

# Entrepreneurship, Human Capital and the Labour Market

by

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## **Project Description**

The entrepreneur is generally believed to play an important role in the modern economy as an engine of growth, a creator of innovations, and a source of flexibility. Thus, the concept of “entrepreneurship” often appears in the modern growth literature and is often advocated as an important economic factor in the political debate. The substance of this concept, however, often remains rather vague.

Although there is a growing literature on entrepreneurship, our understanding of the involved issues is still far from perfect. Detailed descriptive studies of entrepreneurs and their activities are already in place – at least in the case of Denmark, see the National Agency for Enterprise and Housing (2003) – but existing theoretical studies of the *causes* and *consequences* of entrepreneurship are limited and point in different directions, see, *e.g.*, Lazear (2003) and Fonseca, Lopez-Garcia, and Pissarides (2001). Furthermore, empirical studies *testing* the different theories of entrepreneurship suffer from a lack of sufficiently informative data, see, *e.g.*, Evans and Jovanovic (1989), Blanchflower (2000), and Blanchflower and Oswald (1998). Available data have also prevented appropriate application of econometric methods to deal with important issues of endogeneity, caused by, *e.g.*, reverse causality and omitted variables, which can seriously bias the obtained estimates/results.

This project – which is scheduled to run for (at least) three years – addresses a number of issues related to entrepreneurship, combining theoretical work with empirical analyses on high-quality Danish data, which combines firm statistics with very detailed individual information, concerning, *e.g.*, education and labour-market experience of both founders and employees, from the IDA database.<sup>1</sup> These unique data also allow us to treat endogeneity problems using more sophisticated and more appropriate econometric tools, thereby minimising the potential bias in the results.

The research to be undertaken in this project falls under two headings:

The first part of the project addresses the *causes* of entrepreneurship. What are the driving forces behind Danish entrepreneurs, and how do they compare with entrepreneurs in other countries? In answering these questions, the role of individual characteristics as well as the institutional framework, including labour market institutions, the tax system and the legal framework, must be considered.

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<sup>1</sup> IDA: Integreret Database for Arbejdsmarkedsforskning, Danmarks Statistik.

The second part analyses the *consequences* of entrepreneurship. What is the role and value of entrepreneurs in the Danish economy? Are new firms better at creating growth opportunities and/or innovations than old firms, and do they rely on a different organisation of production than existing firms? In this part of the project, the growth and growth contributions of entrepreneurs will be analysed, as well as the role played by new firms in the skill-upgrading process and in business-cycle movements.

The two parts of the project are described in more detail below. Given the believed importance of entrepreneurship in the Danish economy, throwing light on the causes and the consequences may obviously help to improve policy making in this area.

#### A. *What makes an entrepreneur?*

Existing descriptive analyses by, e.g., the National Agency for Enterprise and Housing (2003) and the Danish Economic Council (2003), provide us with a very detailed *picture* of entrepreneurs in Denmark. However, it does not reveal the underlying mechanisms – the *causes* of entrepreneurship. Hence, we may still speculate about what *makes* an entrepreneur?

While this must be the basic question in research on entrepreneurship, existing studies on other countries suffer from severe data limitations and associated econometric problems of endogeneity, which are likely to cause serious estimation bias. Furthermore, specific features of the Danish economy and the institutional set-up are likely to exercise important influence.<sup>2</sup>

The existence of register data in Denmark and the possibility to track entrepreneurs over long time periods (before, during and after self-employment) and to combine them with information on their before-self-employment workplace offers new research opportunities and will help to give an ultimate answer to the old question: What *really* makes an entrepreneur? Candidate entrepreneur characteristics are risk aversion, human capital endowments, something that is often referred to as “entrepreneurial capital” (e.g. past industry experience, personal performance in prior dependent work) and the ability to receive funding. The Danish register data contain a large number of variables that proxy these candidate characteristics.

The available data also allow us to take endogeneity issues into account, and appropriately deal with them using advanced econometric techniques. More specifically, the availability of very detailed individual information, including, for instance, historical and educational information on parents, provide us with suitable instruments in dealing with the above-mentioned endogeneity problems through various IV-estimation techniques. Furthermore, the fact that individuals are tracked over time provides a sound basis for more advanced so-called “structural estimation”, see, e.g., Eckstein and Wolpin (1989) – an approach which allows for more direct inference about the causal relationships, and which has recently been applied in a number of other areas of economics.

However, not only individual characteristics will influence the decision to become an entrepreneur. Institutional features such as the tax system, access to capital, and the

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<sup>2</sup> Very few academic studies on Danish data exist. Carrasco and Ejrnæs (2002) provide a comparative analysis of self-employed in Denmark and Spain based on micro data from the European Community Household Panel (ECHP). Using data from IDA, Jensen, Ejrnæs, Nielsen, and Würtz (2003) measure transition probabilities between different labour market states, including self-employment, and focus on differences between immigrants and natives.



legal framework must also be analysed. A specific issue that might be of particular relevance to Denmark and the other Nordic countries, and which illustrates the complex nature of entrepreneurship, is how existing labour market institutions influence the incentives for becoming an entrepreneur. Due to heavy taxation of dependent work and existing labour market institutions and rigidities, the Danish wage structure is relatively compressed and returns to education low, compared to other countries, see, e.g., Malchow-Møller and Skaksen (2003). This raises the incentives to become self-employed for high-skilled individuals. At the same time, the compressed wage structure limits job opportunities for low-skilled individuals, and hence may also raise their incentives to become self-employed. As a consequence, Danish entrepreneurs may constitute a very heterogeneous group, driven by a number of different incentives and therefore reacting differently to the same policy interventions. Uncovering the different incentives thus becomes central for successful policy implementation, where individual measures may have to be targeted at specific groups.

#### *B. The role and value of entrepreneurs in the Danish economy.*

Having analysed the causes of entrepreneurship, the next step is to look at the consequences for the entire economy. How do entrepreneurs impact on growth and, more generally, how do they affect the functioning of the economy? As for the analyses under part A, the available Danish data allow us to apply rather sophisticated econometric methods in answering these questions – in part because of the recently established link (FIDA) between the firms statistics and IDA. Below, we briefly outline five specific areas of research.

First, we want to analyse the importance of entrepreneurs in the aggregate growth process. Many questions are of relevance here: Do new firms exhibit higher rates of growth? Do they innovate more or less than existing firms? To what extent do they pay different wages? What are the differences across sectors and regions, and between domestically and export-oriented firms? And – most importantly – why do these differences exist?

Second, we wish to analyse whether new firms come with a different governance structure than existing firms. It has been hypothesised that new firms demand a different type of labour than old firms, and that this might have important consequences for the overall skill-upgrading process in the economy. Also the “flow” of workers might be expected to be different in new firms compared to old firms. These theories should be further investigated and subjected to empirical tests in order to clarify the importance of entrepreneurs for the functioning of the economy. Related to this, we would like to investigate to which degree new firms are “better” at introducing organisational changes than existing firms.

Third, business-cycle movements are likely to play an important role in the creation of new firms. It has thus been hypothesised that old and less-productive firms close during downturns (“creative destruction”) and new productive firms open during upturns. We intend to investigate the prevalence and causes of this phenomenon in the Danish economy. In relation to this, one might expect that newly established firms might be more vulnerable to business-cycle movements.

Fourth, we plan to analyse the wage differential between dependently employed workers who have never been self-employed and dependently employed workers who have previously been self-employed. In which cases is the wage differential positive/

negative? What is the effect of an unsuccessful episode of self-employment on wages? This is a central question since a major factor hampering entrepreneurship activity is the fear of becoming punished after a failed attempt of self-employment.

Fifth, we plan to investigate the role of immigrants in economic growth and job creation in Denmark. It is commonly believed that both highly-qualified and less-qualified foreigners immigrate. It is to be expected that low-skill immigrants opt for low-tech businesses while high-skill self-employed immigrants might actually significantly contribute to Danish value added and employment.

### ***Time plan and budget***

The project begun in November, 2003, and will run for (at least) 3 years. Part of the project is financed by an external grant of DKK 3,000,000 from §08.33.01.20 on the Finanslov.<sup>3</sup> However, this grant is earmarked for the financing of the PhD student, the data and contracts with researchers, according to following budget.

#### Funding from §08.33.01.20:

• PhD student	DKK	1,500,000
• Data from Statistics Denmark	DKK	500,000
• Contracts with researchers	<u>DKK</u>	<u>1,000,000</u>
	<u>DKK</u>	<u>3,000,000</u>

The funding applied for at the EPRU network is to finance two research assistants from July 1st, 2004 to June 30<sup>th</sup>, 2005, as well as for the organisation of an international workshop/conference on entrepreneurship to be held in Copenhagen on October 10<sup>th</sup> -11<sup>th</sup>, 2004. Invitations have recently been sent out to leading academics in this field, and we have already received several positive responses.

#### Funding applied for at the EPRU network:

Research assistance, July 1 <sup>st</sup> , 2004 – June 30 <sup>th</sup> , 2005	DKK	200,000
Workshop, October 10 <sup>th</sup> – 11 <sup>th</sup> , 2004	DKK	100,000
Administration	<u>DKK</u>	<u>25,000</u>
Total	<u>DKK</u>	<u>325,000</u>

### ***4. References***

- Blanchflower, D. G. (2000): "Self-Employment in the OECD Countries", *Labour Economics*, 7, 471-505.
- Blanchflower, D. G., and A. J. Oswald (1998): "What Makes an Entrepreneur?", *Journal of Labor Economics*, 16, 26-59.
- Carrasco, R., and M. Ejrnæs (2002): "Self-Employment in Denmark and Spain: Institutions, Economic Conditions and Gender Differences", CAM working paper 2002-01.
- Danish Economic Council (2003): *Dansk Økonomi, forår 2003*, Danish Economic Council, Copenhagen.
- Eckstein, Z. and K. I. Wolpin (1989): "The Specification and Estimation of Dynamic Stochastic Discrete Choice Models", *Journal of Human Resources*, 24, 562-598.

<sup>3</sup> §08.33.01.20: "Generelle aktiviteter for iværksættere og mindre virksomheder".

- Evans, D., and B. Jovanovic (1989): "An Estimated Model of Entrepreneurial Choice under Liquidity Constraints", *Journal of Political Economy*, 97, 808-827.
- Fonseca, R., P. Lopez-Garcia, and C. A. Pissarides (2001): "Entrepreneurship, Start-Up Costs and Employment", *European Economic Review*, 45, 692-705.
- Jensen, K.B., M. Ejrnæs, H. S. Nielsen, and A. Würtz (2003): "Self-Employment Among Immigrants: A Last Resort?", Cam Working Paper 2003-08.
- Lazear, E. P. (2003): "Entrepreneurship", IZA Discussion Paper No. 760.
- Malchow-Møller, N. and J. R. Skaksen (2003): "Globalisering og ulighed på det danske arbejdsmarked", CEBR REP 2003-01, prepared for the Ministry of Economics and Business Affairs.
- National Agency for Enterprise and Housing (2003): "De nye virksomheder – 4. statistiske portræt af iværksættere", National Agency for Enterprise and Housing, Copenhagen.