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Whole vs. shared ownership of foreign affiliates[☆]

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ABSTRACT

This paper studies why multinational firms often share ownership of a foreign affiliate with a local partner even in the absence of government restrictions on ownership. We show that shared ownership may arise, if (i) the partner owns assets that are potentially important for the investment project, and (ii) the value of these assets is private information. In this context shared ownership acts as a screening device. Our model predicts that the multinational's ownership share is increasing in its productivity, with the most productive multinationals choosing not to rely on a foreign partner at all. This prediction is shown to be consistent with data on the ownership choices of Japanese multinationals.

1. Introduction

How the ownership of productive assets should be allocated is a central issue in the theory of the firm.[1] It is also one of the key issues multinationals have to deal with when setting up a foreign affiliate. Multinationals often have a choice between establishing a wholly owned subsidiary or sharing ownership of an affiliate with local partners. Shared ownership may take the form of majority or minority ownership, and may be established through the acquisition of a stake in a local company, or through a joint venture or another form of alliance that leads to the creation of a new business enterprise. Throughout the paper, we will use the terms shared ownership and joint venture interchangeably.

Consider a multinational enterprise that has to choose an ownership structure for its overseas affiliate. Will it assume whole ownership or share ownership with a local partner? If it chooses shared ownership, how large will its share be? We examine these questions by constructing a model in which the multinational faces no government restrictions on ownership and no financial constraints, and in which contracts can be written to ensure that the affiliate's ex-post profit is maximized. We show that under these conditions the profit-maximizing choice of ownership structure entails shared ownership if the following two conditions are met: (i) the local partner can contribute potentially valuable assets to the investment project, such as market-specific knowledge, a distribution network, or valuable contacts with potential customers and suppliers; and (ii) the value of these assets is private information of the local firm. The model predicts that in equilibrium the multinational's ownership share is increasing in the value of its own productive assets, with the most productive multinationals always choosing whole ownership. We test this prediction using Japanese firm-level data, and find that it is consistent with the ownership choices of Japanese multinationals.

Shared ownership of foreign affiliates is an empirically important phenomenon. In our data on Japanese manufacturers, a sample of 1512 investments into manufacturing affiliates located in 22 OECD countries that did not impose local ownership requirements at the time of investment, some 55% of investments were wholly owned, while 45% involved shared ownership.[2] Of these joint ventures, nearly half (48%) had a local firm as the principal investment partner, 27% were joint ventures between two Japanese companies, 10% were investments between a previously established Japanese foreign affiliate and a local firm, and 15% were between a Japanese parent and one (or more) of its previously established foreign affiliates. Thus, in some 60% of Japanese joint ventures, a local firm played the role as the main investment partner. In these joint ventures with a local partner, the principal Japanese investor on average owned a 44% share of the affiliate.

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[1] See, for instance, the seminal papers by Grossman and Hart (1986), and Hart and Moore (1990).

[2] Authors' calculation. See Appendix A.5 for information on the dataset.

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Absent any financial constraints or local ownership requirements, a necessary condition for a multinational to want to share ownership of its affiliate with a local partner is that the partner contributes valuable assets or capabilities. This is not a sufficient condition, however. If the markets for these assets worked perfectly and the two parties could write complete contracts, then the ownership structure would be indeterminate; the firms could simply write contracts to coordinate how their assets are to be used. The ownership structure therefore has to be a response to failures in the markets for these assets. In the current paper, we take this market failure to be the result of incomplete information about the value of the local firm's assets. Specifically only a local firm knows how much its assets are worth. We show that this adverse selection problem can be solved through shared ownership. By offering the local firm a menu of contracts, consisting of a share of the affiliate's ex-post profits and a transfer, the multinational can induce the local firm to reveal its information. The intuition is simple: the menu can be structured in such a way that a local firm with high-value assets would choose a contract where it keeps a large share of the ex-post profits and receives a small transfer rather than picking a contract with a small ownership share and a larger transfer, and vice versa for a local firm with less valuable assets.

Is there evidence that shared ownership is indeed a response to adverse selection? A case in point is the acquisition of a 53% stake in Philip's domestic appliances unit by Whirlpool. According to Reuer and Ragozzino (2006), shared ownership in this case was due to Whirlpool's incomplete information about the value of Philip's dealer network. Other examples include the attempted partial acquisition of Skype, a provider of internet telephony, by News Corp in 2005, and the subsequent successful partial takeover of Skype by eBay. The latter example is also interesting, since it involved a so-called contingent earn-out. Earn-outs are deals in which part of the purchase price is paid ex post, contingent on specified levels of the seller's performance, typically sales or earnings. The seller retains a stake in the company and hence in ex-post profits for a specified time, possibly forever. Such earn-outs are designed specifically to deal with situations where the value of the acquisition target is private information, and are used extensively in international acquisitions (Reuer et al., 2004). This is also confirmed by the fact that earn-outs are popular not only when entering new geographic markets, but also in industries, such as information technology, where company values are especially difficult to determine (Harris, 2002). More than half of all acquisitions of private companies, where adverse selection is a much more severe problem than in the case of publicly traded companies, involve so-called earn-outs (Real Business, 2007).[3]

Given this background, our modelling approach derives a set of contracts offered by a multinational to a potential local target firm whose productivity is private information.[4] Based on the model results, we are able to derive testable predictions regarding the multinational's ownership share in the affiliate. For a given distribution of local firms' assets, and controlling for the host-country wage rate and market size, the ownership share of the multinational is increasing in the multinational's productivity. This prediction is confirmed in our empirical analysis.

We see our model as a complement to other approaches of explaining shared ownership. Recall that in our model we assume implicitly that markets work perfectly in all respects, except that there is adverse selection. In particular, the two parties can write complete contracts to solve ex-post incentive problems, so that the affiliate's profit can be maximized and distributed according to the agreed-upon sharing rule. In Nakamura and Xie (1998) contract incompleteness is the market failure underlying shared ownership; there is no information asymmetry. By retaining at least partial ownership of their assets, firms retain some residual rights of control over their assets. These control rights are assumed to help reduce technological spillovers and solve agency problems in running the affiliate that cannot be solved through incentive contracts.[5] The ownership share of the multinational then reflects the bargaining power of the two parties. Related explanations of partial ownership of foreign affiliates that are driven by the implicit assumption that it is impossible to solve ex-post incentive problems include Asiedu and Esfahani (2001) and Hennart (1991). In the former paper, incentive contracts fail because the parties cannot make any side-payments. In the latter paper, the multinational is only interested in some of the assets of the local firm, and will not buy the whole company if it is too costly to operate it ex post.[6]

More generally, our paper contributes to the emerging literature on the organization of firms in international markets (see Helpman, 2006; Feenstra, 2004, for recent surveys). We make two distinct contributions. First, we explain the presence of shared ownership, whereas in existing models ownership is allocated to one of the parties: either the multinational has complete ownership (as in the case of in-house production), or the local firm has whole ownership (as in the case of outsourcing). Second, we show how ownership questions arise even in a complete-contracting framework, whereas existing studies typically rely on the assumption of incomplete contracts.

In the next section we develop a model of shared ownership based on adverse selection. In Section 3 we examine how shared ownership may help the multinational overcome this problem, and in which situations the multinational will adopt this solution rather than pursue the investment project without seeking a local partner. In Section 4 we confront the predictions of the model with our Japanese firm-level data. Section 5 concludes. Appendix A contains proofs and data sources.

2. A model of shared ownership

We consider a multinational enterprise that has to decide how to establish an affiliate in the host-country market and how to own it. The multinational's first option is to undertake the investment entirely by itself and hence retain whole ownership of its subsidiary. The multinational thus relies only on its own productive assets, such as technology and marketing skills. For simplicity, we refer to this option as "greenfield investment". The second option is to undertake the investment in cooperation with a local firm. This cooperation involves the combination of the multinational's assets with those of the local firm and includes a contract specifying a payment T from the multinational to the local firm for the use of its assets and a sharing rule for the resulting profit, where s denotes the share left to the local partner. We call this option a "joint venture".[7] Assuming that the two parties can write sufficiently complete contracts to ensure that the cooperation leads to an ex-post maximization of the venture's profit, the only aspect of ownership that matters is that it provides a contractual claim on the venture's ex-post profits.[8] To avoid the

[3] For more information on earn-outs and empirical investigations into the importance of equity alliances and other forms of shared ownership in dealing with adverse selection problems see Reuer and Ragozzino (2007), and Datar et al. (2001). More generally, there is considerable evidence that adverse selection is an important factor in shaping foreign investment decisions. See, for instance, Gordon and Bovenberg (1996), and Qiu and Zhou (2006).

[4] This approach is similar to Stähler (2005) who uses it to study cross-border mergers but does not consider an outside option of the multinational. Note that our model also differs from the standard adverse selection literature, since the target firm's outside option depends on its type. For a general discussion of this kind of adverse selection models see Jullien (2000).

[5] Note that earn-outs also help to solve such moral hazard problems, because they give the seller an incentive ex post to stay with the company and to maximize profit (Herrman, 2003).

[6] In our paper we explicitly abstract from host government intervention. Joint ventures may of course be a response to such intervention (actual or anticipated). For further details see, for instance, Müller and Schnitzer (2006).

[7] Note that we assume that the joint venture is established by having the multinational acquire (part of) the local firm's assets rather than by having the multinational and the local firm cooperate to set up a new firm.

[8] Whether ownership conveys residual rights of control over assets is of no relevance in our complete contracting framework. In another paper, we distinguish between joint ventures and acquisitions by assuming that joint ventures do not coordinate outputs (see Raff et al., 2007).