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# Confidence building and politics in privatization: some evidence from Spain

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## Abstract

This paper analyzes privatization on the stock market and has two main findings. First, SIPs' underpricing is consistent with the confidence-building hypothesis derived from political risk under asymmetric information. Larger initial returns occurred in the early stages of privatization, which is consistent with the hypothesis that governments use underpricing to be credible privatizers. Second, evidence gives support to the hypothesis that explicit political motives influence the design of privatization, which is affected by the political majority.

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## 1. Introduction and background

Studies of privatization have consistently shown that Share Issue Privatizations (SIPs) result in underpricing. Seminal works by Vickers and Yarrow (1988) and Jenkinson and Mayer (1988) reported heavy underpricing in UK and France. Further works have focused on SIPs all over the world and show SIP underpricing in a wide sample of countries (Perotti and Guneş, 1993; Dewenter and Malatesta, 1997; Bel, 1998; Jones et al., 1999).<sup>1</sup>

Research on underpricing of privatization has put strong emphasis on political risk under asymmetric information. Perotti and Guneş (1993) analyze several countries and find that sale programs tend to be initially gradual. As policy credibility increases, initial sales tend to be larger and revenues from privatization increase over time. Underpricing may also be used as a signal of

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<sup>1</sup>Meggison and Netter (2001) contains a recent and wide review on privatization, including this issue.

commitment. Perotti (1995) put forward the confidence building hypothesis. He shows that gradual sales can be used to establish confidence on a stable government policy with respect to privatized firms. Partial privatization signals that government will not change its policy in the future. The testable implication is that there is no need for a credible government to signal commitment, and it will be able to privatize larger stakes and reduce underpricing.<sup>2</sup> Time and stable policies are important to the build up of confidence. Cherian and Perotti (2001) and Perotti and Laeven (2001) do formal work on confidence building and they establish the proposition that confidence in the government commitment (and thus stock prices) increases over time as long as there is no policy reversal. Evidence in Huibers and Perotti (1999) and in Perotti and van Oijen (2001) show that only the actual implementation of the privatization program contributes to the build up of confidence in a more reliable economic environment.

Besides political risk under asymmetric information and the confidence building hypothesis, a second and more recent strand of theoretical literature on the design of privatization schemes has been developed. Biais and Perotti (2002) analyze how politicians prefer to design sale programs within an explicit political economy framework. They show that a market-oriented (right-wing) government might design a sale program to ensure that the middle class participates in it, what would make this group more likely to oppose redistribution policies proposed by left-wing opposition. Several hypothesis can be derived from Biais and Perotti's work. First, privatization is more likely to be implemented by right-wing governments. Likewise, underpricing is more likely under right-wing governments, who allocate significant stocks of share ownership to the population. These hypothesis have been tested in some empirical works. Bortolotti et al. (2001) find that privatization is effectively affected by the political majority. Siniscalco et al. (2001) conclude that privatization is associated with a right-wing majority, and conservative governments are also correlated with higher privatization revenues and large scale privatization programs.<sup>3</sup>

Within the framework of these two not mutually exclusive strands in the theoretical literature, we study the political economy of privatization on the stock market using evidence from the Spanish experience. First, we analyze the factors that explain initial returns in SIPs. To do so we set up a model to estimate the factors that explain underpricing, and apply it to see how political risk under asymmetric information affects underpricing. The results show that larger underpricing occurred in the early stages of privatization in Spain. This suggests that underpricing was used so that government can build good reputation as seller. However, once the privatization program becomes progressively implemented over time, underpricing dramatically decreases, and strictly financial asymmetric information appears to be the main factor explaining SIPs underpricing. In addition to that, we study whether there are differences between right-wing and left-wing governments concerning percentage of stock sold, privatization revenues and scale of the privatization program. The results indicate that the right-wing government is associated to the sale of larger stocks, higher revenues and broader scale of privatization program.

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<sup>2</sup>Schmidt (2000) sets up a formal model on the optimal design of privatization given the risk of expropriation through renationalization.

<sup>3</sup>Baake and Oechssler (2001) find similar results in their analysis of the 1996 partial sale of Deutsche Telekom.

## 2. A model to explain initial returns in share issue privatizations

The central hypothesis tested here is that political risk under asymmetric information influences initial returns in SIPs, and underpricing is used to build up confidence of investors in the privatization program. To test the hypothesis, I regress *initial returns* (*IR*) for SIPs on a set of variables that are next specified.

### 2.1. The dependent variable

Analysis on SIP underpricing looks at the change in the asset price soon after its trading in the stock market began. The standard procedure to study underpricing calculates the change in the asset price relative to movements in the stock exchange index. I take market adjusted one-day initial returns *IR* as dependent variable.

### 2.2. The explanatory variables

Many works since Beatty and Ritter (1986) and Ritter (1987) have found that underpricing decreases with offer size in private firms. However, other works have challenged this evidence (Muscarella and Vetsuypens, 1989; Megginson and Weiss, 1991). If asymmetric information effects hold, we expect that underpricing and offer size will have a negative relationship, since large firms are better known. As in Dewenter and Malatesta (1997), I specify the variable *offer size* (*OS*) as the quotient between the value of the offer and gross domestic product.

Stock market trading offers cheap and relatively good information on assets value. This is why there is an essential difference between initial SIPs and subsequent (or seasoned) SIPs: asymmetric information is much lower in seasoned than in initial SIPs. Since Smith (1986), many works on private firms have reported smaller underpricing in seasoned SIPs. I define a dummy variable, *Initial SIP* (*ISIP*), that takes value 1 when the SIP was initial, and value 0 otherwise. It is expected a positive relationship between Initial SIP and underpricing.

Political risk about stable government policy can influence underpricing. SIPs are usually single sales within a privatization process, and private investors can gradually learn about the characteristics and purposes of the privatization program. They can also check whether the government policy on privatized firms remain stable over time. Therefore, early SIPs carry more political uncertainty than SIPs that happen once the program has already got a certain degree of implementation. Once investors confidence has grown up and reversal of privatization is difficult, governments—which have already acquired ‘good seller-reputation’—can reduce underpricing and privatize larger stocks (Perotti, 1995).

Consequently, I define the variable *Seller-Reputation* (*SR*). To see if the temporal pattern of SIPs affects underpricing, I specify *SR* in two alternative ways: (1)  $SR_1$  is specified as a dummy variable that takes value 1 for SIPs in the earliest stage of the Spanish privatization process (1986–89, which could be called ‘confidence building period’) and takes value 0 otherwise.<sup>4</sup> (2) I consider a second

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<sup>4</sup>I owe to Jeffrey Netter the idea of considering a group with the earliest SIPs made, within a well defined period.

variable to test for seller reputation,  $SR_2$ . It is specified as an order statistic indicating the order of the offer within the privatization process. In this I follow Dewenter and Malatesta (1997), that use an order statistic to test for the existence of a temporal pattern.

Finally, the model includes two additional variables: (1) *percent of capital sold* (%KS), since Perotti (1995) predicts that when governments privatize large stakes of firms they must underprice to sell the offer; (2) *regulated markets* (RM), since Perotti and Guney (1993) and Perotti (1995) suggest that underpricing should be larger in firms like utilities because of a signaling argument: these firms bear greater future policy risks. For both variables empirical results so far are mixed, ranging from positive relation to nonsignificance (Menyah et al., 1995; Dewenter and Malatesta, 1997) and (Jones et al., 1999).

### 2.3. The model

I specify a model of the following kind for market adjusted one-day initial returns:

$$IR_i = \beta_0 OS_i^{\beta_1} \%KS_i^{\beta_2} e^{(\beta_3 ISIP_i + \beta_4 SR_i + \beta_5 RM_i)} u_i \quad (1)$$

where:  $IR_i$ =initial return;  $OS_i$ =offer size;  $\%KS_i$ =percent of capital sold;  $ISIP_i$ =initial SIP, 1-0 dummy variable;  $SR_i$ =seller reputation ( $SR_1$ ), 1-0 dummy variable (note that  $SR_2$  is specified as an order statistic);  $RM_i$ =regulated market (utilities), 1-0 dummy variable; and  $u_i$ =random error term.

### 3. Factors explaining SIP underpricing

The empirical analysis studies the SIPs in which the Spanish governments have sold stakes, and it covers the period between 1986, when the first SIP took place, and June 2001, after the last initial SIP (Iberia Airlines) has been carried out. The sample includes 93% of the total number of SIPs, that account for 99.9% of total proceeds. Data sources have been: (1) *Datastream International* for data on stock market asset prices and general indexes; (2) Bank of Spain's *Boletín Estadístico* for data on gross domestic product; and (3) for the rest of variables, the SIP's prospects and communications registered by the issuer agency in the Spanish Securities and Exchange Commission (CNMV), the Madrid Stock Exchange and the firms.

The double logarithmic form of the equation has been estimated:

$$\log IR = \beta_0 + \beta_1 \log OS + \beta_2 \log \%KS + \beta_3 ISIP + \beta_4 SR + \beta_5 RM + u_i \quad (2)$$

Table 1 presents the results. Eq. (1) estimates market adjusted one day initial returns when *Seller reputation* is specified as dummy variable with value 1 for SIPs in years 1986–89; Eq. (2) includes the order statistic  $SR_2$ . The explanatory capacity of equations is around 80%, and both are highly significant. Some specification tests have been made: Kolmogorov–Smirnov test for normality, as well as the Shapiro–Wilks test, specially advised for small samples. The results allow to reject the hypothesis of non-normality.

The  $t$ -values indicate that the variable *Initial SIP* is highly significant, at the 0.01 level, and its sign is as expected; Initial SIPs tend to be more underpriced than subsequent and/or seasoned ones. This is

Table 1  
Factors explaining initial returns in SIPs

Variable	Eq. (1) coefficient	Eq. (2) coefficient
Constant	−0.007	0.139
Offer size	0.004 (0.425)	0.006 (0.884)
Initial SIP	0.065* (2.813)	0.078* (4.549)
Seller reputation		
$SR_1$	0.104* (5.788)	–
$SR_2$	–	−0.006* (8.654)
Percent capital sold	−0.018 (1.282)	0.007 (0.643)
Regulated markets (utilities)	−0.022 (1.393)	0.004 (0.338)
$R^2$	0.771	0.870
Adjusted $R^2$	0.717	0.839
$F$ -ratio	14.15*	18.09*
$N$	27	27
Kolmogorov–Smirnov test	0.097	0.102
Shapiro–Wilks test	0.985	0.976

Notes:  $t$ -value in parentheses.

\* Significant at the 1% level.

consistent with asymmetric information reasons stressed in offer pricing theories. Sign for *Offer size* is positive, contrarily to expected. However, *OS* coefficient does not significantly differ from zero.

What about the results on the variables related to political risk and confidence building? Eq. (1) shows that variable  $SR_1$  has positive sign, as expected. This implies that earliest SIPs, those included in the ‘confidence building period’, yield higher initial returns. The coefficient is highly significant, at the 0.01 level. In Eq. (2), where  $SR_2$  has been tested, sign is negative, as expected, and coefficient is also highly significant. Coefficient signs and statistical significance give support to the hypothesis that there exist a temporal pattern in SIPs underpricing. In order to build a good reputation as sellers, governments use underpricing in the early stage of the privatization program. In this, our results are consistent with the confidence-building hypothesis. Therefore, our findings offer empirical support to insights that governments may use underpricing to build up confidence. Finally, I have found no statistical significance for the variables *percent of capital sold* and *regulated markets*.

#### 4. Design of the privatization schemes and political majorities

SIPs in Spain have been done under left-wing as well as right-wing governments. SIPs between 1986 and May 1996 were done by social democrat governments. In May 1996 the right-wing party

Table 2  
Summary statistics on selected variables

Variable	1986–May 1996 (left-wing government)	May 1996–June 2001 (right-wing government)	Student's <i>t</i> (absolute value)
Total revenues from SIPs $\times 10^6$ €	9502.21	22 615.29	
Total revenues as percentage of GDP of the period	0.249	0.821	
Percentage of initial SIPs in which government relinquished control	14.3	80.0	
Percentage of seasoned SIPs in which government relinquished control	0.0	85.7	
Mean percentage of stock sold in initial SIPs	34.43 (16.50)	54.40 (12.54)	2.267***
Mean privatization revenue from initial SIPs $\times 10^6$ €	268.53 (133.31)	487.41 (218.87)	2.165****
Mean initial returns in initial SIPs (%)	17.80 (4.35)	2.5 (1.39)	7.492*
Mean initial returns in seasoned SIPs (%)	0.98 (1.89)	-1.95 (1.27)	2.877**

Notes: GDP in 1986–May 1996 includes 1st and 2nd quarter of 1996. GDP in May 1996–June 2001 includes 3rd and 4th quarter of 1996, and 1st and 2nd quarter of 2001. Standard deviation in parentheses.

The differences between both periods are indicated as follows: \* significant at the 1% level; \*\* significant at the 2.5% level; \*\*\* significant at the 5% level; \*\*\*\* significant at the 10% level.

Source: *Datastream International*, Bank of Spain's *Boletín Estadístico*, SIPs prospects and communications registered in the Spanish Securities and Exchange Commission (CNMV), Madrid Stock Exchange, the Firms and own elaboration. Full information on all SIPs can be obtained from the author upon request.

took office, and thereafter all SIPs have been carried out by conservative governments. Table 2 shows summary statistics on some variables.

The results are generally consistent with the hypothesis about credible governments (Perotti, 1995) and the differences on the design of privatization between political majorities (Biais and Perotti, 2002). Right-wing governments appear associated with larger scale privatization and with effective transfer of control on the firm to the private sector.<sup>5</sup> Although the conservative period is shorter, the total revenues derived from SIPs in it are 2.4 times those of the social-democrat period. Controlling for GDP to correct for nominal changes, the ratio revenues/GDP under right-wing governments is 3.3 times larger. With respect to relinquishing control of firms, during the left-wing governments period only 14.3% of the initial SIPs and no seasoned SIP implied transfer of control, whereas under conservative governments these percentages were much larger, 80 and 85.7, respectively.

As to the design of initial SIPs, right-wing governments sold larger stakes in initial SIPs and revenues were higher in them. This evidence from Spain is consistent with the results in Bortolotti et al. (2001) and Siniscalco et al. (2001). As to initial returns in the conservative period, they were substantially lower than initial returns in the social-democrat period, and this is true for initial SIPs as well as seasoned SIPs. This seems to contradict the predictions in Biais and Perotti (2002). However

<sup>5</sup>It is worth noticing that in many cases the right-wing government established a Golden Share to retain some control on strategic decisions of privatized firms. The literature shows concerns (i.e. Megginson and Netter, 2001) on the effects of this control mechanism.

Perotti (1995) had already stated that a credible government does not need to signal commitment. That is, the fact that the privatization program was already advanced at the time that the right-wing took office, together with the fact that the right-wing was more credible in effectively relinquishing control, could explain the decrease in underpricing.<sup>6</sup>

## 5. Conclusion

Findings in this paper can be summarized as follows: (1) Initial SIPs tend to be more underpriced than seasoned SIPs, and this indicates that there is room for strictly financial asymmetric information in explaining SIPs underpricing. (2) Analysis on the existence of a negative temporal trend of underpricing endorses the hypothesis that governments use underpricing in the early stage of the privatization process, in order to be credible privatizers and build confidence. Hence, political risk under asymmetric information influences underpricing.

Over all, results on underpricing and governments suggest that in the earliest period of the privatization program underpricing could have been used to build up confidence and a good seller-reputation. Once this has been achieved, underpricing dramatically decreases. Finally, comparison between SIPs under the social-democrat government and SIPs under the conservative government gives support to the hypothesis that explicit political motives may have influenced the design of privatization, which appears to be affected by the political majority.

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<sup>6</sup>After all, the period of right-wing governments in Spain was subject to the hard budget constraint implied by the Maastricht Treaty requirements to join the third phase of the European Monetary Union.

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