For Official Use **DSTI/IND(2008)20**

Organisation de Coopération et de Développement Économiques
Organisation for Economic Co-operation and Development **14-Oct-2008**

English text only

DIRECTORATE FOR SCIENCE, TECHNOLOGY AND INDUSTRY
COMMITTEE ON INDUSTRY, INNOVATION AND ENTREPRENEURSHIP

DSTI/IND(2008)20
For Official Use

ENTREPRENEURS AS DRIVERS OF INNOVATION AND GROWTH

(Note by ICE)

Meeting to be held at the OECD in Paris on 30-31 October 2008

This issues paper was prepared by the International Consortium on Entrepreneurship (ICE). It is submitted to the CIIE under item 5 of the agenda, Delegates are invited to discuss the direction of future work proposed in this document and provide comments on the nature of the work being proposed.

Contact : Structural Policy Division, Mr. Marcos Bonturi, tel: +33 1 45 24 19 59;
fax: +33 1 44 30 62 57; e-mail: marcos.bonturi@oecd.org

JT03252901

Document complet disponible sur OLIS dans son format d'origine
Complete document available on OLIS in its original format

English text only

ENTREPRENEURS AS DRIVERS OF INNOVATION AND GROWTH

Note by the International consortium on Entrepreneurship (ICE)

Background

1. Entrepreneurship is a key driver of productivity and economic growth both directly through its competitive pressure on existing firms and through innovation. However, to date, the relationship between entrepreneurship and innovation is neither well understood nor well analysed.

2. Rigorous analysis of the direct relationship is complicated by the lack of key definitions and data. For example, no "official" definition of entrepreneurship exists, which complicates the collection of comparable data even further. Furthermore, most policy analysis has so far been based on a "best/good practice" approach. New analytical methods are required to supplement our understanding of the drivers of entrepreneurship.

3. Over the years, the OECD has contributed to a dramatic improvement in our understanding of the effects of entrepreneurship and its drivers. However, more work is needed in order to advance understanding the links between entrepreneurship and innovation. At a recent workshop in Copenhagen in May 2008 business representatives and OECD policy makers tried first to clarify what kind of new knowledge is needed, and second to prioritise the wish list according to what is feasible within the timeframe of the OECD Innovation Strategy.

4. This paper is prepared by the International Consortium of Entrepreneurship (ICE)[1] to contribute to the discussion of the links between entrepreneurship and innovation at the next CIIE meeting in October 2008. The paper defines entrepreneurship, briefly reviews the latest work by the OECD and others, and proposes some ideas for further research and analysis in the area.

5. All of the suggested ideas/research projects will be initiated either by ICE or the Kauffman Foundation. However, to better serve the needs of the CIIE, both parties are keen on engaging the CIIE further in the work and are open to suggestions for possible new ideas/research project or changes in the priority of the current set of projects. The plan is to discuss the final results of the work at a workshop in June 2009 (see more below).

Defining entrepreneurship

6. Many countries – especially the European countries – have consistently defined entrepreneurship as the creation of new firms. In this context, an entrepreneur is a person who starts a new firm. The links between firm creation and innovation are, however, very weak. Most new firms are simply copying existing business models and hence are not being particularly innovative (*e.g.* a new barber shop entering the market and forcing another barber shop further down the street out of business). While this kind of firm

[1] http://ice.foranet.dk/

creation and destruction has a competitive effect and can be productivity enhancing, the introduction of innovation is limited.

7. Other countries including the US have often taken a different view to defining entrepreneurs and entrepreneurship, with entrepreneurship and innovation almost becoming synonymous. In Peter Druker's words, "Innovation is seen as the tool of entrepreneurs" (Drucker, 1999).

8. The Entrepreneurship Indicators Programme (EIP) undertaken by the OECD Statistics Directorate in partnership with Eurostat aims to fill the knowledge gap by providing a common definition and a measurement manual (Ahmad and Hoffmann, 2008). The definition considers three components: Entrepreneurs, Entrepreneurial Activity and Entrepreneurship:

- *Entrepreneurs are those persons (business owners) who seek to generate value, through the creation or expansion of economic activity, by identifying and exploiting new products, processes or markets.*

- *Entrepreneurial activity is the enterprising human action in pursuit of the generation of value, through the creation or expansion of economic activity, by identifying and exploiting new products, processes or markets.*

- *Entrepreneurship is the phenomenon associated with entrepreneurial activity.*

9. The definition is deliberately targeting business related entrepreneurship and explicitly ignoring social entrepreneurship. This is not to undermine the importance of social entrepreneurship, but merely an attempt to capture a particular aspect of entrepreneurship related specifically to firms and firm growth, which are the main areas of interest of the work currently conducted by the OECD and its participating bodies.

10. This new definition provides a platform for measuring entrepreneurship consistently across countries and regions. OECD (2007) provides an overview of the current stage of data development and collection. The definition also provides a basis for discussing the links between entrepreneurs and innovation and why promoting entrepreneurship is a critical part of any innovation strategy.

Linking entrepreneurship, innovation and productivity growth

11. The effect of new firm entry and exit on productivity can be shown in a so-called growth accounting framework (OECD, 2003). A detailed decomposition of productivity growth in 8 OECD member economies over a 10 year period showed that between 20 and 40 percent of total labor productivity growth could be explained by new firm entry and exit.

12. Labor productivity of firms exiting the market tends to be lower than that of their competitors, and therefore the exit of these firms increases the average labor productivity within the industry. Firms entering the market tend to have a labor productivity level near the industry average and, therefore, only have a small effect on labor productivity growth. These productivity effects of firm entry and exit are often referred to as *creative destruction*.

13. The effects of innovation can be detected by looking at the effects on multifactor productivity (MFP). Exiting firms have a limited effect on overall MFP growth, while new firm entry contributes significantly to MFP growth. One possible explanation is that new firms enter the market with new innovative management that utilises the factors of production better (innovation) and thus increase MFP growth (OECD, 2005).

14. Work on US data presented by Haltiwanger at the Copenhagen Workshop in May 2008 (Haltiwanger *et al*, 2008) expanded our understanding of these effects. ICE and the Kauffman Foundation are considering expanding this work to include other countries, see below.

15. The effects are confirmed by other studies using different techniques. One study, for example, relates firm entry rates to productivity growth across sectors. This approach captures both the direct impact firms have via their own productivity and the indirect effect on aggregate productivity that might occur, for instance, as a result of the competitive pressure created by firm entry (Brandt, 2004a, b).

16. The main effect on innovation comes from entrepreneurs succeeding in *exploiting new products, services, processes or markets* in a way that raises multifactor productivity. The effects are increased as the entrepreneur expands the firm. Therefore, new high-growth firms, almost by definition, affect productivity.

Policies for promoting entrepreneurship

17. Many words and phrases are used in the literature to describe the factors affecting entrepreneurship. But the differences between these various studies are often largely semantic. The OECD proposes five main areas to classify the determinants of entrepreneurship:

- *Opportunities*
- *Skilled people*
- *Resources*
- *Regulatory framework*
- *Culture*

18. *Opportunities* are created by market conditions, in turn determined by public involvement in markets, competition in the markets, access to foreign markets, procurement regulation and so on.

19. The area of *skilled people* refers both to the capabilities of the entrepreneur and access to other capabilities within the entrepreneurial infrastructure, where so-called entrepreneurial capabilities are understood to include the human and social capital of the entrepreneurs.

20. *Resources* reflect access to capital, R&D and technology. Capital covers all phases of business life, from access to early seed funds to access to the stock markets. R&D creates new inventions that the entrepreneur and entrepreneurial businesses can turn into new products or processes. R&D in this context should be interpreted as a resource that can be created or purchased, whether directly or in an embodied or diffused form.

21. Entrepreneurship happens within a *regulatory framework*, which is defined very broadly and includes all taxes, regulations and other public rules and institutions affecting entrepreneurship.

22. *Culture* affects all parts of the model and is included as the final factor in the framework. It comprises each individual's assumptions, adaptations, perceptions and learning capabilities.

23. So far, most policy analyses have assessed best/good practices by examining policies implemented in various countries and comparing these with country performance. These studies provide a comprehensive set of recommendations for policy reforms but they are limited by the current stage of policy implementation in the various countries.

24. The Copenhagen workshop presented several ideas for policy analysis that would go beyond the best practice approach. One of the most promising ideas is to analyse and hence get a better understanding of the links and strategic collaboration between smaller firms entrepreneurs and large firms. Another idea is to analyse whether it is possible within structured accelerating programs to teach entrepreneurs how to achieve firm growth.

The way forward

25. The Copenhagen workshop highlighted three broad areas in which more knowledge needs to be translated into the current policy debate including *i)* entrepreneurship and economic growth, *ii)* drivers of entrepreneurship and *iii)* best (or next practices) in entrepreneurship/innovation policy.

Area 1: Entrepreneurship and Economic Growth

26. The key questions within this area are:

- How important are entrepreneurs for productivity growth and job generation?
- Are entrepreneurs becoming more important for economic growth as societies become more knowledge intensive?
- What are the characteristics of how industries emerge?
- How different are firms' growth patterns across countries?
- What is the relationship between industry emergence, entrepreneurs, and scientists?

27. Suggested invited analyses and papers:

- The Kauffman Foundation will produce a "thought piece" or research summary on why/if entrepreneurs are becoming more important for economic growth at the frontier.
- The Kauffman Foundation will request a piece on star scientists, economic growth, and industry emergence. The piece would likely focus on nanotechnolgy sector and how it has emerged utilising the Nanobank database.
- Under the leadership of the Danish Ministry, to carry out a micro data study on the patterns of firm growth trajectories across countries. Firm data will be broken down to facilitate analyses that investigate the importance of and difference in firm age, size and sector, firms' contribution to job creation, value added and productivity growth. Nine countries have committed to being a part of this project.
- The Kauffman Foundation will request a piece building on existing work to cover any additional points that are needed to address the question above.

Area 2: Drivers of Entrepreneurship

28. In addition to what is already known about the drivers of entrepreneurship, the proposed follow-up work will address three critical questions:

- What is the impact of financing on entrepreneurship?

- What are the key policy areas for developing well functioning capital markets?

- What is the impact of immigration on entrepreneurial performance?

29. Suggested invited analyses and papers:

- Under the leadership of the Working Party on Industrial Activity, to carry out a micro data study on the impact of financing, entrepreneurship, and innovation. Fourteen countries have committed to being a part of this study.

- Under the leadership of the Danish Ministry and in cooperation with ICE, engage in a series of country reviews of risk capital policies, to address the current stage of capital market policies in leading OECD countries.

- The Kauffman Foundation will request a paper on how international students studying in the U.S. consider possible entrepreneurial activities.

Area 3: Next Practices?

30. Suggested invited analyses and papers:

- Under the leadership of the Danish Ministry and in cooperation with ICE, engage in a series of coordinated case studies on entrepreneurial accelerators, their successes and failures, to address the question of whether growth acceleration programmes can be successful and if so, under what circumstances and whether measures are necessary to foster and maximize the impact of these programmes.

- Under the leadership of ICE, produce an analysis of the interactions between large firms and entrepreneurs. Corporations have recently come to realise that entrepreneurs or intrapreneurs can co-exist within the structure of corporations. As a result, many are attempting to boost their entrepreneurial capabilities, recognising that such activities can improve their competitive positions. Yet overall, these efforts have produced uneven success. Similarly, entrepreneurs can benefit from access to large firms' international network and capabilities in for example scale production. Preliminary data from the new Kauffman/Duke/Georgia Tech survey of innovation may be available for use and discussion.

31. The Kauffman Foundation in partnership with the International Consortium for Entrepreneurship (ICE) and the Danish Authority for Enterprise and Construction will host a workshop in Kansas City, Missouri (United States) on Tuesday, June 22 and Wednesday, June 23, 2009 to discuss the final outcomes of the projects described above. The CIIE is welcome to participate either as co-organisers or participants.

REFERENCES

Ahmad, N., and A. N. Hoffmann (2008) "A Framework for Addressing and Measuring Entrepreneurship", OECD Statistics Working Paper 2008/2, OECD, Paris.

Brandt, N. (2004a), Business Dynamics, Regulation and Performance, STI Working Paper, OECD, Paris.

Brandt, N. (2004b), Business Dynamics in Europe, STI Working Paper, OECD, Paris.

Drucker, P. (1999), *Innovation and Entrepreneurship*, Elsevier, Butterworth Heinemann.

Haltiwanger, J., R. Jarmin and J. Miranda (2008), Business Formation and Business Dynamics by Business Age: Results from the New Business Demography Statistics", May 2008, Working Paper available at: http://www.econ.umd.edu/~haltiwan/bds_paper_CAED_may2008_may20.pdf

OECD (2003), The Sources of Economic Growth in OECD Countries, Paris

OECD (2005), Micro-policies for Growth and Productivity, available at www.oecd.org/sti/micro-policies

OECD (2007), Entrepreneurship Indicators Programme: Status Report and Proposals on Definitions and Core Indicators, COM/STD/CFE/SME(2007)1, OECD, Paris.