Ann Finance (2009) 5:289–293
DOI 10.1007/s10436-009-0124-z

INTRODUCTION

Entrepreneurship, finance and employment

Mariacristina De Nardi · Anne Villamil

Published online: 11 April 2009

Despite the vast existing literature on entrepreneurship, much remains to be learned. This special issue starts with a review article surveying the previous studies on entrepreneurship and macroeconomics. It then moves to empirical papers that use various data sets to ask key questions about entrepreneurship such as: how do new entrepreneurs start a business? How do entrepreneurs manage risk by choosing both their legal organization and their portfolios, and how high are the returns compensating for such risks? Are some entrepreneurs discriminated against because of their race? Does financial market deregulation relax the entrepreneurs' borrowing constraints?

We thank the authors and referees for their contributions, Helen Koshy for expert editorial assistance, the Society for the Advancement of Economic Theory for sponsoring sessions on entrepreneurship at the 2007 SAET conference, and Ed Prescott for his comments at the conference. We especially thank Roko Aliprantis, to whom we dedicate this special issue *in memoriam*.
Anne Villamil thanks the Kauffman Foundation and the Academy for Entrepreneurial Leadership at the University of Illinois. This work was completed while Villamil was the Hallsworth Visiting Professor at the University of Manchester and the Peter Moores Fellow at the Said School of Business at the University of Oxford.
The views expressed in this paper are those of the authors and do not reflect those of the Federal Reserve Bank of Chicago, the Federal Reserve System, or its Board of Governors.

M. De Nardi
Economic Research, Federal Reserve Bank of Chicago,
230 South LaSalle St., Chicago, IL 60604, USA

M. De Nardi
NBER, Cambridge, MA, USA
e-mail: denardim@nber.org

A. Villamil (✉)
Department of Economics, University of Illinois,
1407 S. Gregory Street, Urbana, IL 61801, USA
e-mail: avillami@illinois.edu; avillami@uicu.edu

How does wealth affect the probability of entering entrepreneurship for people with different education levels? After this review of key data and empirical questions, the issue moves onto quantitative modeling and theoretical analysis. We go from understanding the important interplay of savings and entrepreneurial entry, to uncovering the relationship between borrowing constraints and firm growth, survival, and size distribution, to understanding the importance of salaried wages for entrepreneurial decisions, to studying capital taxation in presence of entrepreneurship.

Quadrini (2009) provides an excellent survey of recent macroeconomic theories of entrepreneurship, organizing research around three questions: What factors affect the decision to become an entrepreneur? What are the aggregate and distributional implications of entrepreneurship for savings and investment? How does entrepreneurship affect economic development and growth?

Campbell and De Nardi (2009) use the Panel Study of Entrepreneurial Dynamics, a project undertaken by the Entrepreneurial Research Consortium, to collect detailed data on individuals starting new businesses (nascent entrepreneurs). They organize their analysis around five questions: Who are the nascent entrepreneurs? What do they try to accomplish? What do nascent entrepreneurs and others put into the business? What have the nascent entrepreneurs accomplished? What remains to be done? The firms are especially interesting because they typically start with neither employees nor sales and therefore there has been little data available about them.[1]

Herranz et al. (2009) use the Survey of Small Business Finances (SSBF) to understand how the owners of small firms use decisions about legal organization, firm size, capital structure, and owner investment in the firm to manage firm risk. They find that firms with unlimited liability tend to be small and less leveraged than firms that limit owner personal liability through incorporation or recent legal hybrids. They document that entrepreneurs invest heavily in their firms regardless of the firm's legal organization. An analysis of the return on assets for incorporated firms in the SSBF reveals that entrepreneurship is a very risky undertaking, but has high upside gain. The possibility of high future returns helps explain the coexistence of a large percentage of firms with negative equity and low default rates. The shape of the return distribution and limited liability interact; the option to declare bankruptcy shields owners from personal loss in the lower tail of the distribution while preserving the potential for significant firm returns in the upper tail.

Blanchflower (2009) studies self-employment in the United States, using data from the Current Population Survey, the 2000 Census, and the 2006 American Community Survey, which combines data at the individual level with data at the small firm level from the 2003 Survey of Small Firm Finances. His main finding is of persistent and large disparities in self-employment and earnings between white males and others. This result is especially stark and surprising in construction, an industry for which many government affirmative action programs are designed to improve access by women and minorities. He also finds evidence of discrimination in the small business credit market. Firms owned by minorities, especially blacks, are much more likely to

[1] After Campbell and De Nardi's article went to press, the authors realized that one of their tables was incorrectly calculated. The paper's replication files posted on the journal's web site correct this mistake and other minor inconsistencies.

have loans denied and pay higher interest than is the case for white males. This is only partially explained by their lack of creditworthiness and is consistent with a finding of discrimination in the credit market by banks.

Magri (2009) uses the Survey of Household Income and Wealth to examine the financing of small entrepreneurs in Italy after a period of financial deregulation and innovation. This data set is a unique source of information on the financial structure of very small firms, which account for a large share of the Italian GDP. Magri (2009) finds that only about a quarter of small Italian firms use bank loans for business purposes, with the rest relying on internal finance. She splits the sample into two sub-periods, 1989–1998 and 2000–2006, and analyzes credit rationing by determining the fraction of entrepreneurs that applied for a bank loan and were turned down. Magri (2009) finds that in the post deregulation and innovation period (2000–2006), credit rationing significantly decreased among small Italian entrepreneurs. She also examines the importance of two proxies for internal finance: the effect of household non-business net wealth on the probability of starting a firm and the effect of firm net profitability on the probability of obtaining a bank loan. She finds that internal finance via wealth has become less important for potential entrepreneurs only in the most financially developed regions of Italy, and that the probability that a new small entrepreneur receives a bank loan increases with entrepreneur age, education and with business size. Her results suggest that credit scoring has been important for improved credit access.

Mondragon-Velez (2009) uses the Panel Study of Income Dynamics to document differences between entrepreneurs and workers in education, age, earnings, wealth and business industry. He finds that the probability of becoming an entrepreneur is hump-shaped in wealth for given age-education cohorts, which is consistent with Buera's (2009) model (see below). Importantly, these profiles by wealth are different by education and age. Mondragon's results suggest that using aggregated transition probability profiles to test the importance of liquidity constraints for potential entrepreneurs is problematic. He also finds that education effects alone are linked with the probability of becoming an entrepreneur and wealth-level.

Buera (2009) asks whether wealth begets wealth and entrepreneurship, or if entrepreneurship is mainly determined by an individual's ability. Buera (2009) shows that in a dynamic model of occupational choice, financial constraints that impede the creation of businesses imply a non-monotonic relationship between wealth and entry into entrepreneurship: the probability of becoming an entrepreneur as a function of wealth is increasing for low wealth levels—as predicted by standard static models—but it is decreasing for higher wealth levels. U.S. data are used to study the qualitative and quantitative predictions of the dynamic model. Buera (2009) also finds that the welfare costs of borrowing constraints are significant, around 6% of lifetime consumption. Importantly, these welfare costs are mainly due to undercapitalized entrepreneurs rather than to able people not being able to start businesses.

Monge-Naranjo (2009) studies both analytically and quantitatively how credit constraints shape the entry, growth and size distribution of firms. He considers the optimal contract between banks and entrepreneurs in an economy in which punishment for default is limited and banks are more patient than entrepreneurs. This limited enforcement restricts the amount of credit available to entrepreneurs. Monge characterizes the optimal contract and shows that his model can match key empirical observations

about the evolution of the firm size distribution. He also shows that the model organizes three different margins that determine the impact of limited commitment on aggregate productivity.

Akyol and Athreya (2009) propose a quantitative theory to study self-employment rates and project size distribution across countries. Self-employment decisions depend on both the availability of credit and the relative attractiveness of alternative labor market opportunities, especially paid-work. High self-employment rates do not necessarily imply well-functioning credit markets. Akyol and Athreya (2009) find that the observed cross-country patterns are consistent with a common self-employment technology that is available worldwide, together with differences in financial intermediation and alternatives in paid work. Their main finding is that alternatives in paid work are crucial for explaining self-employment rates, whereas high financial intermediation costs primarily affect the scale of projects. They also show that credit use is not informative for predicting rates of self-employment or the scale of self-employment projects.

Meh and Terajima (2009) study the effects of changing the mix of capital and labor income taxes on capital accumulation and welfare in a general equilibrium model with uninsurable investment risks. Uninsurable risks are common in entrepreneurial activities (e.g., small firm returns are risky and it is not possible for an entrepreneur to diversity this risk by holding a portfolio of small firms), and can lead to under-accumulation of capital.[2] A classic result in public finance is that the capital income tax rate is zero in the long run. More recently a number of authors have examined conditions under which a positive capital income tax rate improves welfare. Meh and Terajima (2009) conduct tax revenue neutral experiments to examine quantitatively the trade-off between capital and labor taxes. Meh and Terajima's key finding is that reducing capital income taxation increases capital accumulation and improves welfare. However, eliminating this tax completely does not necessarily improve welfare when costs associated with the transition are accounted for. When the capital income tax rate is reduced to a moderately positive level there is a welfare gain both in the long-run and in the transition, which implies that the welfare gains by the rich dominate the losses of the poor. If the capital tax rate is lowered too much the welfare losses the poor incur due to higher labor taxes outweigh the gains of the rich.

The papers in this special issue focus on data, theory and empirics because all are important fronts for understanding entrepreneurship. For example, the innovative Panel Study of Entrepreneurial Dynamics surveys roughly 800 new businesses, but follows them over time. In contrast the Survey of Small Business Finances covers roughly 4000 firms, but interviews each firm at a point in time. Appropriate data are essential for understanding the role of entrepreneurs in the macroeconomy and theory, especially quantitative theory, allows us to understand and forge economic policy. We end this introduction as we began, by directing the reader to the excellent survey by Quadrini, which surveys research in the last 20 years and discusses future research trends.

[2] When investment risk is uninsurable, lenders will demand a risk premium. This raises the loan rate above the risk-free rate, raising the marginal product of capital and lowering the input of capital relative to complete-markets.

References

Akyol, A., Athreya, K.: Self-employment rates and business size: the roles of occupational choice and credit market frictions. Ann Finance **5** (2009, in this issue). doi:10.1007/s10436-008-0115-5

Blanchflower, D.: Minority self-employment in the United States and the impact of affirmative action programs. Ann Finance **5** (2009, in this issue). doi:10.1007/s10436-008-0099-1

Buera, F.: A dynamic model of entrepreneurship with borrowing constraints: theory and evidence. Ann Finance **5** (2009, in this issue). doi:10.1007/s10436-009-0121-2

Campbell, J., De Nardi, M.: A conversation with 590 nascent entrepreneurs. Ann Finance **5** (2009, in this issue). doi:10.1007/s10436-008-0113-7

Herranz, M., Krasa, S., Villamil, A.: Small firms in the SSBF. Ann Finance **5** (2009, in this issue). doi:10.1007/s10436-008-0118-2

Magri, S.: The financing of very small enterpreneurs in Italy. Ann Finance **5** (2009, in this issue). doi:10.1007/s10436-008-0109-3

Meh, C., Terajima, Y.: Uninsurable investment risks and capital income taxation. Ann Finance **5** (2009, in this issue). doi:10.1007/s10436-008-0112-8

Mondragon-Velez, C.: The probability of transition to entrepreneurship revisited: wealth, education, and age. Ann Finance **5** (2009, in this issue). doi:10.1007/s10436-008-0117-3

Monge-Naranjo A.: Entrepreneurship and firm heterogeneity with limited enforcement. Ann Finance **5** (2009, in this issue). doi:10.1007/s10436-009-0122-1

Quadrini, V.: Entrepreneurship in macroeconomics. Ann Finance **5** (2009, in this issue). doi:10.1007/s10436-008-0105-7