Emerging Markets Review 23 (2015) 96–123

Contents lists available at ScienceDirect

Emerging Markets Review

journal homepage: www.elsevier.com/locate/emr

Financing in an emerging economy: Does financial development or financial structure matter?

Fernanda Castro [a], Aquiles E.G. Kalatzis [b,*], Carlos Martins-Filho [c]

[a] Department of Production Engineering, School of Engineering of São Carlos, University of São Paulo, EESC—USP, Brazil
[b] Department of Production Engineering, School of Engineering of São Carlos, University of São Paulo, EESC—USP, Av Trabalhador São-Carlense 400, São Carlos, SP 13566-590, Brazil
[c] Department of Economics, University of Colorado at Boulder, Economics Building, Office Econ 105, 256 UCB, Boulder, CO 80309-0256, USA

ARTICLE INFO

Article history:
Received 9 August 2014
Received in revised form 1 April 2015
Accepted 7 April 2015
Available online 17 April 2015

JEL classification:
G10
G20
G30
G31
O16

Keywords:
Financial constraints
Financial development
Financial structure
Investment decisions

ABSTRACT

This paper investigates the effects of the financial system on a firm's investment decisions using data from 404 Brazilian firms over the 1998–2006 period. We also use country-level data and classify firms as financially constrained and unconstrained according to the KZ and WW indexes. The results show that financial development has a significant impact on a firm's investment. Furthermore, the financial structure has an effect on the investment behavior of constrained firms even after controlling for the level of financial development. This finding points to a market-based financial system in order to reduce the constrained firms' dependence on internal resources.

1. Introduction

Finance and growth theories have shown that financial functions provided by banks and capital markets play an important role to enhance economic activity. This suggests a strong relationship between the development of financial markets and the real economy (King and Levine, 1993; Levine et al., 2000; Loayza and Rancière, 2006; Rajan and Zingales, 1998). According to these theories financial development may be characterized as the ability of financial actors to provide mechanisms that facilitate and intensify economic

* Corresponding author. Tel.: +55 16 3373 8288.
E-mail addresses: fernandacastro@usp.br (F. Castro), aquiles@sc.usp.br (A.E.G. Kalatzis), carlos.martins@colorado.edu (C. Martins-Filho)

http://dx.doi.org/10.1016/j.ememar.2015.04.012
1566-0141

transactions in the economic system. This is an extremely important matter, especially to emerging economies, since it makes it possible to understand the financial constraints observed in credit and capital markets. Likewise, this topic is directly related to investment issues. Understanding the factors that influence and constrain investment decisions is a key issue because of its close relationship with macroeconomic factors, public policy and economic growth. According to economic theory, the development of financial markets provides reductions in transaction costs and information asymmetries, thus affecting the cost of financing in investment decisions.

Lately, a complementary stream of literature has been devoted to investigate whether the structure of the financial system matters for the advancement of economic activity. The debate has evolved around the merits of banks versus stock markets for boosting growth (Baum et al., 2011; Beck and Levine, 2002). Nevertheless, most of these studies are based on aggregate data, which can cause worries about the unobserved data heterogeneity. This encourages a microeconomic analysis of a firm's behavior to understand the channels through which the financial system affects economic growth. As pointed out by Gross (2001) economic growth as a macroeconomic phenomenon has microeconomic foundations and arises as a consequence of entrepreneurial activities. So, it is appropriate to investigate the role of financial agents at an individual level. Considering that economic growth emerges from microeconomic activities, it is important to highlight the role of private investment in growth promotion. Understanding the factors that influence and constraint these decisions is highly relevant, especially for developing economies such as Brazil, where most firms still rely on internal funds to invest. Thus, economies such as this one require a better understanding regarding the effects of the financial system on investment decisions. Our paper is based on this context.

The principal contribution of this paper is to assess the effects of the financial system on investment decisions and financial constraints of Brazilian firms. Herein the financial system is characterized both in terms of its level of development and its structure. As far as we know, no other studies have investigated the role of the Brazilian financial system on a firm's investment decisions considering the presence of financial constraint. In particular, we investigate how the financial development affects a firm's investment behavior and which kind of financial structure, i.e., market-based or bank-based, is more efficient to alleviate financial constraints. Although the understanding of how financial development is associated with a lower degree of financial constraints seems to be an important topic in the literature, there are only few international studies dealing with this subject at firm-level. By adding the role of the financial structure on investment decisions, these studies become scarcer and most report contradictory or inconclusive results. In such cases, those studies have been conducted using US or cross-country data and nothing is known about Brazil. Moreover, doubts are cast on cross-country studies, since they do not address the heterogeneity between countries, which may mask relevant cross-country differences in the relationship under analysis. This work intends to shed some light on these questions.

This study also contributes to the literature of emerging markets because Brazil has a financial system with characteristics that make it unique. These characteristics require special attention and should be taken into account. For instance, Brazil is an ideal scenario to check for the interaction of financial development, financial structure and financial constraints because it is a typical case of low credit supply in a modern financial environment which is able to move large amounts of resources. Although the Brazilian financial system presents a complex operational structure, the volume traded in capital markets is still low, reflecting a low level of activity[1]. Notwithstanding Brazil's banking tradition, financial intermediaries are still not able to finance long-term investment, leaving the Government as the main long-term credit provider of companies. The consideration of these aspects is important as they allow a better understanding of the financing constraints observed in financial markets. Accordingly, understanding the Brazilian financial structure characteristics may help in the search for alternatives to overcome its limits and to make external resources less costly for investment purposes. Because of these reasons, to better understand the relationship between the financial system and a firm's investment in Brazil, more in-depth investigations should be carried out. This paper is the first attempt to fill this gap in the literature through a proper analysis on this issue.

[1] For developed countries such as Germany, Canada and USA the credit represents more than 100% of GDP. Even for some developing economies such as Chile this rate was about 74% in 2006. In the same year, the credit to GDP ratio for Brazil was only 34%. Regarding the value traded in the stock market it was about 24% of GDP for Brazil in that year, whereas for South Africa this indicator represented 123% of GDP in 2006. Data are from the Financial Structure Database of Beck et al. (2000), updated in November 2013.