Int. Fin. Markets, Inst. and Money 41 (2016) 60–72

Contents lists available at ScienceDirect

Journal of International Financial Markets, Institutions & Money

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

Do banks or VCs spur small firm growth?☆

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ARTICLE INFO

Article history:
Received 22 September 2015
Accepted 23 December 2015
Available online 30 December 2015

Keywords:
Banks
Venture capital
Growth
Entrepreneurship

JEL classification:
G21
G24

ABSTRACT

It is well accepted that access to entrepreneurial finance encourages entrepreneurship and growth. Empirical studies on topic, however, segregate the effect of entrepreneurial finance on entrepreneurship by the source of capital. In this paper, we compare the effect of two main sources of entrepreneurial finance on small firm formation and growth: banks versus venture capital (VC). Based on U.S. data spanning 1995–2011, and regardless of controls for endogeneity, we find the effect of VC to be both economically and statistically significant in stimulating new firms, new establishments, new employment, and new payroll. We do not find similar evidence for banks.

1. Introduction

It is well accepted that access to capital stimulates entrepreneurship[1]. There are relatively few studies, however, that compare different sources of entrepreneurial finance in stimulating entrepreneurial activity. One literature shows a strong role for banks in stimulating new firm formation and growth (e.g., Berger and Black, 2011; DeYoung, 2009). A second literature shows the importance of venture capital and private equity (VC) in stimulating new firm formation and growth (e.g., Cornelli and Yosha, 2003; Bertoni et al., 2011; Samila and Sorenson, 2011; Wang and Wang, 2012; Yung, 2009; Cornelli

☆ We are indebted to Ming Dong, Katrin Hussinger, Gordon Roberts and Pauline Shum, and the IFN Conference on the Economics of Ownership, Organization and Industrial Development in Vaxholm, Sweden, the American Law and Economics Association, Princeton, the Third Annual Searle Research Symposium on the Economics and Law of the Entrepreneur at Northwestern University, the European Financial Management Association Annual Conference in Aarhus, Denmark, the European Financial Management Association Meeting on Alternative Investments in Toronto, the Milan VICO Conference, the Conference on Business Creation at George Washington University, and the Kauffmann Empirical Entrepreneurship Conference, Philadelphia, and the Eastern Finance Association, Boston, and the University of Hong Kong, and York University Schulich School of Business. Douglas Cumming owes thanks to the Social Sciences and Humanities Research Council of Canada for generous financial support.

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[1] See, e.g., World Bank (2004), Keuschnigg (2004), Audretsch (2007a,b), Engel and Keilbach (2006), Klapper et al., (2006), Audretsch and Keilbach (2007), Bates and Bradford (2008), Levine (2005), Rousseau and Wachtel (2000), Fulghieri and Sevilir (2009), Bouton and Tiongson (2010), Mookerjee and Kalipioni (2010), Krishnan et al. (2011), Bakke et al. (2012), Gimet and Lagoarde-Segot (2012), Classens and Yurtoglu (2013), Nahata et al. (2014) and Farinha and Felix (2015).

http://dx.doi.org/10.1016/j.intfin.2015.12.005
1042-4431/

et al., 2013; Fonseka et al., 2014; Liao et al., 2014; Liu and Wang, 2015; Gunay and Ursel, 2015). Relatively few empirical studies simultaneously document the differences between VC and banks, largely because datasets on entrepreneurial finance are often derived from the source of capital; some exceptions include recent work by Chavis et al. (2011), Cosh et al. (2009) and Robb and Robinson (2014).

An unexplored question in the literature involves comparing the relative importance of VC versus banks in stimulating entrepreneurship. Prior literature (e.g., Keuschnigg, 2004; Gompers and Lerner, 1999) is consistent with the view that VC's provide comparatively more value-added support to entrepreneurs relative to banks, including but not limited to sitting on boards of directors, offering strategic, managerial, human resource, marketing, and financial advice, and providing a network of strategic alliances with suppliers, customers, legal and accounting advisors, as well as investment banks in the event that the firm seeks public listing. Terms upon which VC-backed firm goes public are typically better than that for a non-VC backed firm. These considerations all suggest that VC plays a more pronounced role than banks in spurring entrepreneurs. On the other hand, VC is comparatively hard to obtain and bank finance is much more readily available (Cosh et al., 2009; Robb and Robinson, 2014). The relative dearth of VC finance to bank finance suggests that bank finance is comparatively more important than VCs in spurring entrepreneurs. All things considered, therefore, it is difficult to know a priori whether VCs or banks are relatively more important in spurring entrepreneurship and growth without empirical testing.

In this paper, we analyze the relative importance of banks versus VCs in spurring entrepreneurship using annual U.S. state level panel data spanning the period 1995–2011. We consider four main indicators of entrepreneurship: the annual number of new firms, the annual number of new establishments, annual new firm employment, and annual new firm payroll. We control for various factors that might influence entrepreneurial activity across states and over time, such as growth in personal income, population, education, government policy, and patents, among other things.

An empirical issue that arises in assessing the impact of banks versus VC on entrepreneurship is endogeneity. Bank finance and VC finance may stimulate entrepreneurship by facilitating access to capital for the financing of new ideas and value-added professionalization and governance provided by the investors. At the same time, however, banks and venture capitalists (VCs) may move to areas where rates of entrepreneurship are expected to be more favorable in the future. VCs may stimulate invention, but they have also been noted for chasing good inventive ideas (Gompers and Lerner, 1999; Hirukawa and Ueda, 2008). The boom-and-bust periods with VC have been particularly pronounced as market cycles move up and down, thereby suggesting the impact of VC finance on entrepreneurship could be particularly prone to issues of endogeneity.

Following the approach used in related work in bank finance (Black and Strahan, 2002) and VC finance (Samila and Sorenson, 2011), we assess and control for causality issues by instrumenting VC finance on returns to institutional investors, and instrumenting bank finance on bank assets, capital and deposit-to-asset ratio. The instrumental-variable estimates show very consistent results for both bank and VC finance, albeit with some exceptions that are noted herein.

The US state level panel data over 1995–2011 indicate the following. First, for the smallest firms with fewer than 4 employees, we see scant evidence that either VC or bank finance spurs growth in firms, establishments, employment, or payroll. Instead, growth in firms, establishments, employment, and payroll is caused by growth in personal income, higher levels of education, fewer labor restrictions, and more SBIR awards. These findings are consistent with prior work on topic based on earlier datasets.

Second, for firms with 5–19 employees, the impact of VC on growth is consistently positive and significant. This effect is statistically significant regardless of our controls for endogeneity. The economic significance of the effect is large. For instance, after controlling for endogeneity, a 10% increase in VC is associated with a 2.6% increase in the number of firms, a 2.3% increase in the number of establishments, a 2.9% increase in number of employees, and a 3.9% increase in total payroll. By contrast, there is no apparent or statistically significant impact of banks on any of these outcome variables.

Third, for firms with 20–99 employees, the impact of VC on growth is not nearly as robust. There is some evidence of a positive effect of VC on new firms, and no evidence of an effect of VC on establishments and employees. There is evidence of a positive effect of VC on payroll that is robust and significant at at least the 5% level, whereby a 10% increase in VC causes a 5.9% increase in total payroll. For banks, the evidence is not robust to the use of instrumental variables, although there is some suggestive evidence of a positive impact on establishments and payroll.

The question of whether banks or VCs are more important for stimulating entrepreneurship is one that is important for academic research, practice and policymakers alike. In recent years, there has been a relative shift in the focus of academic studies towards VCs as a primary source of entrepreneurial finance, despite the fact that most entrepreneurs do not obtain VC and the predominant source of capital is bank finance (Cosh et al., 2009; Robb and Robinson, 2014). By directly comparing the effect of VC versus banks on stimulating entrepreneurship, we offer insight into whether or not this shift is warranted. To this end, we also provide guidance to practitioners and policymakers by examining whether or not one form of capital versus another is relatively more deserving of tax subsidization. Our evidence is consistent with the importance of VC for growth (Keuschnigg, 2004) and the important role of public policy in stimulating VC markets to encourage economic growth (Keuschnigg and Nielsen, 2001, 2003a,b, 2004a,b,c).

This paper is organized as follows. A description of the data and summary statistics are provided in Section 2. Section 3 presents multivariate tests with ordinary panel data estimates. Section 4 presents estimates with instrumental variables. Section 5 discusses additional robustness checks. The last section concludes.