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THE DYNAMICS OF EMPLOYER ENTERPRISE CREATION IN PORTUGAL OVER THE LAST TWO DECADES: A FIRM SIZE, REGIONAL AND SECTORAL PERSPECTIVE

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MESURING FIRMS’ FINANCIAL CONSTRAINTS: A ROUGH GUIDE

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The recent years have been prolific in terms of development of new measures of firms’ financial constraints. This paper surveys the main strategies proposed. Additionally, we discuss the key advantages and disadvantages of each measure as well as the data requirements for implementation. Finally, it provides a useful tool for researchers that intend to analyse the impact of constraints on firm behaviour.
Firms’ access to finance has been an increasingly relevant topic for researchers and policymakers (e.g. OECD, 2012). However, empirically addressing this issue can prove to be a difficult task. In this survey, we summarize the existing approaches and methodologies to measure financial constraints. It is organised in a way that facilitates the comparison of the different methodologies, taking into account the advantages and disadvantages of each approach. This allows the researcher to adequate the most appropriate technique for a research purpose and available data.

Financial constraints are empirically not observable. In fact, there is no item on the balance sheet that tells us if, and the extent to which, a firm is financially constrained. As a result, researchers have strived to develop methodologies that consistently allow identifying and measuring such constraints.

There are, however, a number of specificities associated with financial constraints that one should expect to be reflected in a good measure of financial constraints. Firstly, financial constraints are firm-specific. Even though interest lies in making inferences regarding a certain firm characteristic (e.g. firm size or age) or firm behaviour (e.g. innovation activity), one should expect highly heterogeneous levels of access to external finance. Additionally, constraints are time-varying, since a firm may move from constrained to unconstrained states (or across different degrees of constraint) as, for example, it establishes stronger investor-lender relationships and gains better visibility. The reverse may also be true if, for example, a firm’s previously sound economic and financial conditions start to deteriorate (eventually defaulting on previous loans), investment opportunities change or idiosyncratic shocks occur. In this case, it might happen that this previously unconstrained firm will now find it difficult to obtain external finance. Therefore, one might expect different states of constraints along the timeline (e.g. Hubbard, 1998; Cleary, 1999). Finally, financial constraints is not a clear-cut phenomena where a firm is either financially constrained or not, but there are different degrees of constraint (Musso and Schiavo, 2008). As a result, each firm, for a given period of time, may move along a spectrum of constraints.

These characteristics imply that, beyond eventual theoretical issues, finding an appropriate measure of financial constraints may prove to be a rather difficult task. Optimally, the perfect measure of financial constraints should be objective, firm-specific, continuous, and time varying. Unfortunately, to our knowledge, there is no such measure. Nevertheless, we will present and discuss the main advantages and disadvantages of existing approaches to measure constraints. A summary of the different methodologies can be found in Appendix Table 1.

2. Indirect measures

2.1. Prologue: Primordial tests and the Q-theory of investment

Within the traditional Q model for investment (see Chirinko, 1993, for an overview), one should expect that Tobin’s Q summarizes all future information that is relevant for a firm when deciding to invest.1 Consequently, marginal Q should be the only predictor for investment (Chirinko, 1993). Therefore, we should not expect that additional variables (particularly financial ones) have a significant explanatory power in Q investment regressions. However, while financial variables, such as cash-flow, have been shown to be relevant in firms’ investment decisions, the contribution of Q was found to be disappointingly low (e.g. Blundell et al., 1992). This type of result has driven researchers to argue that (after controlling for Q) investment may not be

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1 The theory was introduced by Brainard and Tobin (1968) and Tobin (1969).