

# THE POLITICAL AND FINANCIAL ECONOMICS OF WITHDRAWN PRIVATIZATIONS<sup>ψ</sup>

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## Abstract

This is the first study investigating the determinants and outcomes of share issue privatizations' (SIPs) withdrawal. By employing a novel, hand-collected sample of withdrawn privatizations, we show that both withdrawn and successful SIPs undergo comparable restructuring processes over the three years preceding the event. By controlling for the identified endogenous trends, we isolate the ultimate effect of the ownership transfer from political to profit maximizer investors on corporate policies and performance. Absent the ownership transfer, most of the gains realized during the restructuring process are re-absorbed due to the existence of severe state-ownership induced agency costs. Furthermore, we identify small differences in profitability between successful and withdrawn privatizations over the post-treatment period. This result is suggestive that the reported inefficiencies might be ultimately transferred to consumers/taxpayers both directly, via a potentially higher mark up, and indirectly, through hidden subsidizations of inefficient SOEs. Results are robust to the use of political instrumental variables and to different matching approaches, providing strong support for that the ownership transfer from political to private investors represents a critical determinant of the long term sustainability of any efficiency gains achieved by targeted firms over the pre-privatization period.

JEL Classification: G32, G38, G15

EFM Classification: 150, 110, 210

Keywords: Privatization, International financial markets, Government policy and regulation

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## Abstract

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*“I don't make jokes. I just watch the government and report the facts”*

*Will Rogers (1925)*

## **I. Introduction**

Privatizations have reshaped the global economy. Since 1977, more than 100 governments in both emerging and developed countries have relied heavily on this policy to enhance the competitiveness of their economic systems, raising approximately \$ 3.5 trillion by successfully selling state-owned enterprises (SOEs) and assets to both domestic and international investors (Megginson [2016, 2017]). An extensive literature has documented the economic consequences of these transactions, reporting often impressive efficiency gains for the targeted firms.<sup>2</sup> Yet, not all SOEs are successful in making the transition from state to private ownership. After a SOE files an initial registration statement with the relevant national agency in an attempt to issue shares on a regulated market, a surprisingly large number of these share issue privatizations (SIPs) is ultimately withdrawn.<sup>3</sup> Interestingly, extant literature has ignored these “failed transactions”, anecdotally considering them numerically and economically marginal. However, a detailed empirical analysis on the incidence of these events contradicts this idea: over the period from 1998 to 2013, approximately 7% of filed SIPs were ultimately withdrawn, with governments consciously leaving on the table approximately \$116 billion, globally.

In order to provide a comprehensive analysis of the financial and political determinants and consequences of privatizations’ withdrawal, we build a new dataset including accounting, political, and macroeconomic information for 69 withdrawn and 163 successful SIPs occurred in 20 countries over the period 1998-2013.<sup>4</sup> A statistical analysis of these observations show that both withdrawn and successful SIPs experience similar dynamics over the three years preceding the event. Consistent with findings in Villalonga (2000), Dewenter and Malatesta (2001), and Wolf (2009), the expectation of being exposed to the market discipline generates endogenous pre-privatization trends for all the targeted firms, which experience significant increase in profitability, leverage and accruals. Interestingly, the observed similarities between the two groups suggest that a government’s decision to withdraw a previously filed SIP is unlikely to be exclusively explained by financial factors.

To develop a more accurate understanding of the political and financial determinants of a government’s decision to withdraw a previously filed privatization, we model a rational investor’s *ex-*

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<sup>2</sup> For recent surveys of the privatization literature, see Megginson (2016), Fotak, Gao, and Megginson (2016), Gupta et al. (2001), Megginson and Netter (2000).

<sup>3</sup> This is consistent with findings reported in the emerging literature analyzing withdrawn share issues in the U.S.. See Mikkelsen and Partch (1988), Dunbar (1998), Busaba, Benvenise, and Guo (2001), Busaba (2006), Dunbar and Foerster (2008), Lee and Masulis (2009), Boeh and Dunbar (2013). Helbing and Lucey (2017) is to date the only international study on withdrawn IPOs, focusing exclusively on the three main European markets: U.K, Germany, and France.

<sup>4</sup> Consistent with extant literature, I consider exclusively transactions for which at least two “post-event” years are available over the three fiscal years following the attempted privatization. This filter limits the sample to 2013. Before 1998 the number of available observations is extremely low, limiting the possibility to make interesting inference out of that period.

*ante* derived expected probability of withdrawal for the SIPs included in our dataset. By employing both linear and non-linear probability models with country random effects (RE), we confirm that institutional and political factors play a fundamental role in explaining a government's decision to exercise this real option. In particular, this probability appears to be particularly large in democratic countries in which a strong minority coalition party exists. This finding is consistent with political (electoral) risk playing a major role in shaping privatization programs, ultimately determining their outcomes. From a financial perspective, governments are less reluctant to withdraw a SIP when the firm's operating efficiency is high. This is consistent with governments paying particular attention to those transactions involving their "crown jewels". Finally, differently from findings reported in Busaba, Benvenise, and Guo (2001) and confirmed in Bernstein (2015),<sup>5</sup> we identify no significant relationship between the decision to withdraw a previously filed SIP and stock market returns over the 30 trading days preceding the event. This result is suggestive that market timing attempts are at most a marginal driver for a government's decision to withdraw a previously filed SIP, calling into question (1) whether governments manage these transactions under a revenue maximization framework, and (2) whether SIPs and share issues executed by privately owned firms are actually comparable, given their different final objectives and sensitivity to market conditions.<sup>6</sup>

As previously discussed, both withdrawn and successful privatizations are exposed to similar "threats" over the pre-treatment period. In particular, the expectation of being exposed to the market discipline in the near future generates pre-privatization trends that extant literature has ignored. By employing a novel sample of withdrawn SIPs, we control for the above-mentioned pre-treatment trends by matching the two groups and running several Difference-in-Difference (DiD, hereinafter) models to shed lights on the ultimate effects of the ownership transfer from political to private investors on firms' corporate policies and performance. These tests provide strong support for the existence of state-ownership induced agency costs. Operating efficiency declines dramatically for those SOEs whose privatization is not successfully completed, while their labor intensity (measured as the ratio number of employees to total assets) increases after the withdrawal with respect to the applied counterfactual. However, no major difference in profitability between successful and withdrawn SIPs is recorded over the post-treatment period.<sup>7</sup> All in all, these findings provide strong evidence for that the ownership transfer from political to private investors represents a necessary condition to sustain the economic gains cumulated by targeted firms over the pre-privatization period (Villalonga [2000], Dewenter and Malatesta [2001], and Wolf [2009]), and, therefore, to attain the long term success of privatization

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<sup>5</sup> These papers focus on American privately owned firms, identifying a strong negative relationship between stock market returns preceding the decision to withdraw a previously filed IPO and its economic consequences.

<sup>6</sup> This is particularly important, given the extensive use in the literature of privately owned firms as a control group for SOEs selected for privatization.

<sup>7</sup> Note that newly privatized firms' profitability might be depressed due to the dispersed ownership structure resulting from the ownership transfer. Thus, reported results might be biased toward finding no difference in profitability and operating efficiency between the two groups. See Jensen (1989).

programs. These results are robust to several matching procedures and to the use of instrumental variables to deal with the non-random assignment of the treatment. Furthermore, similar results are identified if we employ a dynamic DiD model à la Dinc and Gupta (2011) and Bernstein (2015). In particular, the Politi IV index and the number of simultaneous IPOs provides relevant and exogenous variation to the decision to exercise the option to withdraw a previously filed SIP, allowing for a consistent estimate of the treatment effect. Furthermore, this methodology allows us to estimate the local average treatment effect of the decision to withdraw a previously filed SIP without relying on the strong (and never directly testable) assumptions the DiD methodology depends on. These analyses provide support for virtually all the DiD results, providing further support for the existence of severe state-ownership induced agency costs. All in all, the pre-treatment efficiency gains experienced by SOEs selected for privatizations are not sustainable absent the successful completion of the ownership transfer from political to profit maximizer investors.

This paper contributes to the literature in three main directions. This is the first study to provide a detailed empirical picture of the incidence and relevance of share issue withdrawals attempted by both privately owned and state owned enterprises, globally. Second, it presents novel hand-collected sample including 69 withdrawn SIPs and 163 successful SIPs, which allows me to study the economic consequences of SIPs within a new, interesting setting. In particular, comparing successful and withdrawn privatizations offers new evidence supporting the existence of state-ownership induced agency costs, whose resolution cannot be achieved absent the ownership transfer from government related investors to private investors.<sup>8</sup> Finally, this paper contributes to the growing empirical literature on the political economy of financial markets<sup>9</sup> in several ways. First, the political economy of finance literature builds on the idea that politicians might be exposed to strong incentives that might lead governments to deviate from the ideal concept of the benevolent social planner. By supporting the proposition that privatization withdrawals are strongly motivated by political factors, this paper provides an indirect test for this underlying assumption and shows how politicians' incentives might shape the outcome of a proposed privatization program. Second, by modelling the decision to withdraw a previously filed SIP, I show that market conditions play an at most marginal role in explaining this important financial and political decision, rising further questions about the direct comparability of SIPs and share issues completed by privately owned firms, given their differential determinants and sensitivity to market conditions. Finally, these results complement findings reported in Dinc and Gupta (2011), supporting the idea that political measures may be used as instruments to correct for the intrinsic endogeneity characterizing the literature on privatization and liberalization programs.

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<sup>8</sup> Note that this result provides implicit support for the complementarity of privatization and liberalization programs, rather than for their substitutability. For a discussion, see Belloc, Nicita, and Sepe (2014).

<sup>9</sup> See Jones et al. (1999), Clarke and Cull (2002), Brown and Dinç (2005), and Dinc and Gupta (2011), among others.

The remainder of the paper is organized as follows. Section II presents empirical evidence on the incidence of share issues' withdrawal, discussing their time, country and industry distribution. Section III presents the novel dataset employed in this paper. Section IV analyzes a government's decision to withdraw a previously filed SIP. Section V debates whether successful and withdrawn privatizations undergo comparable restructuring processes over the pre-privatization period. Section VI studies the economic consequences of a SIP's withdrawal. Finally, Section VII concludes.

## **II. The incidence of share issues' withdrawal: a global perspective**

Only a few studies have investigated the incidence of share issues' withdrawal, primarily focusing on the American IPO market. Dunbar (1998) and Busaba, Benvenise, and Guo (2001) show that between the mid-1980s and mid-1990s almost 20% of proposed IPOs were ultimately withdrawn before completion. In a more recent study, Dunbar and Foerster (2008) confirm this figure, showing that the fraction of withdrawn IPOs increased to almost 50% of filed IPOs in the period between mid-1990s and 2008.<sup>10</sup> To identify similar statistics for seasoned equity offerings (SEOs) appears to be more challenging. Lee and Masulis (2009), identify a sample of 2,960 completed SEOs and 336 withdrawn offers by U.S. issuers over the period between 1990 and 2002, suggesting that a non-negligible number of SEOs are withdrawn before completion. A similar ratio of withdrawn to successful SEOs is reported in Mikkelsen and Partch (1988), providing further support for the numerical and economic relevance of these "failed" transactions. Given this strong pattern for privately owned (American) firms<sup>11</sup>, it would not be unreasonable to hypothesize the existence of similar figures for privatizations. However, a careful empirical analysis is paramount, since the generalizability of these statistics outside the U.S. is far from proven.

In order to provide a detailed overview of this phenomenon from a global perspective, I carefully collect and analyze data for both successful and withdrawn firms' commitment to new common equity issues filed between 1998 and 2016 from SDC Platinum and Datastream.<sup>12</sup> Table I reports the time distribution and incidence of these failed transactions.

[Table I]

Of the 6,245 SIPs<sup>13</sup> attempted between 1998 and 2016, 448 (7.17%) were ultimately withdrawn. This figure is slightly higher than the one recorded for privately owned firms: of the 152,543 attempted

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<sup>10</sup> To date, the only cross-country study is Helbing and Lucey (2017), in which the authors show that approximately 10% of file IPOs was ultimately withdrawn in Europe over the period 2001 – 2015.

<sup>11</sup> The afore-mentioned papers do not distinguish privately owned firms from state owned enterprises. However, the structure of the used dataset suggests a predominance of privately owned enterprises.

<sup>12</sup> Share issues of ADRs, closed-end funds, conversion of mutuals, or multiple-class are excluded from the sample. The author acknowledge a severe double-counting issues for data downloaded from SDC. The cleaned data set used in this section of the paper is available from the author upon request.

<sup>13</sup> SIPs are identified via the use of the "Government Owned Involvement Flag", available for the "New Issue Dataset in SDC Platinum. This dummy variable is populated as "Yes" if "*the Public Mid Code of the Issuer/Borrower, Immediate or Ultimate Parent of the Issuer/Borrower, Selling Shareholder, or Immediate or Ultimate Parent of the Selling Shareholder is Government.*"

share issues, 7,121 (4.66%) were withdrawn over the same period. Consistent with results reported in Busaba, Benvenise, and Guo (2001), no strong time pattern can be identified with respect to the ratio of withdrawn to attempted share issues for both privately owned and state owned firms. The only anomaly is represented by the period 2001-2002, during which 36.98% and 22.80% of the attempted SIPs were ultimately withdrawn (Figure I).

[Figure I Here]

The correlation between the ratio withdrawn to total attempted share issues for privately owned firms and SOEs appears to be large and positive<sup>14</sup>, yet significantly different from one. This finding is suggestive that, from a global perspective, different determinants are likely to drive the decision to withdraw a previously filed share issue for privately owned and state owned enterprises.<sup>15</sup>

SIPs' withdrawals are a global phenomenon. As reported in Figure II, the percentage incidence of these failed transactions range between 5% and 10% for most countries. As reported in Table II, when I focus exclusively on countries that experienced at least 5 SIPs' withdrawals over the period 1998-2016, the incidence of these failed transactions appears to be significantly more dramatic, reaching 24% in the Czech Republic, and almost 10% in China. Furthermore, the incidence of SIP withdrawals is systematically larger than the incidence of share issues' withdrawal for privately owned firms, suggesting that the value of the option to withdraw a previously filed share issue is likely to be significantly higher for political agents due to their exposure to specific sources of political risk.

[Figure II & Table II]

It is more challenging to assess the economic relevance of these failed transactions. Following Busaba, Benvenise, and Guo (2001), I compute the *expected* offer value as the number of shares offered times the midpoint of the price range specified in the filing prospectus and reported on SDC.<sup>16</sup> Following this strategy I am able to recover the expected proceeds for approximately 42% of the withdrawn share issues executed by both privately owned and state owned firms. Given the large number of omitted observations it is difficult to make strong inference out of these values.<sup>17</sup> However, conditional on their availability, missed revenues from withdrawn SIPs cumulate to a non-negligible \$116 billion<sup>18</sup>, representing approximately 5% of the \$2.39 trillion raised by governments through SIPs over the studied period. This figure is consistent with that observed for privately owned firms, for which

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<sup>14</sup> 0.5227, statistically different from zero at 1% level of confidence. This result is not driven by the observed spike. Once I drop 2001 out of the sample, the correlation between the two time series declines to 0.2539.

<sup>15</sup> The author acknowledges that regulatory differences might cause the observed correlation to be significantly different from one, conditional on different countries representing a different percentage of the number of yearly global issues executed by privately owned and state owned firms. This issue will be at least partially addressed in the next section through different matching procedures aimed to balance the sample and within-group regressions.

<sup>16</sup> Alternatively, I used the item "total proceeds in all markets" reported in SDC to proxy for the expected proceeds.

<sup>17</sup> Omitted observations are likely to be driven by both country-specific regulations and accounting standards and, consequently, they are unlikely to be randomly distributed. Therefore, any inference based on this sample should be carefully interpreted.

<sup>18</sup> See Table I.

the expected proceeds from withdrawn transactions cumulate to approximately \$779 billion, which represent 6.14% of the \$12.16 trillion raised by private investors.<sup>19</sup>

Finally, the breakdown of withdrawn versus successful share issues by industry is reported in Table III. The distribution of withdrawals appear to be fairly homogenous for both privately owned and state owned firms, ranging between 5% and 10% for most industries. However, the frequency of withdrawals appear to be systematically higher for SIPs than for SOEs attempted by privately owned firms, consistent with the hypothesis that the unique political features characterizing these transactions might ultimately play a fundamental role in shaping privatization programs and determining their final outcome (Jones et al. [1999], Clarke and Cull [2002], Dinc and Gupta [2011], Roberts and Saeed [2012]).

[Table III]

All in all, an average of 22 withdrawn SIPs per year is recorded for the period 1998-2016. Interestingly, Less than 10% of these “failed” privatizations re-attempt to issue shares on a regulated market over the following 24 months,<sup>20</sup> suggesting that a simple market-timing story is unlikely to explain their occurrence. Thus, further analysis are necessary to shed light on the determinants and consequences of this phenomenon. In order move in this direction, I build a new dataset reporting accounting variables for 69 withdrawn SIPs. The characteristics of this sample are discussed in the following section.

### **III. A novel dataset**

We identify the universe of withdrawn SIPs by surveying data available on SDC Platinum and Datastream.<sup>21</sup> In order to get consistent and comparable accounting data, I exclude from the sample unit and multiple-class offerings, offerings of REITs, ADRs, and closed-end mutual funds. Furthermore, we also exclude offerings of financial institutions (SIC code 6000-6999), which should be studied in isolation.<sup>22</sup> Unfortunately, for withdrawn privatizations accounting data availability is extremely limited, especially with respect to the post-withdrawal period. Furthermore, the only available firm identifier is the company name, as reported in SDC. Therefore, we hand collect these financial information from different sources by attempting different forms of “fuzzy matching” based on the available company name. Whenever we encounter any degree of uncertainty concerning whether the identified company differ from the one reported on SDC Platinum, we take a conservative approach

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<sup>19</sup> Once I focus exclusively on IPOs, similar figures can be identified. Table and figures including exclusively IPOs are available upon request.

<sup>20</sup> Similar percentages are identified if I consider the 36 and 60 months following the withdrawal. Interestingly, a similar percentage can be identified for privately owned firms. However, for these firms the “re-issuance” rate is systematically larger, independently on the considered window.

<sup>21</sup> To cross-check the validity of the available information, I verify the available events with news information reported on on Lexis-Nexis, Bloomberg and on the Privatization Barometer Reports (2004 to 2016).

<sup>22</sup> I could identify accounting data for apprximately 30 financial institution whose SIPs were withdrawn before completion.



and drop these observations to minimize the amount of noise that this hand collection process might accumulate. This selection results in a sample of 69 withdrawn SIPs. The sample is dominated by Chinese SOEs, but it retains the global nature characterizing the universe of events, including SOEs from 20 countries.

Following extant literature on privatizations, we focus on the seven years surrounding the event, and we cluster all the observations in terms of their relative year of occurrence. The resulting panel is balanced, and it includes 839 firm-year observations. Due to the presence of extreme outliers for several financial variables which might be caused by reporting errors, we winsorize all accounting variables at the 1% level. Finally, we complete the sample by collecting accounting data for all successful SIPs which occurred in the same (1) country and year or (2) country and 2 digit SIC code of any of the withdrawn privatizations incorporated in my main dataset.<sup>23</sup> Once we apply these filters we identify 163 SOEs for which accounting data are available for the seven years surrounding their SIP. The resulting complete sample includes accounting data for 232 attempted SIPs occurred in 20 countries, providing an interesting starting point to study the financial and political economics of withdrawn privatizations. Table IV reports summary statistics for all the available data.

[Table IV]

At a glance, withdrawn SIPs involve significantly larger firms, and, as expected, they occur with weaker market conditions. However, the most striking differences are recorded with respect to the reported political factors. Withdrawals are more common in democratic countries in which a strong minority coalition party exists, and they seem to cluster around elections. However, these univariate statistics provide poor guidance to establish reliable conditional correlations between different financial and political factors and an SIP's probability of withdrawal. Therefore, we attempt to shed lights on the determinants of the decision to exercise this valuable real option in the next section.

#### **IV. The political and financial determinants of SIPs' withdrawal**

As discussed in Busaba, Benvenise, and Guo (2001), and Busaba (2006), the decision to withdraw a previously filed share issue hinges on the position of the issuer's reservation value relative to possible investors' valuation. Therefore, the economic and political factors affecting these two dimensions are likely to play a critical role in determining whether a government will ultimately decide to withdraw a SIP. However, the empirical and theoretical frameworks presented in Busaba, Benvenise, and Guo (2001), and Busaba (2006) are likely to fail with respect to SOEs, given their particular nature. For instance, SOEs face soft budget constraints, making financial constraint related considerations secondary for the decision to issue shares in a regulated market. Absent a clear theoretical model, we control for all firm level and country level variables that might ultimately affect a government's decision

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<sup>23</sup> For consistency, I rely on the same sources I used for the withdrawn SIPs.

to withdraw a previously filed SIP, letting the data to talk, instead of developing curious and debatable hypothesis.

**a. The decision to withdraw a previously filed SIP**

In Table V, we model a rational investor's *ex-ante* derived expected probability of withdrawal for all the SIPs included in our dataset. In particular, the decision to withdraw a previously filed SIP is modeled as a function of several firm-level financial factors, as observed at the end of the fiscal year preceding the attempted share issue, and of a set of political variables, as observed at the end of the fiscal year the event takes place in. In order to take into account the existence of country-level shocks without sacrificing the possibility to study the role played by highly persistent political factors in triggering the decision to withdraw a previously filed SIP, we employ country random effects (RE) in all the five proposed specifications.

Since the relation between the decision to exercise this real option and the set of variables reported in Table V can be linear, as well as non-linear, we begin by running our baseline results by estimating a Linear Probability Model via GLM (Column 1), and both a Probit and a logit Model via MLE (Column 2 and Column 3, respectively).<sup>24</sup>

[Table V here]

The reported results do not appear to be model dependent, allowing me to rely on the Logit estimates to infer the direction of the identified conditional correlations. Interestingly, financial factors appear to play a secondary role. Sales Efficiency (the ratio of net income to the number of employees) is the only factor that is systematically statistically significant at 1% level of confidence. This finding is consistent with governments' sensitivity to macro and political factors being at the highest when the privatization program includes their "Crown Jewels". Interestingly, a weak, but not negligible positive relation between firm size and SIP's probability of withdrawal is identified in model 1 and in model 2. While puzzling at first, this result is consistent with larger transactions carrying larger political risk due to a more extensive media coverage. Two additional important results are worth noting before discussing the political nature of the decision to withdraw a previously filed SIP. First, no support is provided for the idea that governments exercise their option to walk away in an attempt to time the market. This result is inconsistent with those reported in Busaba, Benvenise, and Guo (2001), and Bernstein (2015) for privately owned firms, raising further concerns about the direct comparability of share issues attempted by privately owned and state owned enterprises, given their different sensitivities to political and financial factors. Second, the cumulative proceeds raised by a government through successfully completed SIPs are positively correlated with the decision to withdraw a previously filed SIP. This result provides empirical support for that governments' reputation building is indeed an important force shaping the financial and political structure of privatization programs (Biais and Perotti

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<sup>24</sup> All continuous variables have been normalized with mean 0 and standard deviation 1.

[2002], and Bel [2003]).<sup>25</sup> Finally, it is important to discuss the strong marginal effect imposed by the Politi IV Index on the probability to withdraw a SIP. The Politi IV Index is a discrete index which can take values between -10 and +10. The larger the score, the more “democratic” a country is. This index is an indirect function of all the other political variables included in Table V, explaining the lack of significance for other arguably important factors such closeness to a political election. Thus, in Column 4 we re-estimate the probit model after substituting the Politi IV Index with a dummy (“democracy”) set equal to one if the Politi IV Index is above 5, zero otherwise. With this alternative specification we attempt to open up the political “black box”, shedding light on which political factors are ultimately driving the results. However, the democracy dummy capture again most of the variation due to political elements. Thus, we drop the Polity IV Index and the Democracy dummy in Column 5, and we re-estimate the logit model. Consistent with findings reported in Dinc and Gupta (2011), the most important factor appears to be the strenght of the minority coalition party (Political Competitiveness). In particular, the largest the difference of votes controlled in the Parliament between the majority and the minority coalition party, the lower the probability of withdrawing a previously filed SIP. That is, stronger minority coalition parties are more likely to cause the failure of an attempted privatization program.<sup>26</sup>

#### **V. The comparability of successful and withdrawn SIPs over the pre-privatization period**

From an economic perspective, once an issuer files the required documents to issue shares on a regulated market, the reputational costs of withdrawing from this commitment are likely to be severe (Dunbar and Foerster [2008]). Therefore, it is unlikely that such a late withdrawal was strategically decided before the filing. If this is the case, then successful and withdraw privatization should be virtually indistinguishable before the treatment is assigned. While the marginal role played by most firm-level financial factors in explaining the decision to withdraw a previously filed SIP provides strong support for this hypothesis,<sup>27</sup> a more comprehensive tests should be conducted to confirm the direct comparability of successful and withdrawn privatizations over the pre-treatment period. Since the economic consequences of state-ownership on a firms’ operating and financial performance are dynamic in nature (Villalonga [2000], Gupta [2005]), I investigate the existence of parallel conditional trends between the two groups by estimating the following regression model via OLS:

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<sup>25</sup> As discussed in Biaisi and Perotti (2002), and Bel (2003), confidence building is critical for governments to establish themselves as reliable financial counterparties. Thus, the identified positive correlation is consistent with the hypothesis that governments with limited experience will be more careful in managing eventual reputational costs originate from an SIP’s withdrawal, ultimately being willing to accept a lower reservation price.

<sup>26</sup> Note that this finding can be either positive or negative in terms of its social welfare implications. Indeed, from one side a strong opposition party can reduce the risk of tunneling or of political patronage. However, on the other side a stronger minority coalition party might have the power to freeze a government’s attempts to finalize important economic reforms to damage the majority party from an electoral perspective.

<sup>27</sup> See Section IV.

$$Y_{i,t} = \alpha + \beta_1 * linear\ trend_t + \beta_2 * withdrawal_i + \beta_3 * linear_t * withdrawal_i + \alpha_{fy} + \alpha_c + \varepsilon_{i,t}$$

Where  $\alpha$  represents the conditional mean; *linear trend* is an indicator variable set equal to one, two, or three when three, two or one fiscal year is missing to the attempted transaction, respectively; *Withdrawal* is a dummy set equal to one if firm *i*'s SIP is ultimately withdrawn, zero otherwise. Finally,  $\alpha_{fy}$  and  $\alpha_c$  are fiscal year and country fixed effects. The regression is run over the three years preceding the event date, and standard errors are clustered by country.

The variable *linear trend* captures the existence of an eventual time trend, while *withdrawal* controls for the existence of any differences in the conditional mean for the dependent variable between the two groups. Finally, the interaction term allows us to estimate differences in trends over the pre-treatment period between successful and withdrawn SIPs. Therefore, a statistically significant  $\beta_1$  indicates the existence of pre-privatization trends for successful privatizations, while a significant  $\beta_3$  is suggestive of differential dynamics for the two groups over the three years preceding the event. Table VI reports the results.

[Table VI]

Strong, statistically significant pre-privatization trends emerge from this analysis. Consistent with Villalonga (2000), Dewenter and Malatesta (2001), and Wolf (2009), improvements in Capital Expenditures and an increase in the targeted SOEs' size are recorded for both groups. Interestingly, no significant trends can be identified with respect to the number of employees, although labor intensity declines for successful SIPs exclusively. Similarly, an increase in profitability is recorded only for those SOEs for which the ownership transfer was successfully completed. On a different note, leverage increases for both groups. To the extent that firms expect an increase in profitability following the completion of their privatization, and under the assumption that refinancing is costly, this finding is somewhat consistent with the predictions of the dynamic trade-off theory (see Fischer, Heinkel, and Xechner [1989], and DeAngelo, DeAngelo, and Whited [2011]), according to which firms increase their leverage to fully exploit present and future tax advantages. Finally, consistent with results reported in Teoh, Welch, and Wong (1998), accruals increase significantly over the pre-privatization period for both groups, suggesting that all targeted SOEs are committed to complete the transaction. However, these results might raise concerns that liberal accounting policies might be used to accelerate the recognition of income and delay the recognition of expenses prior to the privatization (Dewenter and Malatesta [2001]). Note that if this is the case a control group including SOEs that are not selected for privatization would dramatically fails in controlling for this issue.

All in all, the two groups appear to undergo comparable restructuring process. However, a few difference in trends still exist, and this differences should be carefully taken into account while examining the economic consequences of SIPs' withdrawal.

## VI. The economic consequences of SIPs' withdrawal

While matching successful and withdrawn SIPs allow to control for the existence of endogenous pre-treatment trends, the decision to withdraw a previously filed SIP is ultimately endogenous, making it extremely challenging to identify its economic consequences within a causal setting. In order to offer at least reliable conditional correlations, we begin by running a simple, endogenous DiD model on the full sample. While acknowledging that difference in trends still exist between the two groups, this model can serve a baseline result to study and sign eventual biases. Table VII, Panel A reports these baseline results.

[Table VII here]

Both groups experience a statistically significant increase in profitability (ROS) over the post-treatment period, with no relevant difference recorded between the two groups.<sup>28</sup> Conversely, withdrawn privatizations experience a strong relative decline in operating efficiency over the post-treatment period. These findings are consistent with the existence of state ownership induced agency conflicts that cannot be fully dealt with absent the ownership transfer. Interestingly, both groups experience a significant increase in the number of employees over the post treatment period, and no differential effect between the two groups is observed. Furthermore, withdrawn SIPs experience a strong reduction in capital expenditure. The observed simultaneous (1) increase in employment, (2) reduction in capital expenditure, and (3) reduction in operating efficiency provide support for the hypothesis that state ownership induced agency costs do exist, and that they are potentially severe. Furthermore, the lack of decline in profitability over the post-treatment period suggests that these agency costs might be transferred to consumers/taxpayers both directly, through a higher mark up, and indirectly, through a suboptimal subsidization of certain industries or firms aimed to maximize employment for political reasons. Finally, withdrawn SIPs significantly reduce their accruals after the event, relatively to what observed for successfully completed privatizations. Since less than 10% of the firms in our sample re-attempt a SIP after suffering a withdrawal, the observed decrease in accruals might ultimately reflect a commitment issue caused by managers' incentives to increase their firm's performance suddenly disappearing once the expectation of being exposed to the market scrutiny is eliminated.

In order to assess the robustness of these results, I attempt to mitigate the severe endogeneity characterizing this setting by re-estimating all the proposed DiD models after including several firm-level and country-level control. In particular, I control for profitability and labor intensity, since these variables present differential pre-treatment trends, and for a large set of political variables. Virtually all

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<sup>28</sup> It is worth mentioning that the profitability of newly privatized firms might suffer from a downward bias due to agency conflicts generated by the dispersed ownership resulting from the transaction itself. See Jensen and Meckling (1976), and Jensen (1989). This might explain the model inability to identify statistically significant results. Furthermore, it is important to recall that Chinese SIPs are severely affected by the so called "listing effect", which ultimately results in lower improvements in profitability and operating efficiency.

results are unchanged, as reported in Table VII, Panel B, Column 1. To further strengthen these results, I follow Angrist and Pischke (2008) and I employ the fitted values from the Logit model estimated in Table V, Model 3, as an instrument for the decision to withdraw a previously filed SIP. Note that both the Politi IV Index and the number of simultaneous IPOs provides sources of relevant and exogenous variation to the endogenous variable. Indeed, conversely to other political factors, the Politi IV Index is rooted in a country history, and, thus, is likely to be exogenous to the current firm's performance. Similarly, the number of simultaneous IPOs occurring in the same equity market targeted for the SIP is arguably independent from the SIP's performance and from its idiosyncratic components. After re-estimating the two previously discussed DiD models via 2SLS, all results appear to be consistent with the baseline results, providing strong support for the existence of severe state ownership induced agency costs.<sup>29</sup>

To provide further support for these findings, we replicates our DiD results after matching each withdrawn privatization to one successful SIP via PSM. We implement this closest neighborhood matching by using the fitted values from the Logit model estimated in Table V, Column 3 as the relevant propensity score, after conditioning the paired SOEs to be incorporated in the same country. As shown in Figure III, the common support appears to be particular wide, allowing us to identify a good match for 38 withdrawn privatizations.

[Figure III]

While the model efficiency is negatively affected by the reduced sample size, results reported in Table VIII are consistent with those reported in Table VI, and only a marginally significant difference in trends for the ratio of capital expenditure to sales survives, validating the quality of our matching strategy.

[Table VIII]

Table IX reports DiD results for the matched sample, with and without additional controls (Panel A and Panel B, respectively). Most results are consistent with those reported for the full sample. However, the small sample size impacts negatively the estimates' efficiency, leading to inconclusive findings for the proxies for capital expenditures. On the other hand, these estimates confirm that a strong and simultaneous decline in operating efficiency and increase in employment take place for withdrawn privatizations. These findings provide further support for that the ownership transfer from private to political agents is a necessary condition for the long term sustainability of any efficiency gains cumulated over the pre-privatization period.

[Table IX]

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<sup>29</sup> The first stage of the 2SLS is reported in the Appendix, in Table A.II.

As a final test, we build on Dinc and Gupta (2011) and Bernstein (2015) in estimating the following dynamic DiD model:

$$Y_{i,t} = \alpha + \beta_1 * Y_{i,pre} + \beta_2 * withdrawal_{i,t} + \beta_3 * second\ period_t + \beta_4 * third\ period_t + \beta_5 * second\ period_t * withdrawal_i + \beta_6 * third\ period_t * withdrawal_i + \beta_7 * X_{i,t} + \alpha_{fy} + \alpha_c + \varepsilon_{i,t}$$

Where  $Y_{i,t}$  is the dependent variable;  $\alpha$  is its conditional mean;  $Y_{i,pre}$  is the average value for the dependent variable over the pre-treatment period;  $second\ period_t$  and  $third\ period_t$  are two dummy variables set equal to one if two or three years have passed since the attempted privatization, respectively;  $withdrawal$  is a dummy variable set equal to one if the SIP is withdrawn, zero otherwise. Finally,  $\alpha_{fy}$  and  $\alpha_c$  are fiscal year and country fixed effects, respectively.

The model is estimated over the three years following the event. Furthermore,  $withdrawal_{i,t}$ , as well as all its interactions, are instrumented with the fitted values of the Logit model estimated in Table V, Model 3. As previously discussed, the Politi IV Index and the number of IPOs occurring in the same year and stock exchange in which the SIP is supposed to happen provide relevant and exogenous sources of variation to the endogenous variables. These 2SLS estimates are reported in Table X.<sup>30</sup>

[Table X here]

This approach allows to open up the dynamic relationship between state ownership and operating performance and corporate policies. Column 1 shows that the ability to retain a high profitability for withdrawn SIPs disappear over time. Profitability is indeed systematically declining over the post-treatment period, similarly to what observed with respect to withdrawn SIPs' sales efficiency. Further support for a relative decline in capital expenditure is provided in Table X, Column 6 and Column 7, while, interestingly, no significant difference between the two groups in terms of number of employees is identified after the event. Finally, the decline in accruals for the failed SIPs appears to be instantaneous, consistent with the idea that a very limited number of withdrawn privatizations are re-attempted in the short term.

All in all, while extant literature supports the idea that an ownership transfer from political to private investors is insufficient, *per se*, to generate significant efficiency gains (Kole and Mulherin [1997]), the results reported in this Section are at least suggestive that, at the same time, it represents a critical condition for the long term sustainability of any improvements achieved by targeted SOEs over the pre-privatization period.

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<sup>30</sup> Table X reports the Cragg-Donal F-Statistics for the three used instruments: the logit score, its interaction with the “second period” dummy, and its interaction with the “third period” dummy. The three first stages for each of the 8 regressions reported in Table X are reported in the Appendix, in Table A.III.

## **VII. Conclusions**

This is the first paper studying the political and financial economics of withdrawn share issue privatizations. A detailed empirical analysis of this phenomenon shows that approximately 7% of the SIPs filed over the period 1998-2013 were ultimately withdrawn, with governments leaving on the table \$116 billion in missed proceeds. The decision to exercise this option appears to be both political and economic in nature, and all SOEs targeted for privatizations appear to undergo comparable restructuring processes over the three years preceding the attempted SIP.

By exploiting the reported similarities between withdrawn and successful privatizations, I provide support for the existence of severe state ownership induced agency costs. These agency conflicts materialize in a strong reduction in operating efficiency and capital expenditures, often materializing in suboptimally high level of employment. Furthermore, the small differences in profitability between successful and withdrawn privatizations over the post-treatment period is suggestive that these inefficiencies might be ultimately transferred to consumers/taxpayers both directly, via a potentially higher mark up, and indirectly, through hidden subsidizations of inefficient SOEs. Thus, while the ownership transfer from government-related to private investors is not a sufficient condition to achieve the often impressive efficiency gains documented in the privatization literature, it appears to be a necessary condition for the long term sustainability of any gains achieved by targeted firms over the pre-privatization period.



## A.I Appendix

**TABLE A.I**  
**VARIABLE DEFINITIONS**

<b>Panel A: Accounting Variables</b>	
<b>Variables</b>	<b>Definitions</b>
Total Assets	The value of total book assets in millions, where assets are deflated to 2010 dollars.
# of Employee	Total number of employees.
Sales Growth	The natural logarithm of sales in millions in year t divided by the value of sales in millions in year t-1.
ROS	Returns On Sales, measured as the ratio of net income to sales, both measured in millions.
NIEFF	Net Income Efficiency, measured as the ratio of net income in millions to the number of employees.
SALEFF	Sales Efficiency, measured as the ratio of sales in millions to the number of employees.
Labor Intensity	The ratio of the number of employees to total book assets in millions, where assets are deflated to 2010 dollars.
Leverage	The ratio of total debt to total book assets, both measured in millions.
CETA	Capital Expenditures to Total Assets, measured as the ratio of CAPEX to total book assets, both in millions.
CESA	Capital Expenditures to Total Sales, measured as the ratio of CAPEX to total sales, both in millions.
Accruals	
IPO	A dummy variable set equal to 1 if the share issue is an IPO, 0 otherwise.
1 month market returns	30-days returns recorded for the main index of the stock exchange targeted for the share issue privatization.
# of IPO	Number of IPO which occurred in the same country and in the same year the share issue privatization is supposed to occur.
GDP per Capita	GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in current U.S. dollars.
<b>Panel B: Political Variables</b>	
Cumulative Proceeds from SIPs	The ratio of the proceeds in millions raised from share issue privatization by a government up to year t divided by its GDP per capita.
Public Debt	All general government, SOEs and central bank's liabilities that require future payment of interest and/or principal by the debtor to the creditor. This includes debt liabilities in the form of special drawing rights, currency, and deposits; debt securities; loans; insurance, pension, and standardized guarantee programs; and other accounts payable. (See the IMF's 2001 Government Finance Statistics Manual and Public Sector Debt Statistics Manual.)
Left-wing Government	A dummy set equal to 1 if the government is defined as "left-wing" in the Database of political Institutions 2015.

Election year	A dummy set equal to 1 if a legislative or executive election is scheduled over the 12 months following an attempted share issue privatization, 0 otherwise.
Political Competitiveness	The absolute value of the difference between the number of seats controlled in the Parliament by the majority coalition party and those controlled by the main minority coalition party.
Politi IV Index	The Polity Index is a composite index proxying for a country's democracy "quality". It is based on a unified scale assuming values between +10 (strongly democratic country) and -10 (strongly autocratic country). For further details, see Marshall and Jaggers (2005), and Marshall (2011).

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**TABLE A.II**  
**FIRST STAGE – TABLE VII**

Table A.II reports the first stage of the 2SLS regressions reported in Table VII, Panel B. The first two columns report the first stage for the endogenous dummy “Withdrawal” and for its interaction with the post-treatment dummy with respect to the specification reported in Table VII, Panel B, Column 2. The third and fourth columns report the two first stage regressions for the specification reported in Table VII, Panel B, Column 3. “Additional Controls” include all the exogenous variables described in Table VII. Logit Score represents the fitted values from the Logit model estimated in Model V, Column 3. Logit Score x Post represents the interaction between the main instrument and the “post-treatment” dummy. Standard Errors are clustered at the Country level in all regressions. \*, \*\*, \*\*\* indicate statistical significance at 10%, 5% and 1%, respectively.

VARIABLES	(1)		(2)	
	Fist stage – Table VII, Panel B, Column 2 (Withdrawn)	(Interaction)	First stage – Table VII, Panel B, Column 3 (Withdrawn)	(Interaction)
Logit Score	1.3514*** (0.2885)	0.107 (0.1011)	1.2174*** (0.3387)	0.0678 (95.78)
Logit Score x Post	0.0415 (0.0654)	0.9323*** (0.1106)	0.0542 (0.0499)	0.9578*** (0.2885)
Fiscal Year FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Additional Control	Yes	Yes	Yes	Yes
Cragg-Donald F-Statistic	69.57		51.74	
Stock and Yogo Critical Value	7.03		7.03	
Observations	755	755	726	726

**TABLE A.III**  
**FIRST STAGE – TABLE X**

Table A.III reports estimates for the first stages of the dynamic 2SLS models reported in Table X. The fitted values from the Logit model estimated in Table V, Model 3 are the used instrument for the endogenous decision to withdraw a previously filed SIP and its interactions terms. Wtd is the abbreviation for the endogenous “Withdrawal” dummy, and Second and Third are the abbreviations for the two dummies “Second Period” and “Third Period”, respectively. Control variables include all the exogenous variables described in Table X. All regressions include fiscal year and country fixed effects; standard errors are clustered by country. \*, \*\*, \*\*\* indicate statistical significance at 10%, 5%, and 1%, respectively.

VARIABLES	(1) ROS			(2) NIEFF			(3) SALEFF			(4) # of Employee		
	Wtd	Wtd x Second	Wtd x Third	Wtd	Wtd x Second	Wtd x Third	Wtd	Wtd x Second	Wtd x Third	Wtd	Wtd x Second	Wtd x Third
Logit Score	1.037** (0.472)	0.040 (0.122)	-0.047 (0.083)	1.3018* (0.771)	0.186 (0.232)	-0.055 (0.159)	1.225* (0.781)	0.143 (0.235)	-0.050 (0.157)	1.045** (0.483)	0.044 (0.143)	-0.051 (0.091)
Second Period x Logit Score	0.038 (0.059)	1.014*** (0.177)	-0.051 (0.038)	0.035 (0.055)	1.012*** (0.178)	-0.051 (0.038)	0.0345 (0.054)	1.012*** (0.177)	-0.051 (0.038)	0.034 (0.057)	1.010*** (0.175)	-0.050 (0.038)
Third Period x Logit Score	0.059 (0.161)	0.058 (0.041)	0.849*** (0.141)	0.066 (0.143)	0.064 (0.047)	0.846*** (0.143)	0.050 (0.177)	0.058 (0.048)	0.846*** (0.140)	0.065 (0.175)	0.06 (0.105)	0.846*** (0.145)
Fiscal Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Additional Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cragg-Donald F-Statistic		9.99			5.87			8.66			10.24	
Observations	251	251	251	251	251	251	251	251	251	251	251	251

[Continued]

VARIABLES	(1) Labor Intensity			(2) CETA			(3) CESA			(4) Accruals		
	Wtd	Wtd x Second	Wtd x Third	Wtd	Wtd x Second	Wtd x Third	Wtd	Wtd x Second	Wtd x Third	Wtd	Wtd x Second	Wtd x Third
Logit Score	1.114** (0.478)	0.0719 (0.1273)	-0.025 (0.080)	0.985** (0.431)	0.015 (0.115)	-0.054 (0.082)	1.025** (0.0.466)	0.041 (0.122)	-0.062 (0.081)	1.022** (0.484)	0.036 (0.125)	-0.0538 (0.0.093)
Second Period x Logit Score	0.035 (0.057)	1.013*** (0.1764)	-0.052 (0.038)	0.037 (0.054)	1.014*** (0.178)	-0.051 (0.038)	0.037 (0.054)	1.013*** (0.177)	-0.051 (0.037)	0.017 (0.050)	1.004*** (0.181)	-0.05 (0.038)
Third Period x Logit Score	0.052 (0.180)	0.059 (0.053)	0.840*** (0.144)	0.682 (0.168)	0.065 (0.046)	0.846*** (0.144)	0.075 (0.166)	0.066 (0.045)	0.850*** (0.144)	0.026 (0.151)	0.044 (0.273)	0.844*** (0.147)
Fiscal Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Additional Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cragg-Donald F-Statistic		10.62			8.46			9.94			9.39	
Observations	251	251	251	251	251	251	251	251	251	251	251	251

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## VIII. Tables and Figures

**TABLE I**

**TIME DISTRIBUTION OF COMPLETED AND WITHDRAWN SHARE ISSUES**

Table I reports the time distribution of completed and withdrawn share issues attempted by both privately owned and state owned enterprises. Proceeds for withdrawn transactions are defined as the product between the mid price and the number of share issued, as reported in the filing documents. Reported proceeds are severely biased downward due to missing/omitted observations. Approximately 6.00% of the observations for proceeds raised by privately owned companies successfully completing a share issue are not reported in the original dataset. Analogously, 20.00% of the proceeds raised by governments from share issue privatizations are missing. Finally, I am unable to identify the proceeds associated with 60.00% of withdrawn share issues attempted by both private and state owned companies. These reporting issues are likely to be caused by both cross-country heterogeneity in (1) accounting standards and (2) regulatory requirements. All monetary values are reported in millions of U.S. dollars.

Year	Private - Successful		Private - Withdrawal		Privatization - Successful		Privatization - Withdrawal	
	N	Proceeds	N	Proceeds	N	Proceeds	N	Proceeds
1998	4,621	\$ 362,750.54	262	\$ 1,318.17	572	\$ 77,299.05	14	\$ 200.00
1999	5,129	\$ 472,126.79	181	\$ 298.41	277	\$ 129,799.51	26	\$ 452.80
2000	5,773	\$ 502,751.30	446	\$ 964.42	162	\$ 82,176.19	8	\$ -
2001	4,343	\$ 1,147,271.74	390	\$ 655.65	146	\$ 42,072.52	54	\$ 2,536.70
2002	4,464	\$ 292,073.99	243	\$ 5,072.71	171	\$ 48,914.93	39	\$ 1,563.24
2003	5,015	\$ 333,531.54	93	\$ 9,056.47	187	\$ 72,649.18	11	\$ 1,199.22
2004	6,037	\$ 411,638.10	215	\$ 41,893.77	247	\$ 121,506.31	10	\$ 2,928.79
2005	6,125	\$ 537,763.52	158	\$ 20,348.49	173	\$ 79,552.35	5	\$ 1,196.77
2006	7,069	\$ 715,607.55	199	\$ 32,122.34	207	\$ 109,366.59	5	\$ 5,808.51
2007	9,990	\$ 1,012,156.95	339	\$ 49,657.29	308	\$ 171,176.34	16	\$ 6,869.33
2008	7,711	\$ 722,469.02	537	\$ 123,713.89	241	\$ 102,477.39	16	\$ 3,886.13
2009	10,008	\$ 897,676.79	437	\$ 78,624.48	289	\$ 102,202.80	16	\$ 6,877.38
2010	11,676	\$ 868,453.92	609	\$ 77,297.31	459	\$ 217,779.61	34	\$ 14,995.21
2011	10,060	\$ 690,669.26	694	\$ 86,030.44	358	\$ 150,370.86	29	\$ 14,283.92
2012	8,904	\$ 579,095.18	551	\$ 43,800.17	392	\$ 143,849.80	22	\$ 9,375.02
2013	9,143	\$ 700,397.05	382	\$ 33,431.11	382	\$ 132,957.76	13	\$ 3,984.21
2014	9,653	\$ 767,237.92	449	\$ 41,577.95	446	\$ 187,916.19	23	\$ 6,680.08
2015	7,935	\$ 1,059,050.09	352	\$ 89,825.47	307	\$ 193,555.40	45	\$ 24,483.49
2016	11,766	\$ 863,753.70	584	\$ 62,301.68	473	\$ 229,634.50	62	\$ 9,182.84
TOTAL	145,422	\$ 12,169,237.03	7,121	\$ 797,990.56	5,797	\$ 2,395,257.97	412	\$ 116,504.94
YEARLY MEAN	7,654	\$ 676,069.28	375	\$ 41,999.77	305	\$ 126,066.84	22	\$ 6,472.55

**TABLE II**  
**WITHDRAWN SHARE ISSUES: A COUNTRY-LEVEL PERSPECTIVE**

Table II reports the incidence of share issues' withdrawals for countries experiencing at least 5 SIPs' withdrawals. The reported frequencies are relative to the time period from 1998 to 2016. Percentage are rounded to the second decimal unit.

country	Privately Owned Firms				State Own Enterprises			
	Total	Successful	Withdrawal	% of withdrawal	Total	Successful	Withdrawal	% of withdrawal
Australia	18687	18387	300	1.61%	234	222	12	5.13%
Brazil	930	884	46	4.95%	89	81	8	8.99%
China	7772	6834	938	12.07%	1405	1250	155	11.03%
Czech Republic	50	43	7	14.00%	22	16	6	27.27%
France	2282	2196	86	3.77%	101	96	5	4.95%
Greece	571	525	46	8.06%	80	71	9	11.25%
Hong Kong	5512	5328	184	3.34%	318	311	7	2.20%
India	4815	4676	139	2.89%	388	370	18	4.64%
Italy	1005	892	113	11.24%	106	88	18	16.98%
Malaysia	2133	2052	81	3.80%	129	123	6	4.65%
Norway	860	826	34	3.95%	27	22	5	18.52%
Poland	1152	1127	25	2.17%	135	123	12	8.89%
Russian Fed	730	677	53	7.26%	224	210	14	6.25%
Singapore	2212	2149	63	2.85%	119	113	6	5.04%
South Korea	5630	5433	197	3.50%	176	169	7	3.98%
Taiwan	3748	3233	515	13.74%	55	50	5	9.09%
Turkey	569	513	56	9.84%	48	40	8	16.67%
United Kingdom	9722	9516	206	2.12%	128	122	6	4.69%
United States	23594	21643	1951	8.27%	192	174	18	9.38%
Vietnam	940	892	48	5.11%	238	223	15	6.30%

**TABLE III**  
**WITHDRAWN PRIVATIZATIONS: AN INDUSTRY-LEVEL PERSPECTIVE**

Table III reports the incidence of share issues' withdrawal within different industry groups. AFF (Agriculture, Forestry and Fishing) is defined as firms operating in sectors from 01 to 09 in the 2-digit SIC classification. Mining includes firms active in 2-digit SIC 10 to 14. Construction incorporates companies working in the 2-digit SIC code from 15 to 17. TCEGS (Transportation, Communications, Electric, Gas & Sanitary Services) includes firms active in the 2-digit SIC from 40 to 49. Wholesale Trade incorporates firms in the 2-digit SIC 50 and 51. Retail Trade is defined as all firms operating in the 2-digit SIC 52 to 59. FIR (Finance, Insurance and Real Estate) includes all firms active in SIC 60 to 67. Services describes all sectors defined with 2-digit SIC 70 to 89. Finally, Public Administration includes all firms active in SIC 91 to 99. The reported frequencies are relative to the time period from 1998 to 2016. Percentages are rounded to the second decimal unit.

Industry	Privately Owned Firms				State Owned Enterprises			
	Total	Successful IPO	Withdrawal	% of withdrawal	Total	Successful IPO	Withdrawal	% of withdrawal
AFF	1054	1000	54	5.12%	67	63	4	5.97%
Mining	34893	33888	1005	2.88%	613	591	22	3.59%
Construction	2416	2292	124	5.13%	182	172	10	5.49%
Manufacturing	41597	39173	2424	5.83%	1681	1550	131	7.79%
TCEGS	9447	8962	485	5.13%	1424	1324	100	7.02%
Wholesale Trade	3416	3237	179	5.24%	100	93	7	7.00%
Retail Trade	3732	3516	216	5.79%	77	71	6	7.79%
FIR	28701	27609	1092	3.80%	1360	1283	77	5.66%
Services	22566	21364	1202	5.33%	388	349	39	10.05%
Public Administration	240	234	6	2.50%	84	76	8	9.52%

**TABLE IV**  
**SUMMARY STATISTICS**

Table IV reports summary statistics for successful and withdrawn SIPs. Panel A reports accounting and financial variables. Panel B shows summary statistics for the available political variables. Variables' description is provided in Table A.I. All values are rounded to the second decimal unit. Monetary values are deflated to 2010 \$. All values are Winsorized at the 1% level. For non-U.S. firms, the yearly average exchange rates have been applied for conversion. For Countries that adopted the Euro in January, 1999, the exchange rate of the original country was used till the end of the fiscal year 1998.

<b>Panel A: Accounting and Financial Variables</b>						
Variable	Successful Privatizations			Withdrawn Privatizations		
	N	Mean	Median	N	Mean	Median
Total Assets	839	6,222.08	1,254.25	427	12,767.33	3,166.69
# of Employees	839	15,979.41	4,272.00	427	25,929.91	5,940.00
Sales Growth	839	1.81	1.08	427	1.56	0.64
ROS	839	7.22	4.50	427	8.20	5.85
Labor Efficiency (NIEFF)	839	2.01	0.74	427	4.58	1.21
Labor Efficiency (SALEFF)	839	40.08	17.29	427	77.91	23.07
Labor Intensity	839	5.14	3.78	427	4.13	2.09
Leverage	839	31.16	29.38	427	31.94	29.84
CETA	839	7.37	5.89	427	7.15	5.85
CESA	839	9.51	17.68	427	9.35	17.46
Accruals	826	11.76	14.22	405	9.56	7.00
IPO	839	13.70	0.00	427	19.20	0.00
1 month market returns	839	6.24	4.29	427	1.56	1.32
# of IPOs	839	304.03	358.00	427	169.74	102.00
GDP per Capita	839	8.53	8.63	427	8.86	9.08
<b>Panel B: Political Variables</b>						
Cumulative Proceeds from SIPs	839	116.37	124.90	427	80.91	14.76
Public Debt	839	28.70	26.10	427	43.28	32.85
Left-wing Government	839	95.23	1.00	427	71.19	1.00
election year	839	1.67	0.00	427	13.33	0.00
Political Competitiveness	839	93.71	1.00	427	62.12	1.00
Politi IV Index	839	-5.96	-7.00	427	0.74	-7.00

**TABLE V**  
**THE DECISION TO WITHDRAW A SIP**

Table V reports estimates for five in-sample probability models analyzing the determinants of the decision to withdraw a previously filed SIP. The dependent variable is set equal to one for withdrawn SIPs, zero otherwise. All variables are described in Table A.1. All continuous variables are standardized, with mean 0 and standard deviation 1. Model 1 is a Linear Probability Models (LPM) estimated via GLM. Model 2 is a Probit model; finally, Model 3, Model 4 and Model 5 are Probit models for which Odds Ratios are reported. Probit and Logit models are estimated via Maximum Likelihood Estimation (MLE). All models include a constant term. Additional Controls includes GDP per capita level and growth, and a dummy variable set equal to one if the share issue is an IPO, zero otherwise. Robust standard errors are employed in all five specifications. \*, \*\*, \*\*\* indicate statistical significance at 10%, 5% and 1%, respectively.

VARIABLES	(1) GLM	(2) Probit	(3) Logit Model	(4) Logit Model	(5) Logit Model
CETA	-0.0143 (0.0181)	-0.0438 (0.0831)	0.929 (0.172)	0.904 (0.182)	0.956 (0.196)
Log Total Assets	0.0522* (0.0292)	0.203* (0.120)	1.460 (0.348)	1.465 (0.356)	1.477* (0.338)
Sales Growth	0.0329** (0.0157)	0.118* (0.0705)	1.238 (0.162)	1.233 (0.165)	1.179 (0.174)
ROS	-0.0117 (0.0325)	-0.0575 (0.116)	0.900 (0.191)	0.934 (0.198)	0.854 (0.210)
Labor Intensity	0.0168 (0.0156)	0.0543 (0.0671)	1.099 (0.141)	1.045 (0.161)	1.080 (0.141)
Leverage	0.0118 (0.0112)	0.0563 (0.0390)	1.110 (0.0758)	1.118 (0.0838)	1.037 (0.0747)
Sales Efficiency (NIEFF)	0.0846*** (0.00989)	0.284*** (0.0502)	1.620*** (0.156)	1.598*** (0.142)	1.678*** (0.195)
Accruals	0.0118 (0.0156)	0.0692 (0.0506)	1.143 (0.104)	1.105 (0.0897)	1.080 (0.0947)
Public Debt	-0.0521 (0.0355)	-0.235 (0.153)	0.600 (0.258)	0.589 (0.241)	0.835 (0.235)
Politi IV Index	0.259*** (0.0703)	0.948*** (0.291)	7.166** (6.895)		
Democracy				22.21*** (24.42)	
Left Wing Government	-0.0152 (0.121)	-0.129 (0.512)	0.999 (1.104)	0.530 (0.649)	0.608 (0.668)
Election Year	0.0247 (0.122)	0.0736 (0.708)	1.303 (2.298)	1.517 (2.493)	4.755 (7.248)
Political Competitiveness	0.154 (0.107)	0.868* (0.517)	7.711 (13.36)	1.414 (1.200)	0.304** (0.194)
Cumulative Privatizations to GDP	0.0512*** (0.0116)	0.173** (0.0707)	1.374** (0.221)	1.434* (0.294)	1.316* (0.218)
Market returns	0.0163 (0.0222)	0.0802 (0.103)	1.143 (0.221)	1.173 (0.212)	1.071 (0.256)
IPO Wave	0.0560* (0.0296)	0.200** (0.0997)	1.533** (0.326)	1.519* (0.326)	1.424 (0.312)
Additional Controls	Yes	Yes	Yes	Yes	Yes
Country Effects	Random	Random	Random	Random	Random
Observations	225	225	225	225	225
Log Likelihood	-98.76	-99.34	-98.52	-98.23	-100.77

**TABLE VI**  
**DIFFERENCE IN PRE-PRIVATIZATION TRENDS**

Table VI reports results for a test for difference in trends over the pre-privatization period between successful and withdrawn SIPs. Withdrawal is a dummy which equals one if the transaction is withdrawn, zero otherwise. Linear Trend is a variable set equal to one, two, or three as a function of the number of years missing to the attempted transaction. Standard errors are clustered at a country level. The regressions are run over the three years preceding the successful/withdrawn SIP, to. All regressions include Country and Fiscal Year Fixed Effects. \*, \*\*,\*\*\* indicate statistical significance at 10%, 5% and 1%, respectively.

VARIABLES	(1) Total Assets	(2) # of Employee	(3) Labor Intensity	(4) ROS	(5) NIEFF
withdrawal	2,185 (2,795)	12,731 (8,775)	-2.474*** (0.772)	0.0339*** (0.0106)	0.0152 (0.0106)
Linear Trend	1,583*** (340.5)	1,512 (2,628)	-0.572** (0.235)	0.0109* (0.00548)	0.000695 (0.00358)
withdrawal x Linear Trend	-167.9 (635.9)	-2,503 (2,231)	0.545** (0.241)	-0.0167*** (0.00547)	0.00105 (0.00613)
Constat	Yes	Yes	Yes	Yes	Yes
Fiscal Year FE	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes
Observations	724	724	724	724	724
Adjusted R-squared	0.357	0.138	0.112	0.123	0.075
VARIABLES	(6) SALEFF	(7) Leverage	(8) CETA	(9) CESA	(10) Accruals
withdrawal	0.208 (0.163)	-0.00136 (0.0185)	0.0129* (0.00709)	0.0982** (0.0433)	0.0457* (0.0241)
Linear Trend	-0.0784 (0.0669)	0.0374*** (0.00548)	0.00617*** (0.00147)	0.0328*** (0.00920)	0.0221*** (0.00295)
withdrawal x Linear Trend	0.0455 (0.0722)	0.00974 (0.00888)	-0.00435 (0.00352)	-0.0148 (0.0119)	-0.0173 (0.0135)
Constant	Yes	Yes	Yes	Yes	Yes
Fiscal Year FE	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes
Observations	724	724	724	724	693
Adjusted R-squared	0.033	0.111	0.074	0.061	-0.007

**TABLE VII**

**THE ECONOMIC CONSEQUENCES OF PRIVATIZATION WITHDRAWALS: DiD**

Table VII, Panel A reports results for a difference in difference (DiD) model aimed to study the economic consequences of a SIP's withdrawal. Panel B reports the estimated interaction term for 3 conservative models. "Additional Controls" include the variables for which a different pre-privatization trend was identified in Table VI, and a set of country level macroeconomic and political variables including GDP per capita level and growth, the Politi Index, a dummy variable sets equal to one if the majority party coalition is defined as "left wing", a dummy variable sets equal to one if an executive or a legislative election is scheduled over the 12 months following the privatizations, and the variable "Political Competitiveness". The probit score estimated in Table V, model 3 is used as an instrument in the two 2SLS specifications for the endogenous regressor "withdrawal". Post is a dummy which equals one if the observation occurs after the transaction is completed, 0 otherwise. Standard Errors are clustered at the Country level in all regressions, which are run over the period from three years before the event, to three years after the event. \*, \*\*, \*\*\* indicate statistical significance at 10%, 5% and 1%, respectively.

<b>Panel A: Endogenous DiD</b>				
VARIABLES	(1) ROS	(2) NIEFF	(3) SALEFF	(4) # of Employee
post	0.0403*** (0.0134)	-0.00259 (0.0162)	-0.182 (0.351)	23,771*** (5,109)
withdrawal	0.0163 (0.0109)	0.0347*** (0.00647)	0.607*** (0.103)	2,739 (7,872)
interaction	0.0146 (0.0110)	-0.0240** (0.0112)	-0.558* (0.269)	-4,440 (4,287)
Fiscal Year FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Observations	755	755	755	755
Adjusted R-squared	0.138	0.067	0.046	0.158
VARIABLES	(5) Labor Intensity	(6) CETA	(7) CESA	(8) Accruals
post	-1.959*** (0.449)	0.0172*** (0.00508)	0.111*** (0.0234)	-0.0455*** (0.0102)
withdrawal	-1.615** (0.767)	-0.0113** (0.00468)	+0.00230 (0.0133)	0.0284*** (0.00856)
interaction	0.871*** (0.214)	-0.00369 (0.00554)	-0.0537** (0.0218)	-0.0403*** (0.0127)
Fiscal Year FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Observations	755	755	755	736
Adjusted R-squared	0.253	0.110	0.081	0.034
<b>Panel B: Robustness Checks</b>				
	Endogenous DiD with additional Controls	2SLS DiD	2SLS with additional controls	
ROS	0.0195	0.0453**	0.0443	
NIEFF	-0.0289*	-0.0921***	-0.110***	
SALEFF	-0.606*	-1.419**	-1.611***	
# of Employee	-5,343	-1,074	-3,177	
Labor Intensity	1.138***	1.959**	3.309***	
CETA	-0.00389	-0.0346***	-0.0392***	
CESA	-0.0538***	-0.0935***	-0.0867***	
Accruals	-0.0415**	-0.134***	-0.156***	

**TABLE VIII**  
**DIFFERENCE IN PRE-PRIVATIZATION TRENDS: MATCHED SAMPLE**

Table VIII reports results for a test for difference in trends over the pre-privatization period between the successful and withdrawn SIPs included in the matched sample. Withdrawal is a dummy which equals one if the transaction is withdrawn, zero otherwise. Linear Trend is a variable set equal to one, two, or three as a function of the number of years missing to the attempted transaction. Standard errors are clustered at a country level. The regressions are run over the three years preceding the successful/withdrawn SIP. All regressions include Country and Fiscal Year Fixed Effects. \*, \*\*,\*\*\* indicate statistical significance at 10%, 5% and 1%, respectively.

VARIABLES	(1) Total Assets	(2) # of Employee	(3) Labor Intensity	(4) ROS	(5) NIEFF
withdrawal	-2,448 (2,711)	-13,996 (11,005)	-0.346 (2.118)	-0.0365 (0.0487)	0.0253* (0.0119)
Linear Trend	-975.7 (1,968)	-6,553* (3,829)	-0.291 (0.663)	0.0267* (0.0184)	0.0253** (0.00890)
withdrawal x Linear Trend	-1,949 (1,247)	2,850 (3,773)	0.0945 (0.348)	0.00809 (0.00937)	0.0115 (0.00626)
Constat	Yes	Yes	Yes	Yes	Yes
Fiscal Year FE	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes
Observations	220	220	220	220	220
Adjusted R-squared	0.197	0.173	0.502	0.152	0.030
VARIABLES	(6) SALEFF	(7) Leverage	(8) CETA	(9) CESA	(10) Accruals
withdrawal	1.146** (0.383)	-0.0748 (0.0448)	-0.0386 (0.0257)	-0.270* (0.132)	0.0203 (0.0546)
Linear Trend	0.452** (0.182)	0.0404*** (0.0115)	-0.00355 (0.00575)	0.0168 (0.0322)	0.00738* (0.0133)
withdrawal x Linear Trend	-0.0543 (0.0316)	0.00789 (0.0155)	0.0111 (0.00646)	0.0663* (0.0330)	0.0159 (0.0219)
Constant	Yes	Yes	Yes	Yes	Yes
Fiscal Year FE	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes
Observations	220	220	220	220	214
Adjusted R-squared	-0.019	0.223	0.125	0.221	-0.029



**TABLE IX**  
**MATCHED SAMPLE: DiD & PSM**

Table IX, Panel A reports results for a difference in difference (DiD) model aimed to study the economic consequences of a SIP's withdrawal. Panel B reports estimates for the same models, in which additional controls have been added. "Additional Controls" include the variables for which a different pre-privatization trend was identified in Table VIII, and a set of country level macroeconomic and political variables including GDP per capita level and growth, the Politi Index, a dummy variable sets equal to one if the majority party coalition is defined as "left wing", a dummy variable sets equal to one if an executive or a legislative election is scheduled over the 12 months following the privatiations, and the variable "Political Competitiveness". Post is a dummy which equals one if the observation occurs after the transaction is completed, 0 otherwise. Standard Errors are clustered at the Country level in all regressions, which are run over the period from three years before the event, to three years after the event. \*, \*\*, \*\*\* indicate statistical significance at 10%, 5% and 1%, respectively.

<b>Panel A: No Additional Controls</b>				
VARIABLES	(1)	(2)	(3)	(4)
	ROS	NIEFF	SALEFF	# of Employee
post	0.0479** (0.0150)	0.0400*** (0.00829)	0.440*** (0.115)	5,504 (6,167)
withdrawal	-0.0292 (0.0288)	0.0354** (0.0139)	0.806*** (0.192)	-995.9 (5,664)
interaction	0.0362** (0.0148)	-0.0238*** (0.00497)	-0.443*** (0.117)	7,056*** (1,800)
Fiscal Year FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Observations	390	390	390	390
Adjusted R-squared	0.143	0.015	-0.006	0.133
VARIABLES	(5)	(6)	(7)	(8)
	Labor Intensity	CETA	CESA	Accruals
post	-1.254 (0.742)	0.0307*** (0.00403)	0.0681** (0.0222)	0.0183 (0.0166)
withdrawal	-0.0980 (2.190)	-0.0147 (0.0135)	-0.159* (0.0757)	0.0419* (0.0201)
interaction	-0.577 (0.601)	-0.000216 (0.00723)	0.0505 (0.0278)	-0.0388 (0.0216)
Fiscal Year FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Observations	390	390	390	384
Adjusted R-squared	0.570	0.162	0.225	0.029

<b>Panel B: Additional Controls</b>				
VARIABLES	(1) ROS	(2) NIEFF	(3) SALEFF	(4) # of Employee
post	0.0394*** (0.00826)	0.0451** (0.0123)	0.527** (0.146)	14,248** (5,788)
withdrawal	-0.00405 (0.0244)	0.0336* (0.0171)	0.702*** (0.156)	-2,033 (3,068)
interaction	0.0286*** (0.00660)	-0.0257*** (0.00377)	-0.438*** (0.0940)	5,456* (4,619)
Fiscal Year FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Additional Controls	Yes	Yes	Yes	Yes
Observations	390	390	390	390
Adjusted R-squared	0.143	0.015	-0.006	0.133
VARIABLES	(5) Labor Intensity	(6) CETA	(7) CESA	(8) Accruals
post	-0.212 (0.868)	0.0335*** (0.00326)	0.0785** (0.0220)	0.00279 (0.0198)
withdrawal	-0.320 (1.379)	-0.0131 (0.0154)	-0.160* (0.0809)	0.0625*** (0.0130)
interaction	-0.744 (0.567)	-0.000416 (0.00801)	0.0493 (0.0313)	-0.0404** (0.0160)
Fiscal Year FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Additional Controls	Yes	Yes	Yes	Yes
Observations	390	390	390	384
Adjusted R-squared	0.570	0.162	0.225	0.029

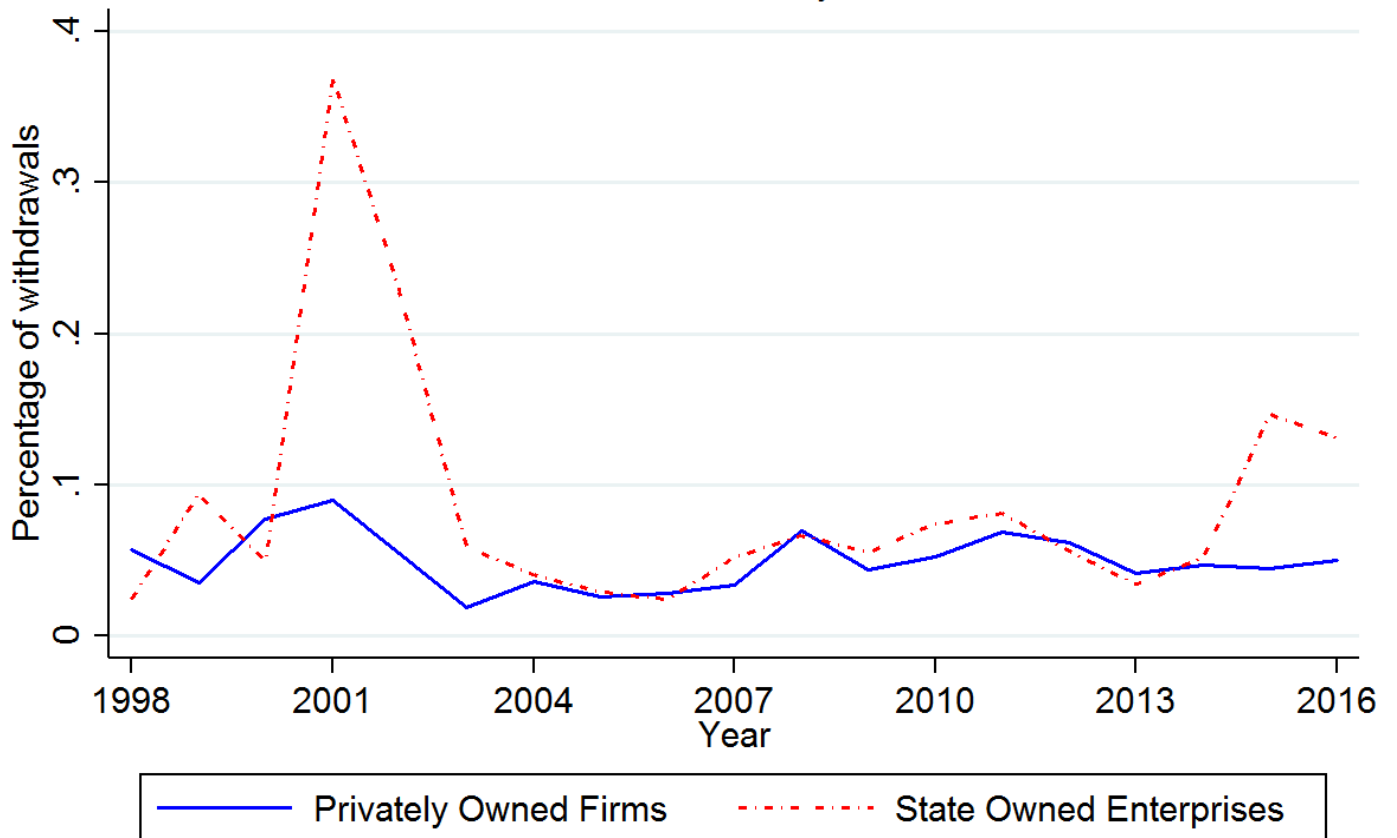
**TABLE X**  
**THE ECONOMIC CONSEQUENCES OF PRIVATIZATION WITHDRAWALS: IV APPROACH**

Table X reports estimates for a dynamic 2SLS model. The fitted values from the logit model estimated in Table V, Model 3 are the used instrument for the endogenous decision to withdraw a previously filed SIP. Withdrawn is a dummy variable that is set equal to one if the SIP is withdrawn before completion, 0 otherwise. Second Period and Third period are dummy variables indicating the second and third fiscal year following the event date, respectively. Control variables include the average value of the dependent variable over the three years preceding the attempted privatization, a dummy variable sets equal to one if the majority party coalition is defined as “left wing”, a dummy variable sets equal to one if an executive or a legislative election is scheduled over the 12 months following the privatizations, and the variable “Political Competitiveness”. All regressions include fiscal year and country fixed effects, and they are estimated over the three years following the event; standard errors are clustered by country. \*, \*\*, \*\*\* indicate statistical significance at 10%, 5%, and 1%, respectively.

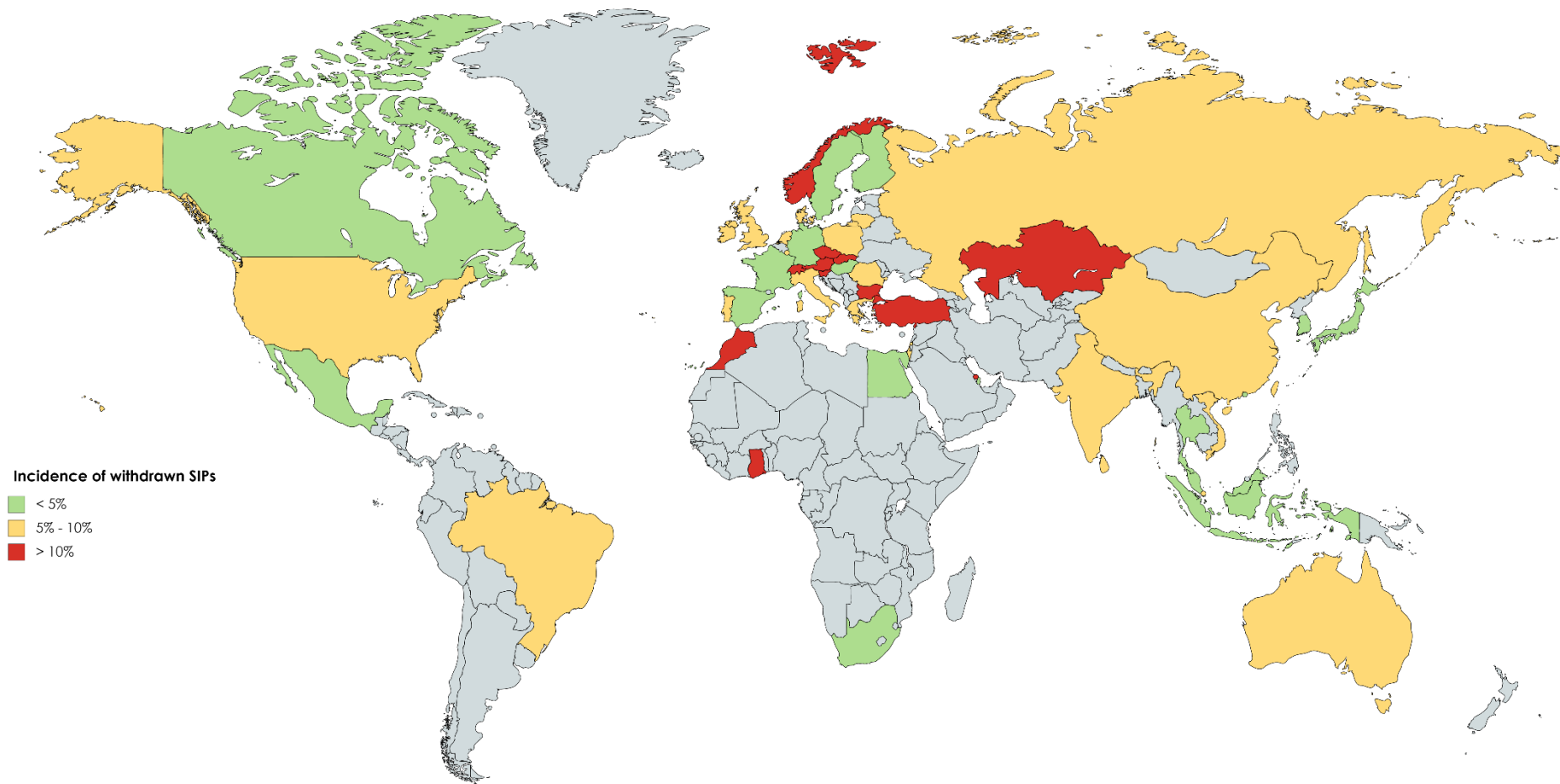
VARIABLES	(1) ROS	(2) NIEFF	(3) SALEFF	(4) # of Employee
Withdrawal	0.0636*** (0.0246)	0.0303* (0.0177)	-0.191 (0.228)	5,117 (3,713)
Second Period x Withdrawal	-0.0220** (0.0105)	-0.0175** (0.00786)	-0.150*** (0.0479)	-2,579 (2,926)
Third Period x Withdrawal	-0.0453* (0.0234)	-0.0529*** (0.0166)	-0.465*** (0.159)	-10,147 (6,613)
Fiscal Year FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Additional Controls	Yes	Yes	Yes	Yes
Cragg-Donald F-Statistic	9.99	5.87	8.66	10.24
Observations	251	251	251	251
Adjusted R-Squared	0.643	0.318	0.728	0.976
VARIABLES	(5) Labor Intensity	(6) CETA	(7) CESA	(8) Accruals
Withdrawal	-0.534** (0.265)	-0.0669** (0.0281)	-0.0825*** (0.0248)	-0.127* (0.0658)
Second Period x Withdrawal	0.198 (0.225)	-0.0145*** (0.00535)	-0.0557*** (0.0145)	0.00164 (0.0142)
Third Period x Withdrawal	0.214 (0.367)	-0.0199* (0.0105)	-0.0568** (0.0277)	0.0164 (0.0328)
Fiscal Year FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Additional Controls	Yes	Yes	Yes	Yes
Cragg-Donald F-Statistic	10.62	8.46	9.94	9.39
Observations	251	251	251	251
Adjusted R-Squared	0.801	-0.013	0.393	-0.000

# Incidence of Share Issues' Withdrawals

State Owned Vs Privately Owned firms

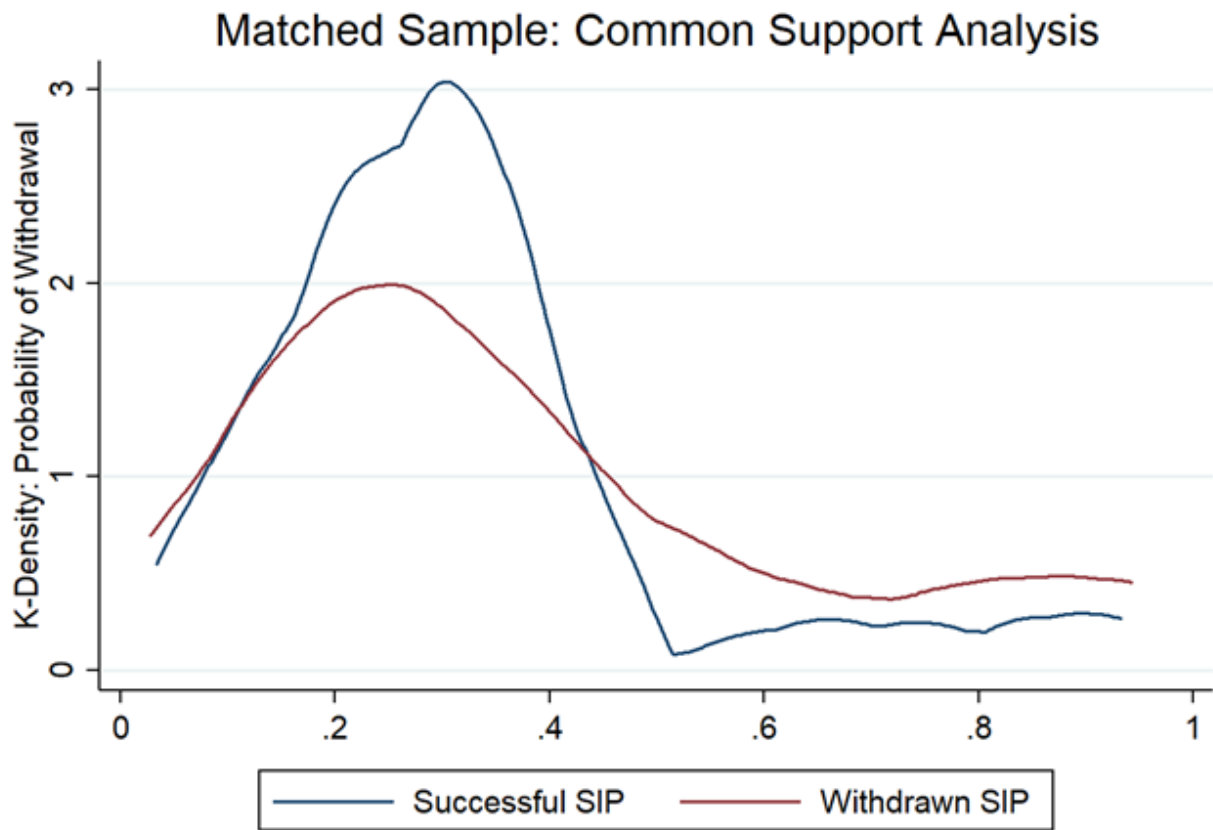


**Figure I:** Incidence of share issues' withdrawals over the period 1998-2016. Source: SDC Platinum & Datastream.



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**Figure II:** Incidence of withdrawn SIPs. Source: SDC Platinum & Datastream.



**Figure III:** Common support analysis. The probability of withdrawal is estimated as the fitted values from the logit regression reported in Table V, Model 3.