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The rise of female entrepreneurs: New evidence on gender differences in liquidity constraints

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ABSTRACT

In this paper, we study the importance of liquidity constraints for entrepreneurial activity, using previously unexplored data from the UK. Using inheritances as an instrument, IV estimates reveal that single women drive the overall relationship between personal wealth and the propensity to start a new business. Defining business ownership rather than self-employment as the entrepreneurial outcome measure is also shown to be critical. Using self-employment leads to selection bias and underestimates the impact of personal wealth. The results imply that efforts aimed at relieving the liquidity constraints of single women could help further accelerate the recent rise of female entrepreneurship.

1. Introduction

Self-employment and small business activity have become increasingly important features of the UK economy. Small firms now account for 48% of all private sector employment, and increases in total employment since the start of the Great Recession have been mostly driven by the growth in self-employment (Office of National Statistics, 2014). Another recent pattern that has emerged is sharply different growth rates by gender in the proportion self-employed. UK Labour Force Surveys show that from 2009 to 2014, the proportion of men in self-employment increased by 6%. Over the same period, the proportion of self-employed females jumped by 22%.

In this paper, we study the importance of liquidity constraints for entrepreneurial activity, using previously unexplored data from the UK. The data are extracted from the UK Wealth and Assets Survey, a large-scale survey that contains a range of different personal wealth and entrepreneurial outcome measures. The data also contain information on individual inheritances, which are exploited as a source of exogenous variation that helps identify the causal impact of personal wealth on the propensity to start a new business. A causal effect of personal wealth on entrepreneurial activity is typically interpreted as a manifestation of liquidity constraints.

Instrumental variables (IV) regressions that use inheritances as an instrument produce a strong and precisely estimated effect of personal wealth on entrepreneurial activity. This is consistent with the previous literature. However, in contrast to previous work, we are able to separate out financial wealth from broader and potentially less relevant personal wealth measures commonly used in the literature. We show that financial wealth has the most quantitatively important impact on entrepreneurial activity amongst the various alternatives. This provides stronger evidence than has been previously offered that liquidity constraints underlie the impact of personal wealth.

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An additional contribution of the study is in the analysis of heterogeneous effects. The IV results indicate substantial heterogeneity in the effect of personal wealth by gender and household composition. This new finding is detectable both because of the unusually large number of female entrepreneurs in the Wealth and Assets Survey, and the ability to use a broader definition for an entrepreneur than in previous studies.

In particular, individuals can be classified as entrepreneurs if they have started a business, in contrast to simply having entered self-employment. To date, self-employment has been the most widespread definition of entrepreneurship in the empirical literature. Using business ownership rather than self-employment as the entrepreneurial outcome measure is shown to be critical. The narrower measure of self-employment leads to selection bias and underestimates the importance of personal wealth.

IV regressions that use the business ownership outcome measure, estimated separately by gender and household composition, reveal that it is primarily single women that drive the overall relationship between personal wealth and the propensity to start a new business. The magnitude of the effect is substantial. Amongst single women, a relaxation of financial wealth constraints by £1000 results in an 8.5% increase in the probability of starting a new business relative to the sample mean. The results are robust to a range of specifications and a placebo test that uses future inheritances as the instrument rather than past inheritances.

Our findings have interesting policy implications. Additional data from the Wealth and Assets survey indicate that single women are less likely to acquire formal loans in order to start a business, which may underlie the differential liquidity constraints by gender and household composition. Further, the lower propensity to acquire a formal loan may be due to lack of collateral. This suggests that public policy programmes specifically targeted to meet the needs of liquidity-constrained single women have the potential to further accelerate the rate of female entrepreneurship.

The remainder of the paper is structured as follows: Section 2 places our study and its contribution in broader context. Section 3 describes the data used in our analysis. Section 4 outlines the instrumental variables approach. Section 5 presents the IV results. Section 6 discusses the implications of the results. Section 7 concludes.

2. Background

A positive correlation between personal wealth and entrepreneurial activity has consistently emerged from a large literature examining the effect of liquidity constraints (see, e.g., Evans and Leighton, 1989; Evans and Jovanovic, 1989; Holtz-Eakin et al., 1994). In Evans and Leighton (1989) individuals with greater assets are shown to be more likely to switch into self-employment. Evans and Jovanovic (1989) also demonstrates that wealthier people are more inclined to become entrepreneurs. In this latter paper, a model of entrepreneurial choice is developed in which the observed positive correlation between net family assets and the probability of starting a business arises only if liquidity constraints are present.

Whether the positive relationship between personal wealth and entrepreneurial activity is robust, or indeed due to underlying liquidity constraints, is still subject to some debate. Hurst and Lusardi (2004) question the relationship because they find that business entry rates are fairly constant throughout the US wealth distribution. Nykvist (2008) detects a similar distributional pattern in Sweden, but nevertheless produces evidence that liquidity constraints are present. Meyer (1990) observes that most new businesses require only small amounts of start-up capital, casting doubt on the likelihood that liquidity constraints are binding.

Several difficult identification problems in the relationship between personal wealth and entrepreneurial activity can explain some of the conflicting findings. For example, it may be the case that potential entrepreneurs save before starting a new enterprise, leading to a positive correlation between assets and business start-ups even in the absence of financial constraints. A similarly biased upward impact could arise if many family firms are directly inherited. Although a bias toward zero may also result from inaccuracies in the measurement of personal wealth.

Blanchflower and Oswald (1998) was one of the first studies to note that a potentially ideal experiment, capable of correcting for several of these biases, would be to compare the subsequent entrepreneurial activity of individuals who randomly receive a wealth shock to those who do not. They suggest exploiting inheritances or gifts that individuals receive as proxies for exogenous wealth shocks.

Using data from two waves of the National Child Development Study in the UK, the results in Blanchflower and Oswald (1998) indicate that those who receive windfall income are more likely to be self-employed. Their findings are strongest when considering inheritances received more than three years prior to entering self-employment. They also present evidence that the results are not likely to be due to direct inheritance of a business.

Other types of exogenous wealth shocks have also been proposed, such as lottery winnings and house price movements. Using data from Sweden, Lindh and Ohlsson (1996) find that receiving a lottery prize is associated with an increased probability of self-employment. However, Taylor (2001), who uses the British Household Panel Survey to analyse the impact of different sources of windfall income on self-employment, produces a statistically weak negative effect of a lottery win. The evidence on house price movements is similarly mixed (see, e.g., Hurst and Lusardi, 2004; Nykvist, 2008; Disney and Gathergood, 2009).

In addition to challenging identification problems that have not been completely resolved, the large literature on liquidity constraints has not produced reliable evidence on gender differences in the relationship between personal wealth and entrepreneurial activity. The seminal papers by Evans and Leighton (1989) and Evans and Jovanovic (1989) analyse the