Introduction and summary of the thesis

Introduction

Behind most successful companies and products, one can find a successful entrepreneur. In the case of Sweden, the list is long. Swedish innovations and inventions have revolutionized warfare and mining through Nobel’s Dynamite, a wide range of industrial applications with the improved ball bearings of Wingquist and furnishing habits everywhere through Kamprad’s IKEA stores.

The real-world relevance of entrepreneurship is self-evident. Despite the large impact of entrepreneurship on economic development, economics as an academic discipline has rarely found it necessary to model or otherwise account for entrepreneurship in any detail. As Baumol (1968) noted, “The theoretical firm is entrepreneurless—the prince of Denmark has been expunged from the discussion of Hamlet.”

This dissertation seeks to first examine the extent to which the entrepreneur is still absent from economics and then proceeds to apply the concept of entrepreneurship to two economic issues: education and the distribution of income. It also examines a closely related topic, the economic role of philanthropy, often the result of successful entrepreneurship.

The exact role of the entrepreneur is often unclear in both public debate and academic research. One frequently comes across confusion or vagueness regarding how to define entrepreneurship. Sometimes the word is used as shorthand for business ownership. The man on the corner selling hot dogs is an entrepreneur. On other occasions the term is used to describe only those at the pinnacle of the business world – Bezos, Musk, Gates.
other times it is used to describe some activities of employees (intrapreneurship) or even public servants.

The second and third chapter in this thesis hence examine the role of entrepreneurship (and the closely related concept of the family business) in modern economics. The first article is coauthored with Dan Johansson. The second article is derived from the first one and is coauthored with Dan Johansson and Johan Karlsson.

The fourth and fifth chapter apply the concept of the entrepreneur to two long-debated issues in economics: the economic returns to education and the nature of income inequality in the United States. I am the only author of the article on education and entrepreneurship, while the article on inequality is coauthored with Tino Sanandaji.

The sixth and final chapter deals with what is frequently a consequence of successful entrepreneurship: Philanthropic giving in Sweden and its economic effects. The article is coauthored with Johanna Palmberg and Pontus Braunerhjelm.

**Defining the entrepreneur**

How should one define the entrepreneur and the concept of entrepreneurship? This is not obvious. Often, “entrepreneur” is used as a positively charged synonym for “business owner”. In academic research the definition of entrepreneurship hinges on the economic role of the entrepreneur. This role is never limited to fulfilling some formal criteria (i.e. owning a business). Rather, these definitions are based on an individual agent performing a certain economic function.

Probably the most widely used definition of the entrepreneur was provided by Joseph Schumpeter. Schumpeter (1912/1934) defined the entrepreneur as the economic actor who introduces new ways of employing existing productive means, an activity he termed innovation. Schumpeter contrasts the act of innovating to that of inventing. An invention that remains unused in the wider economy does not change how existing productive means are used. Inventions only contribute to innovation if they are used in some new product or
service. Steve Jobs did not invent the smartphone, but he innovated by combining existing and new products into a product that came to define the smartphone market.

Israel Kirzner (1973) instead portrays the entrepreneur as the discoverer of opportunity. Kirzner’s entrepreneur is the agent that brings markets into equilibrium by identifying profit opportunities. The entrepreneur then proceeds to exploit these opportunities until they disappear through competition. In short, Steve Jobs identified an unexploited profit opportunity and then upended the market for phones and portable computing. He reaped great profits from doing so.

Frank Knight (1921) held that the function of the entrepreneur is making judgmental decisions and bearing uncertainty in the economy. The entrepreneur is the agent that bears the economic uncertainty that cannot be insured against. If you are gambling at a roulette table, you can calculate the risk that you take with precision. If you oversee the introduction of a new brand of detergent into an established market, you tend to have a good grasp of what market outcome you can expect. However, when launching a product in a category that is in its infancy (say, an iPhone), you do not know the possible outcome space.

These definitions of the entrepreneur’s role in the economy are not mutually exclusive. Nor are they exhaustive. Rather, they capture different aspects of what is traditionally meant by “entrepreneurship”. Creating innovative products and services, identifying and exploiting fleeting profit opportunities and bearing uncertainty are all overlapping and complementary economic functions.

There will never be an “objective” definition of what constitutes entrepreneurship. But the commonly used definitions allow us to examine the economic role of the entrepreneur with far greater precision than when merely using “entrepreneur” as shorthand for “business owner”.

How does one operationalize the various theoretical measures of entrepreneurship? Measuring the bearing of uncertainty or recombination of productive factors in innovative ways directly is difficult. Invariably, one must rely on various proxies for entrepreneurial activity. Quality-adjusted measures of business activity, such as the growth
opportunities perceived by firms can be useful in detecting entrepreneurial activity (see for instance the Global Entrepreneurship Monitor, 2018). One can also look for the telltale profits that tend to be produced by entrepreneurship (Henrekson & Sanandaji, 2014).

Finally, it should be noted that entrepreneurship is not necessarily socially beneficial for all, or even most, in society. As Baumol (1990) argues, entrepreneurship can be canalized into productive, unproductive or even destructive activities.

Chapter 2-3: The role of the entrepreneur in Economics

Several researchers created definitions of the entrepreneur as an economic actor at a relatively early stage in the history of modern economics. However, the concept was increasingly pushed out of mainline economics as it was difficult to operationalize mathematically.

Chapter 2: Economics doctoral programs still elide economics

The research question posed in “Economics Doctoral Programs Still Elide Entrepreneurship” (coauthored with Dan Johansson) is hence: Is the entrepreneur still absent from economics? The methodology used is simple: We study doctoral programs in Sweden and the United States and examine textbooks and assigned articles to check if some formal concept of the entrepreneur is covered in course materials.

The mandatory courses in microeconomics and macroeconomics represent the “canon” of economics, or the theoretical foundation, that all doctoral students are expected to know. We therefore investigate the content of the textbooks and articles used in these courses. The article adds to the literature by performing the first survey of the role of entrepreneurship in US Economics PhD programs as well as through closer analysis of the models and articles that are discussed in the canon of economic literature.

We find that while the entrepreneur remains a marginal phenomenon in the canon of modern economics, some more recent macroeconomic textbooks attempt to reintroduce the entrepreneur into the standard macroeconomic frameworks, primarily in the form of Schumpeterian growth models. Johansson, Karlsson & Malm (2018) extends the methodology used in Johansson & Malm (2017) to another mostly neglected concept in economics: family firms.

**Chapter 3: Family business – a missing link in economics**

Family businesses account for a substantial share of economic activity and have been found to deviate from standard economic assumptions on firm behavior in important ways. Yet, little is known of how they are represented in economic theory. As in Johansson & Malm (2017), we examine course literature and assigned papers in doctoral courses in economics. We also survey economics professors on their views of the topic. We conclude that the family firm as a concept is not used in mainstream economics and that it is not viewed as a subject important enough to merit inclusion in economics instruction.

**Chapter 4-5: Applying the concept of the entrepreneur to economic debates**

The next step after concluding that the Entrepreneur is still a marginal phenomenon in mainstream economic thinking is: Can introducing the concept of the entrepreneur into longstanding economic debates help us understand the underlying issues better? I here examine the role of the entrepreneur in two separate problems in economics: The returns to education and the distribution of income.

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3 Malm (2018), manuscript
Chapter 4: Entrepreneurship and the returns to education

Estimating the returns to education is a longstanding economic problem that has significant policy implications. The problem is complex. Estimating the earnings of various educational categories is straightforward, but disentangling the underlying causality is far more challenging.

There exists a significant body of previous research that examines the correlation between education and entrepreneurship. However, most papers on the topic examine the correlation between observed education and self-employment (Van der Sluis et al., 2008). This approach makes it difficult to establish causality, due to potential systematic differences in unobserved characteristics between individuals (Hartog and Oosterbek 2007). In short, it is unclear if it is education that causes differences in self-employment and entrepreneurship, or if instead underlying unobserved characteristics such as cognitive ability cause differences in both education and occupational choice and success.

The issue is complicated further as the very definition of the term “entrepreneurship” itself can be contentious. As discussed above, “Entrepreneurship” is often used as a synonym for “self-employment” (Henrekson & Sanandaji 2014). I hence attempt to measure not only occupational status, but also the quality of entrepreneurial activity.

To mitigate the problem of unobserved characteristics, I examine the effects of exposure to the Swedish Compulsory School Reform of 1958-69. In the 1950s and 60s, Sweden introduced a major educational reform that lengthened compulsory education from seven to nine years. The reform also postponed the separation of students into theoretical or practical tracks and introduced mandatory English education from grade five.

Meghir and Palme (2005) pioneered the use of this reform in examining the effects of education, making use of the rolling introduction across Swedish municipalities as a source of semi-exogenous variation in education.
I use a similar approach to examine both the effect on occupational choice (i.e. if someone chooses to become self-employed or employed) as well as entrepreneurial success, measured by criteria such as profitability and the number of employees in an operational firm leader’s firm. The contribution of the article is the use of the Swedish comprehensive school reform as a source of variation in education for examining self-employment and entrepreneurship-related outcomes.

To summarize my findings briefly, I find that participation in the Swedish reform is a strong predictor for receiving more total years of education, both amongst employees and operational firm leaders. However, reform participation does not appear to increase performance amongst individuals that are operational firm leaders.

Receiving more education does appear to make individuals less likely to engage in marginal self-employment (indicated by years spent operating a sole proprietorship (“enskild firma”). This effect is possibly caused by an increase in the opportunity space for students that received more years of education, resulting in less necessity-based self-employment. However, there is no corresponding effect on the propensity of reform participants to operate a limited corporation (“aktiebolag”).

Chapter 5: Entrepreneurship and the distribution of income

Income inequality has increased significantly in the United States since the mid-1980:s. This phenomenon has been the subject of much attention, both in the political sphere as well as in academia. There are many proposed causes for rising income inequality. The theory of Skill-Biased Technological Change (Krueger, 1991 and Katz, 1999) suggests that technological development is increasing the returns to education and human capital. Rosen (1981) proposes that increasing compensation to “Superstar” performers due to larger and more integrated markets is increasing income inequality. Others have analyzed the role of

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4 Malm & Sanandaji (2018), manuscript
increased trade and globalization (Ohlin, 1931 or Burtless, 1995), or ideology (Bjørnskov, 2008).

Economist Thomas Piketty (2014) proposes a novel explanation for increasing top incomes in his book “Capital in the twenty-first century”. He argues that this development has been driven by the emergence of “Supermanagers”, managers in large hierarchical organizations that can influence their own compensation through rent-seeking.

We examine Piketty’s hypothesis by breaking down the data used by Piketty when formulating his hypothesis. Rather than merely looking at a broad aggregate of “executives, managers, supervisors and financial professionals”, we divide this category further based on imputed occupational status. We distinguish between salaried managers and those individuals who are managers in closely held firms. We find that the share of salaried managers amongst the top 0.1 percent of earners declined from 38 to 20 percent between 1979 and 2005 and that the increase in compensation to salaried managers only explains 14% of the increase in top income shares during the same period. Managers in closely held corporations and other individuals classified as entrepreneurs meanwhile explain 34 percent of the 1979-2005 increase in top income shares. This reinterpretation of Piketty’s thesis, shifting the focus from salaried managers to managers in closely held firms and other entrepreneurs is our primary contribution to the literature.

One weakness of the tax data used by Piketty is the limited period covered. The data stops in 2005. We therefore also examine self-reported data from the Survey of Consumer Finances (Federal Reserve, 2017) for the period 1989-2016. The SCF data confirms that entrepreneurial households make up a highly disproportionate share of top income earners. However, this strong overrepresentation has declined somewhat since 1989.

To summarize our findings, we conclude that increasing managerial bargaining power is unlikely to have been the primary driving force behind the increase in top incomes in recent decades. Still, we cannot exclude the possibility that at least some of the increase in
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top incomes might has been caused by an increase in managerial bargaining power and rent-seeking.

Chapter 6: Philanthropy and entrepreneurship

Successful entrepreneurship is the main source of new fortunes, and new fortunes are the primary source of large-scale philanthropic activity (Acs, 2013). As chapter four argues, successful entrepreneurs constitute a large share of those with high incomes and high wealth. Hence, the Swedish Entrepreneurship Forum (SEF) conducts a research program into philanthropy (“Filantropiskt Forum”).

As a part of this research program, we have examined the state of Swedish philanthropy. As Swedish philanthropy has long been focused on the funding of research, we also examine linkages between philanthropy and innovation and research output (Silfverstolpe, 2013).

The non-profit foundation is the key actor in Swedish philanthropic activity. We hence use data on the activity of non-profit foundations for the period 2000-2015 to examine variations in giving over time and across regions. We find that total payments from philanthropic foundations have remained stagnant as a share of GDP during this period and that giving is heavily concentrated to large foundations, primarily in the Stockholm region.

We also examine regional linkages between philanthropic giving and research and innovation, a topic previously unexamined in a Swedish context. We use a knowledge production framework that explains regional patent applications by private R&D spending, public non-university R&D spending (patent applications and R&D spending categorized by industry), regional human capital and university research spending (categorized by academic

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5 Braunerhjelm, Palmberg & Malm, 2018
field). University research spending is further divided into non-profit funding, corporate funding and state funding.

While we find that total spending of R&D from all sources is a strong predictor of patent application output, funding composition does not appear to have a significant impact on outcomes. Philanthropic funding does not appear to be better or worse than other funding sources when it comes to promoting innovation. Using a similar knowledge production function setup, we find that total research funding is the primary driver of publication output, while again funding composition does not appear to have any significant effect.

The correlational methodology used does not allow for strong causal conclusions from our results. Better microdata availability for philanthropic donations could hence alter our conclusions.
References:


