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Privatization, strategic foreign direct investment and host-country welfare

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ABSTRACT

Recent evidence shows that developing countries and transition economies are increasingly privatizing their public firms and at the same time experiencing rapid growth of inward foreign direct investment (FDI). We show that there is a two-way causality between privatization and greenfield FDI. Privatization increases the incentive for FDI, which, in turn, increases the incentive for privatization compared to the situation of no FDI. The optimal degree of privatization depends on the cost difference of the firms, and on the foreign firm's mode of entry.

1. Introduction

Empirical evidence shows that many developing and transition economies are privatizing state-owned enterprises across several sectors and also experiencing significant inflow of foreign direct investment (FDI). In an earlier study on Latin America, Baer (1994) notes that the presence of foreign capital has increased as the presence of state has declined. It is documented in UNCTAD (2002) that along with a combination of several reform measures such as improved investment climate, openness to trade and FDI, macroeconomic stability, etc., privatization has increased FDI inflow over the 1990s. Using annual data of eight Asian and nine Latin American and Caribbean countries for 1990–1999, Gani (2005) shows that privatization is positively correlated to FDI. Focusing on the Central and Eastern European countries (CEECs), Merlevede and Schoors (2005) show that privatization history positively affects FDI. It has been found that, during 2000–2003, China accounted for almost 90% of the privatization proceeds[1] in East Asia and the Pacific and it is, at the same time, the biggest

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[1] Privatization proceeds are defined to include all monetary receipts to the government resulting from partial and complete divestitures (via asset sales or sale of shares), concessions, leases, and other arrangements. The data do not cover management contracts, new greenfield investments, investments committed by new private operators as part of concession agreements, and "voucher" privatizations (Kikeri and Kolo, 2005).

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FDI recipient in the region. India also shares a similar story on FDI and privatization proceeds. Other regions, such as Latin America, Europe and Central Asia, also recorded the same trend of FDI and privatization proceeds.[2]

While the empirical evidence suggests a positive correlation between privatization and FDI, the causality between these two is not immediate. To the best of our knowledge, there is no theory which helps us to understand whether privatization is the cause or consequence of FDI. We develop a simple open-economy mixed oligopoly model to understand the causality between privatization and greenfield FDI. We find complementarity between these two.

We show that privatization increases the incentive for greenfield FDI, and the possibility of greenfield FDI increases the optimal degree of privatization if the degree of privatization that is required to attract FDI is not very high. If the degree of privatization that is required to attract FDI is very high, the host-country may not prefer to induce FDI through privatization. In this situation, the optimal degree of privatization is the same with and without FDI. Thus, our analysis suggests that reforms allowing FDI and reducing state ownership can help to increase welfare by complementing each other. The cost difference between the firms, the fixed cost of undertaking FDI and the demand parameter play important roles in determining the optimal degree of privatization.

We also show that partial privatization is the optimal strategy of the host-country. In other words, neither complete privatization nor complete nationalization maximizes the host-country welfare in the presence of foreign competition. This result is in line with Maw (2002), which shows that partial privatization of the public firms are mostly observed in transition countries while their economies are increasingly open to foreign competitions.[3]

The reasons for our results are as follows. Nationalization of the domestic firm serves as a credible commitment to increase output beyond the profit-maximizing level. Thus, in an imperfectly competitive market, nationalization acts as a disciplining device by increasing the industry output. However, if the foreign firm is more cost efficient than the domestic firm, nationalization creates production inefficiency by reducing the output of the foreign firm. If the degree of nationalization reduces, it reduces the domestic firm's weight on social welfare, and induces the foreign firm to increase its output by creating a more level playing field of competition. However, since the foreign firm's cost is lower under FDI compared to exporting, the foreign firm's gain from privatization is higher under the former, thus increasing the incentive for FDI.

While privatization reduces the output of the domestic firm, it increases the output of the foreign firm, which is more cost efficient than the domestic firm. The optimal degree of privatization balances these effects, and makes partial privatization as the optimal strategy of the domestic country. If privatization induces FDI, it increases the benefit of privatization by inducing the foreign firm to choose a more cost-efficient production strategy. Hence, unless the degree of privatization which is required to attract FDI is not very high, the FDI attracting role of privatization increases the incentive for privatization compared to the situation with no FDI. However, if the degree of privatization which is required to attract FDI is very high, the negative effect of privatization due to the lower output of the domestic firm becomes the important factor, which eliminates the incentive for attracting FDI through privatization. In this situation, the degree of privation remains the same with and without the possibility of FDI. Therefore, while privatizing in the presence of FDI, a government needs to balance the loss of the disciplining effect of nationalization and the gain in cost efficiency due to FDI.

The remainder of the paper is structured as follows. The next section reviews the related literature. Section 3 describes the basic model. The effects of privatization on the incentives for FDI and welfare are shown in Section 4. Section 5 concludes.

2. Review of the related literature

A tradition of the theoretical literature on privatization is to consider mixed oligopoly models where the markets are characterized by a small number of firms and the objective function of at least one firm is not to maximize profit but to maximize welfare, in the case of a completely nationalized firm, or a combination of profit and welfare, in the case of a partially privatized firm.[4]

The works on privatization gets momentum with De Fraja and Delbono (1989), yet the earlier literature mainly focuses on closed economies to explain the relationship between privatization and several other important aspects, such as incentive delegation (Barros, 1995), endogenous market structure (Anderson et al., 1997), entry deterrence (Fershtman, 1990), cost asymmetry (Matsumura, 1998) and innovation (Ishibashi and Matsumura, 2006).[5]

The consideration of privatization in an open economy has started to attract attention only in recent years. Pal and White (1998) show the effects of privatization under strategic trade policies such as production subsidies and import tariffs. Ohori (2004) considers the effects of privatization on tariffs and environmental taxes. Ohori (2006) considers export competition between the public firms in the presence of strategic government policies. Fjell and Heywood (2002) consider privatization in a Stackelberg leader-follower structure, and show that the effects on firms' outputs, profits and welfare depend on the relative number of domestic and foreign firms. However, a common feature of these works is to ignore FDI

[2] Kikeri and Kolo (2005) provide details on privatization in developing countries.

[3] Besides the decision on complete or partial privatization, often the governments need to decide whether to privatize all the state-owned enterprises simultaneously or sequentially. See Gupta et al. (2008) for a recent discussion on this latter issue.

[4] De Fraja and Delbono (1989) provide definition of mixed oligopoly in more details.

[5] See Harris and Wiens (1980), Beato and Mas-Colell (1984) and Cremer et al. (1989) for other works on privatization.