.144	0.132	0.079	0.118	0.126
	(2.692)***	(3.269)***	(2.223)**	(2.249)**	(3.908)***	(3.540)***	(2.165)**	(3.162)***	(2.987)***
LEFT	0.556	0.413	0.531	0.343	0.434	0.565	0.440	0.539	0.648
	(4.879)***	(4.746)***	(3.773)***	(3.752)***	(4.704)***	(5.738)***	(4.984)***	(5.690)***	(6.437)***
GOVSTAB	-0.030	-0.024	-0.042	-0.063	-0.089	-0.057	-0.052	-0.054	-0.021
	(-0.854)	(-0.889)	(-1.015)	(-2.366)**	(-3.217)***	(-2.107)**	(-1.941)*	(-1.960)**	(-0.667)
LNGDPC	-0.481	-0.253	-0.395	-0.274	-0.102	-0.235	-0.080	-0.201	-0.205
	(-6.654)***	(-5.616)***	(-7.243)***	(-7.352)***	(-2.590)***	(-5.115)***	(-1.950)*	(-5.188)***	(-4.938)***
TURNOVER	0.000	-0.004	-0.007	-0.006	-0.004	-0.003	-0.004	-0.005	-0.006
	(0.347)	(-4.365)***	(-4.998)***	(-6.488)***	(-4.477)***	(-3.414)***	(-4.255)***	(-5.944)***	(-5.877)***
SIZE	0.302	0.240	0.396	0.244	0.244	0.277	0.230	0.201	0.212
	(9.721)***	(10.820)***	(10.780)***	(9.888)***	(10.465)***	(11.717)***	(10.444)***	(8.206)***	(8.235)***
LATE	-0.417	-0.464	-0.204	-0.308	-0.425	-0.326	-0.445	-0.409	-0.195
	(-2.844)***	(-4.480)***	(-1.458)	(-2.893)***	(-3.903)***	(-3.033)***	(-4.246)***	(-3.718)***	(-1.594)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
CIFAR	0.022								
	(2.333)***								
AUTOCRACY		-0.050							
		(-4.372)***							
GOVDEBT			0.569						
			(7.298)***						
GINI				-0.455					
				(-9.391)***					
EXCHANGE RATE					0.006				
					(-3.135)***				
OPENNESS					0.000				
					(0.137)				
GOV SHARE OF GDP (%)						-0.105			
						(-5.970)***			
GDPG							-0.003		
							(-2.229)**		
INTERCEPT	0.073	0.744	1.577	1.299	-0.822	1.006	-0.770	-0.009	-0.125
	(0.128)	(1.615)	(2.966)***	(3.383)***	(-1.886)*	(2.041)**	(-1.916)*	(-0.022)	(-0.265)
INDUSTRY CONTROLS	YES	YES	YES	YES	YES	YES	YES	YES	YES
Pseudo. R2	0.104	0.093	0.160	0.093	0.076	0.083	0.075	0.089	0.069
N	2080	3584	1632	3197	3401	3401	3573	3284	2456

Notes: This table presents additional tests for our multivariate analysis of the impact of labor regulations on the likelihood to privatize SOEs through SIPs. Panel A reports the results of regressions estimated using EMPLOY (the employment index from Botero et al. (2004)) as a proxy for labor regulations. Panel B reports the results of regressions estimated using LMR (Fraser Institute's Labor Market Regulation Index) as a proxy for labor regulations. The full sample includes 4400 privatization transactions, which occurred between 1989 and 2008 in 55 countries. Descriptions and data sources for the regression variables are outlined in Table 1. z-statistics based on robust standard errors adjusted for clustering by firm are shown below each estimate – in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively, one-tailed when directional predictions are made, and two-tailed otherwise.

TABLE 9

Labor Protection, Investor Legal Protection, and the Privatization Method

Variable	Panel A: LABOR= EMPLOY				Panel B: LABOR= LMR			
	LAW&ORDER		DISCREQ		LAW&ORDER		DISCREQ	
	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
LABOR	2.924	0.354	2.816	-0.283	0.116	0.081	0.433	0.117
	(7.316)***	(0.741)	(5.369)***	(-0.425)	(2.228)**	(1.446)	(6.133)***	(1.295)
LEFT	0.385	0.641	0.733	0.248	0.363	0.461	1.001	-0.063
	(3.198)***	(5.057)***	(4.121)***	(1.536)	(2.763)***	(3.618)***	(5.509)***	(-0.407)
GOVSTAB	0.039	-0.216	-0.048	-0.045	0.064	-0.156	-0.006	0.004
	(1.130)	(-6.968)***	(-1.011)	(-1.011)	(1.596)	(-4.393)***	(-0.120)	(0.098)
LNGDPC	-0.249	-0.304	-0.729	-0.100	-0.086	-0.262	-0.722	-0.108
	(-4.095)***	(-3.948)***	(-11.874)***	(-1.168)	(-1.418)	(-3.398)***	(-10.429)***	(-1.343)
TURNOVER	-0.007	-0.002	0.002	-0.004	-0.007	-0.002	0.004	-0.004
	(-6.118)***	(-1.929)*	(0.941)	(-2.867)***	(-5.201)***	(-1.771)*	(-1.826)*	(-2.460)**
SIZE	0.274	0.189	0.403	0.267	0.301	0.169	0.465	0.253
	(9.032)***	(7.237)***	(8.679)***	(7.525)***	(8.423)***	(6.188)***	(9.203)***	(7.088)***
LATE	-0.368	-0.762	-1.498	-0.335	0.065	-0.751	-1.234	-0.315
	(-2.551)**	(-5.621)***	(-6.794)***	(-1.903)**	(0.397)	(-4.948)***	(-5.275)***	(-1.802)**
INTERCEPT	-1.336	2.597	3.414	-0.139	-2.135	1.516	1.867	-1.415
	(-2.204)**	(5.059)***	(7.151)***	(-0.225)	(-2.848)***	(2.490)**	(3.520)***	(-1.898)*
INDUSTRY CONTROLS	YES	YES	YES	YES	YES	YES	YES	YES
Pseudo. R2	0.096	0.126	0.074	0.238	0.107	0.096	0.062	0.260
N	2029	2371	1090	1546	1682	1902	971	1398

Notes: This table presents the results of logit regressions of SIP on labor protection and control variables for 2 sub-samples: HIGH and LOW. HIGH includes observations for which LAW&ORDER and DISCREQ are greater than the median value of the full sample, and LOW comprises observations for which LAW&ORDER and DISCREQ are smaller than the median value of the full sample. Panel A reports the results of regressions estimated using EMPLOY (the

employment index from Botero et al. (2004)) as a proxy for labor regulations. Panel B reports the results of regressions estimated using LMR (Fraser Institute's Labor Market Regulation Index) as a proxy for labor regulations. The full sample includes 4,400 privatization transactions, which occurred between 1989 and 2008 in 55 countries. Descriptions and data sources for the regression variables are provided in Table 1. z-statistics based on robust standard errors adjusted for clustering by firm are shown below each estimate– in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively, one-tailed when directional predictions are made, and two-tailed otherwise.