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Inventory investment, global engagement, and financial constraints in the UK: Evidence from micro data

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ABSTRACT

We use a panel of 9381 UK firms to study the links between firms' global engagement status and their financial health. We estimate inventory investment equations augmented with a financial composition variable, and interpret the sensitivity of inventory investment to the latter as a measure of the strength of the financial constraints faced by firms. We find that smaller, younger, and more risky firms; and firms that do not export and are not foreign owned exhibit higher sensitivities. Moreover, global engagement substantially reduces the sensitivities displayed by the former categories of firms: this suggests that it shields firms from financial constraints.

1. Introduction

A burgeoning literature has documented that, in an increasingly globalized world, exporters and foreign owned firms are larger, more productive, more capital-intensive, and pay higher wages than their purely domestic counterparts.[1] Yet, the effects of being an exporter or foreign owned on other firm characteristics have received much less attention. This paper seeks to fill this gap in the literature, by using a large panel of UK firms to study whether the two dimensions of firms' global participation, namely export behavior and foreign ownership, affect firms' financial health.

Only a handful of papers in the literature have looked at the effects of global engagement on firms' financial health, obtaining contrasting results. Along the first dimension of global participation, Campa and Shaver (2002) find that liquidity constraints are less binding for Spanish exporters compared to non-exporters; while Castañeda (2002) shows that export-oriented Mexican firms faced higher financial constraints before the 1995–2000 financial paralysis than after. Along the second dimension, and focusing, respectively on Colombia, Côte D'Ivoire, and Estonia, Arbeláez and Echavarría (2002), Harrison and McMillan (2003), and Mickiewicz et al. (2004) show that foreign owned firms face lower financial constraints compared to other firms. De Brun et al. (2002) find no such evidence for firms in Uruguay.[2]

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[1] See Greenaway et al. (2007) for a survey on firm level adjustment to globalization.

[2] Related studies are Desai et al. (2008), who find that internal capital markets of multinational firms allow their affiliates to expand output after severe depreciations, when economies are fragile and prone to economic contractions; Blalock et al. (2008), who show that following the 1997 East Asian financial crisis which led to a dramatic currency devaluation, it was only those Indonesian exporters with foreign ownership who were able to increase investment significantly, while domestic firms were unable to do so due to financing constraints; and Harrison et al. (2004), who find that direct foreign investment is associated with a reduction of financing constraints for firms without foreign assets and for domestically owned enterprises.

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All the above mentioned papers analyze financial constraints in the context of fixed investment regressions augmented with financial variables such as cash flow. In particular, they consider the sensitivity of investment to cash flow as an indicator of the degree of financial constraints faced by firms: financially constrained firms (for whom access to external finance is difficult and/or expensive) can only invest if they have sufficient internal funds.

Our contribution to the literature is twofold. First, we study the effects of global engagement on firms' financial health in the UK. This is important because most of the studies that looked at similar issues generally considered developing or transition countries. Our choice of the UK is motivated by the fact that this country ranks high in terms of global engagement: it is the fifth largest exporter of manufactures in the world and the second largest host of multinational enterprises. Moreover, a rich firm-level dataset is available for the UK, that covers mostly unlisted firms, which are generally small, young, and particularly likely to face financial constraints.

We expect globally engaged firms to face a lower degree of financial constraints compared to their purely domestic counterparts for the following reasons. First, globally engaged firms have access to both internal and international financial markets, which enables them to diversify their sources of financing and the associated risks. Specifically, foreign owned firms can obtain credit from their parent company, insuring themselves against liquidity constraints (Desai et al., 2004).[3] Second, as they benefit from a lower bankruptcy risk and adopt international standards faster in terms of product quality, foreign owned firms find it easier to gain access to domestic banks (Colombo, 2001; Harrison and McMillan, 2003). Third, because they are also dependent on demand from foreign countries, exporters are less tied to the domestic cycle, and less subject to those financial constraints caused by tight monetary policy and recessions at home.[4] This leads to a more stable cash flow for exporters compared to non-exporters, which in turn leads to weaker liquidity constraints (Campa and Shaver, 2002; Garcia-Vega and Guariglia, 2008).[5] Finally, being an exporter also provides a signal that the firm is sufficiently productive to generate enough profits in foreign markets to recover the sunk costs that need to be met when entering foreign markets for the first time (Roberts and Tybout, 1997). This increases the likelihood that the firm will be able to service its external debt, and further relaxes the liquidity constraints that it faces.

Our second contribution to the literature is that we explore, for the first time, the links between firms' global engagement and their financial health in the context of inventory investment regressions. We estimate error-correction inventory investment equations augmented with a financial composition variable. As in the investment literature, we interpret the coefficient on the latter as a measure of the degree of financial constraints faced by firms. We explore how this coefficient differs across firms classified into financially constrained and unconstrained in a traditional sense (based in turn on size, age, and risk), on the one hand; and across globally engaged and purely domestic, on the other. We also compare the coefficient across globally engaged financially constrained firms and purely domestic financially constrained firms, with the objective of determining whether global engagement can shield firms from financial constraints.

Three reasons justify our choice of inventory investment in our analysis. First, because of its high liquidity and low adjustment costs, inventory investment is likely to be more sensitive to financial variables than investment in fixed capital (Carpenter et al., 1994). Second, inventory investment plays a crucial role in business cycle fluctuations (Blinder and Maccini, 1991). Third, inventory investment equations are less likely than fixed investment equations to suffer from misspecification due to the inappropriate control for investment opportunities.[6]

Our results show that smaller, younger, and more risky firms, on the one hand; and firms that are not globally engaged, on the other, exhibit higher sensitivities of inventory investment to our financial composition variable. Moreover, when we differentiate among purely domestic financially constrained firms, globally engaged financially constrained firms, and financially unconstrained firms, we find that the effects of our financial variable are statistically significant only for the former group, implying that global engagement helps firms to overcome liquidity constraints.

The remainder of this paper is organized as follows. Section 2 presents some economic background for our analysis, and illustrates our baseline specification and our econometric methodology. In Section 3, we describe our data and present some descriptive statistics. Section 4 illustrates our main empirical results, and Section 5 concludes.

2. Economic background, baseline specification, and estimation methodology

2.1. Economic background

Our baseline specification is motivated by a generalization of Kashyap et al.'s (1993) framework, which focuses on financial composition and its effects on firms' real activities. Kashyap et al. (1993) assume that firms can finance their investment projects in two ways: either by using bank loans or by issuing commercial paper. To measure financial composition, they introduce a "mix" variable, defined as the ratio of bank loans to the sum of bank loans and commercial paper. They show that the "mix" is an important determinant of both inventory investment and investment in fixed capital. In other words,

[3] In a purely domestic framework, Hoshi et al. (1991) and Ng and Schaller (1996) consider firms belonging to groups as less likely to face financing constraints.

[4] This argument relies on the assumption that business cycles are not perfectly coordinated across countries.

[5] A more stable cash flow provides in fact greater assurances to lenders that the firm will be able to service its obligations.

[6] Within a Q model of investment framework, Cummins et al. (2006) show that financial variables such as cash flow could enter significantly in an investment regression simply because they pick up investment opportunities which are not properly accounted for by Tobin's Q.