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Economic slowdowns, hazard rates and foreign ownership

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ABSTRACT

This paper evaluates the link between foreign ownership and firm exit during crises, using a longitudinal micro dataset over an 18-year period. We address two main questions: first, if foreign affiliates have different failure rates than domestic firms during economic downturns, and second if the foreignness effect differs between two different economic downturns. The results partially confirm the liability of foreignness argument, suggesting that when the crisis was more pronounced at home than abroad, the differences in hazard rates between foreign and domestic firms reduce. The footloose argument is also only partially confirmed. For policy makers, our results on survival dynamics during crises are not against policies stimulating inward investment. There is no need to fear that foreign firms destabilize more than usual the host economy during economic slowdowns by immediately closing down operations.

1. Introduction

The recent global financial and economic crisis and the consequent scaling up of bankruptcy indicators call for further reflection on the survival patterns of firms during a crisis period. The literature on firm survival has shown the detrimental impact of macroeconomic instability upon firms' survival and their dynamics (e.g., Audretsch & Acs, 1994; Bhattacharjee, Higson, Holly, & Kattuman, 2009; Geroski, Mata, & Portugal, 2010; Varum & Rocha, 2011, 2012). However, particular groups of firms may be better able to surpass the difficulties of a crisis. In this regard, one may ask if foreign firms exit with less or greater likelihood than their domestic counterparts, and how does this likelihood of exiting vary in economic downturns. This issue has been relatively neglected in the literature, albeit the weight of foreign firms on many host economies.

There is a rich stream of literature investigating the survival of firms in foreign markets in comparison with domestic firms (Bernard & Sjöholm, 2003; Görg & Strobl, 2003a, 2003b; Kronborg & Thomsen, 2009; Li & Guisinger, 1991; Mata & Portugal, 2002). The overwhelming conclusion is that after controlling for characteristics that make foreign firms different than domestic ones, foreign firms tend to exit with greater likelihood. The most common explanations to why foreign firms exit more often than domestic ones rest upon the idea that in host economies foreign firms face certain disadvantages *vis-à-vis* their domestic counterparts, thus suffering from a 'liability of foreignness' (Zaheer, 1995). Along this line of thought, the theory of multinational enterprises has developed upon the argument that firms operating in foreign markets need to have some type of ownership advantages to compensate for these increased costs of doing business abroad (Dunning & Lundan, 2008). From another line of argumentation, multinationals are by nature more footloose than domestic firms, and therefore are more likely to exit (Mata & Freitas, 2012).

Both lines of argument support the view that foreign firms may be more likely to exit markets. However, they lead to different expectations with respect to the likelihood of exit during economic downturns. The footloose argument implies that foreign firms should be even more likely to exit during downturns. When changes in the host economy make that economy less attractive, relocation is seen more favorably by foreign firms than by domestic ones, which are more attached to a particular location. Alternatively, the liability of foreignness argument implies that the exit rates of foreign and domestic firms should converge during

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Table 1
Empirical evidence on the foreign ownership–firm survival link.[a]

(A) Positive relationship	(B) Negative relationship
Behrman and Deolalikar (1989) – Indonesia [1975–1985]	Zaheer and Mosakowski (1997) – 47 countries [1974–1993]
Li and Guisinger (1991) – USA [1978–1988]	Görg and Strobl (2003a, 2003b) – Ireland [1973–1996]
Audretsch and Mahmood (1994) – USA [1976–1986]	Bernard and Sjöholm (2003) – Indonesia [1975–1989]
Mata and Portugal (2004) – Portugal [1983–1989]	Kimura and Kiyota (2006) – Japan [1994–2000]
Narjoko and Hill (2007) – Indonesia [1993–2000]	Bernard and Jensen (2007) – USA [1987–1997]
Bridges and Guariglia (2008) – UK [1997–2002]	Van Beveren (2007) – Belgium [1996–2001]
Girma and Gong (2008) – China [1999–2005]	Fertala (2008) – Germany [1997–2004]
Kronborg and Thomsen (2009) – Denmark [1895–2005]	Álvarez and Görg (2009) – Chile [1990–2000]
Holmes, Hunt, and Stone (2010) – UK [1973–2001]	Bandick and Görg (2010) – Sweden [1993–2002]
(C) Neutral relationship	
Mata and Portugal (2002) – Portugal [1983–1989]	Kimura and Kiyota (2007) – Japan [1994–1998]
Özler and Taymaz (2004) – Turkey [1983–1996]	Taymaz and Özler (2007) – Turkey [1983–2001]

[a] Studies are presented in a chronological order (*Reference* – *Country* [*Time Period*]).

downturns because foreign firms hold some sort of ownership advantages over domestic ones. Foreign multinationals may have better conditions to face the crises owing to their multinationality advantages or they may resist more due to the sunk costs associated with their investment (Chung, Lu, & Beamish, 2008; Desai, Foley, & Forbes, 2004; Ghosal, 2010).

Studies about the importance of foreign ownership during crises are relatively scarce, the notable exceptions being the studies by Álvarez and Görg (2009), Lee and Makhija (2009) and Varum and Rocha (2011). Hence, in this paper we use longitudinal firm-level data for a large time span to assess, first, whether foreign ownership contributes to differentiating the incidence of firm exit during crises, controlling for other determinants that may affect the exit risk of firms. We use discrete time hazard models that account for firm-level unobserved heterogeneity to answer our research questions. In addition, we analyze whether the foreign ownership effect differs between two crises, which occurred in the same economy, in different periods of time and with different characteristics. To our knowledge the paper is unique in these respects. We analyze manufacturing firms created in Portugal in the period 1988–2005 by following their paths during the whole period and the economic slowdowns of early 1990s and 2000s. Portugal in particular is an interesting case as the economy experienced these significant slowdowns which provide us with 'a natural experiment to identify directly the "footloose nature" of multinationals' (Álvarez & Görg, 2009).

Results from past lessons may be of value in understanding more modern recessions, such as the one from which the world economy is currently recovering. For the Portuguese case we add to the previous important contributions of Mata and Portugal (2002, 2004), by enlarging the time span of their study and focusing on the potential effect of foreign ownership during (different) downturn periods. Compared to Varum and Rocha (2011), who examined the link between foreign ownership, firm employment and turnover growth and crises, the present study investigates firms' dynamics in terms of firm survival, using discrete time duration models. The analysis also adds to Varum and Rocha (2012) by exploring the foreignness effect upon firm survival under crises, differentiating between two distinct crisis contexts.

The paper is organized as follows. Section 2 reviews the literature on foreign ownership–firm survival relationship. Most of this literature does not focus on the effects during downturns, but allows for understanding why we may expect differences between foreign and domestic firms' exits patterns. Section 3 relates to methodological issues, where the data and econometric procedures are outlined. Section 4 presents some descriptive statistics and discusses the results. Section 5 concludes.

2. Macroeconomic conditions, foreign ownership, firm survival and exit

The overall state of the economy has long been indicated as an important force driving firms out of business (Geroski et al., 2010). Current macroeconomic environment affects not only market conditions but also market expectations about the future, leading firms to exit if an unfavorable environment is predictable. Despite the fact that some studies prove that exit is not responsive to the cycle (e.g. Boeri & Bellman, 1995; Ilmakunnas & Topi, 1999), many others found that firm exit is countercyclical and that there is a detrimental impact of macroeconomic instability upon firms' survival and their dynamics (Audretsch & Acs, 1994; Bhattacharjee et al., 2009; Box, 2008; Varum & Rocha, 2012). Downturn periods are expected to increase firms' hazards, though eventually this effect may be different between firms. Hence, it is important to investigate which firm-level conditions contribute to explain why firms resist differently during economic slowdowns.

Many studies have investigated the survival of firms in foreign markets. The empirical results on this matter are not unanimous (see Table 1). The overwhelming conclusion is that when controlling for a number of variables along which foreign firms differentiate from domestic ones, the former often exhibit higher exit rates. This fact may be due to the *liability of foreignness* (Zaheer & Mosakowski, 1997) or to the footloose nature of multinationals.

However, it remains overlooked whether under a crisis' environment foreign firms are affected or react differently from domestic firms and, if that is the case, whether or not their advantages compensate for the disadvantages of doing business abroad, possibly making them weather the crisis in a better way (or not). From the literature, we may explore arguments for a stabilizer or otherwise role of multinational enterprises (MNEs) during economic downturns.

2.1. Footloose multinationals and economic downturns

Compared to their domestic counterparts, it may be easier for foreign firms to transfer production facilities internationally (Flamm, 1984; Lee & Makhija, 2009), to cut operational costs (Gao & Eshaghoff, 2004) and, in the extreme, to exit the local economy. If multinationals are indeed more "footloose", they may be expected to be more likely to leave the country, especially during that period when it is hit by a negative shock. Actually, and relying on the way of thinking about foreign direct investment (FDI) enriched by real option theory (Campa, 1993; Li & Rugman, 2007), foreign firms may decide to switch operations quickly between locations in response to changing costs differentials, market opportunities and host country uncertainty, particularly