



**INSTITUTIONS AND INCENTIVES
FOR INNOVATION**

POLICY BRIEF

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INSTITUTIONS AND INCENTIVES FOR INNOVATION

The need for an innovation policy framework

Successful entrepreneurs mobilizing resources, both from research and enterprise building, to find solutions to complex problems is an essential part of Sweden's road to future success.

Through combining, harnessing and developing new knowledge, the entrepreneur is a key component in meeting future challenges, locally as well as globally. Therefore it is crucial that entrepreneurial competencies are maintained and that experimenting and forward thinking as well as failures are allowed.

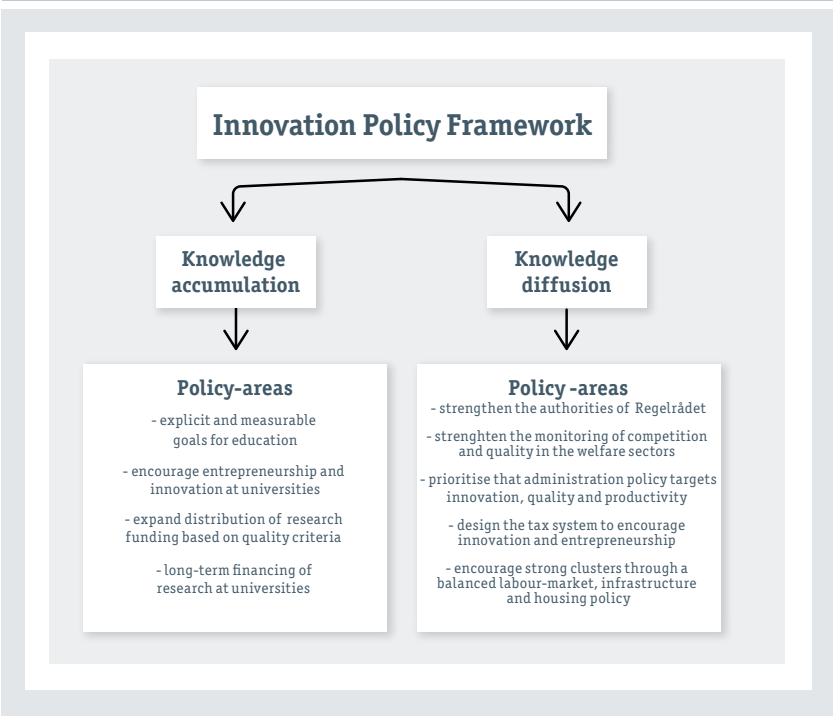
The Swedish Economic Forum Report 2013 focuses on institutions, laws and regulations which promote productive entrepreneurship and sustainable economic growth for the future. The report is based on studies conducted within the research program "The Economy of Entrepreneurship", financed by Torsten and Ragnar Söderberg Foundations.

Currently, there is consensus regarding the opinion that well-functioning institutions are fundamental for economic growth and success. However, it does not mean that we know the way to success for any given country. To pinpoint the crucial institutional factors is not a straightforward task.

Each country has its own unique set of formal and informal institutions which have developed over time. To follow the political discourse in most countries makes it obvious that people mainly are concerned with the own country's comparative weakness. This makes it tempting to search for a country that presents good solutions for the particular "problem area" one is concerned about and then argue that a certain institutional factor is key and thus should be imported.

Despite the difficulty of imitating and importing institutional solutions from abroad, there are lessons to be learned and room for adapting and reflecting. Compared with USA, the Swedish economy has gone through major reforms over the past twenty years, but some areas still need oversight and strengthening. Above all, Sweden needs a long-term and credible innovation policy framework (Figure 1).

FIGURE 1: AN INNOVATION POLICY FRAMEWORK



Entrepreneurship can favourably be viewed as a factor of production in itself. The entrepreneur often creates capital for a company by investing in material resources and building up non-material assets. The entrepreneur should be rewarded both for labour and for profit being reinvested in the company rather than distributed to the owner. This process is governed by the design of institutions, laws and regulations.

Institutional crossroads for Sweden

The introductory chapter by *Pontus Braunerhjelm* and *Magnus Henrekson* runs through Sweden's economic policy and institutional changes over the last decades, and compares the changes with the parallel development in USA. According to the authors, the Swedish economy has been heavily reformed over the last twenty years. However, there are several areas that needs strengthening. Above all, Braunerhjelm and Henrekson call for a credible and long-term framework for innovation policy.

In the next chapter *Joacim Tåg* presents an overview of correlations between venture capital investments and institutional framework as well as a case study of the development of the venture capital markets in Sweden and USA. The chapter includes an exploration of three institutional factors which may have affected a later development of the venture capital market in Sweden compared to USA – the financial markets, tax policies and labour market regulations. The government has played a crucial part in developing a Swedish venture capital market. Through deregulation of the financial markets and active government measures, the Swedish venture capital market has progressed fast over the last two decades and today it is one of the ten most active in the world.

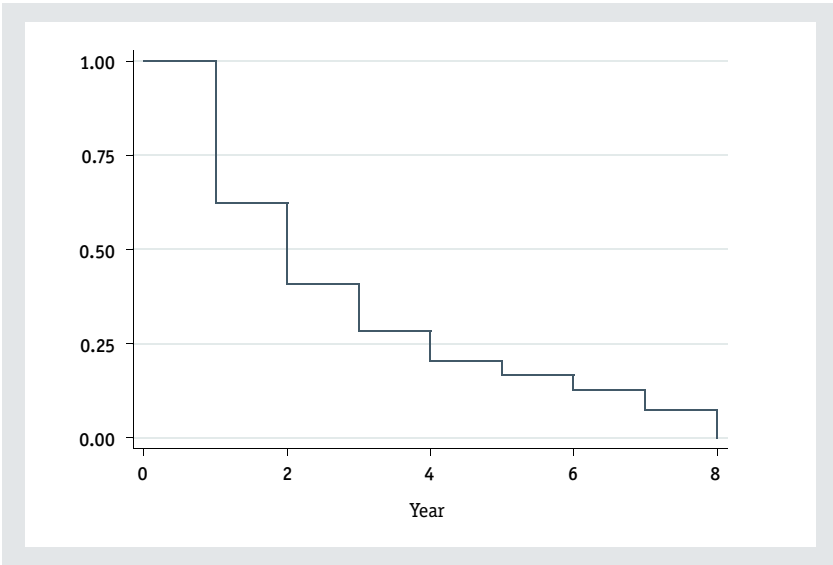
Martin Andersson's chapter focus on new firm formation, mainly on so-called spin-offs (firms created by employees leaving their job to start a business). Swedish spin-offs are doing relatively well in terms of growth and economic success compared to other firms – 75 percent survived the first two years, with the corresponding figure for other firms being 50 percent. A scenario that well mirrors the development in other countries. Research clearly point to the importance of experience and education as factors underpinning success.

Andersson also points out the important interplay between spin-offs and established firms – the latter providing a significant nursery for new ventures. The conditions for new fast-growing Swedish firms are connected with our ability to keep and attract large high tech and knowledgebased multinational companies.

How economically successful is academic entrepreneurship? *Anders Broström's* chapter presents a study of university employees, with a PhD, who has chosen to leave academia to start a business. The study is based on unique income data, which includes the complete economic return in addition to income from employment e.g. capital gains from exit.

The study shows that the small number of academics turned entrepreneurs rarely do well in economic terms. Out of the 19,171 academics in the study, 478 started a business (significantly fewer than in the population as a whole) and 60 percent had left the market within two years after start-up (Figure 2). Income for the average researcher was not raised, rather the risk of lowered income was considerable. Only in four cases could a significant economic outcome be observed.

FIGURE 2: PART OF ACADEMICS WHO REMAINS ACTIVE ENTREPRENEURS, 1-8 YEARS AFTER TRANSITION FROM EMPLOYMENT AT UNIVERISTIES



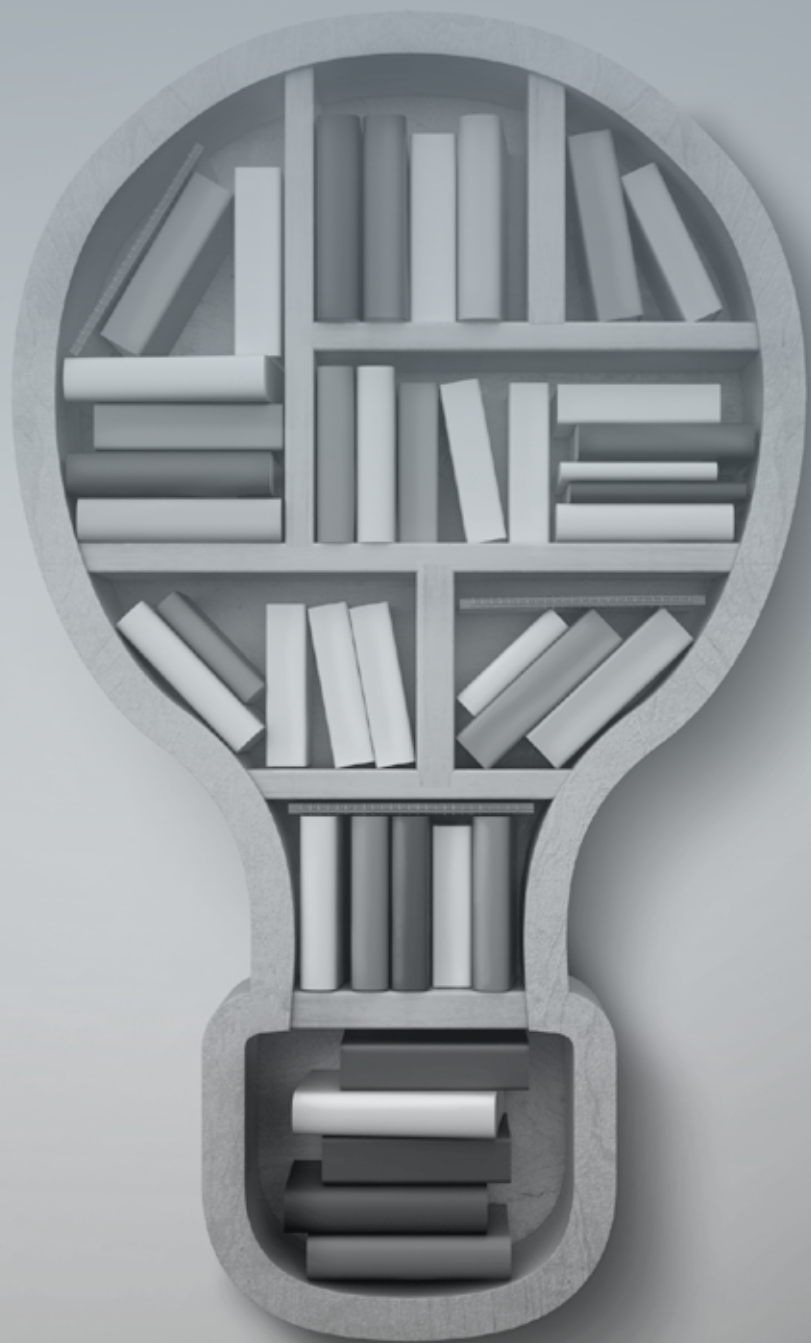
Based on these results Broström concludes that facilitating commercialization of research through the creation of favorable conditions for co-operation between academics and entrepreneurs is essential i.e. commercialization not demanding the academic to become an entrepreneur.

Tino Sanandaji's chapter focuses on high-impact entrepreneurship – defined as entrepreneurs who have built a billion dollar fortune. Existing studies tend to focus on self-employed entrepreneurs – individuals with low economic impact. As a rule, self-employed entrepreneurs have few or no employees and often no

ambition to grow or innovate. Based on this observation the author argues that it is not obvious for self-employed entrepreneurship to be used as a measure of innovative entrepreneurship.

Billionaire entrepreneurs comprise a small group which is disproportionately important. In the chapter, the group is compared to the share of self-employed entrepreneurs in 130 countries. The study shows that the impact of institutions and policy is not consistent. A policy that promotes more high-impact entrepreneurs does not necessarily correspond with one that promotes a large proportion of self-employed entrepreneurs.

In the last chapter *Per Thulin* studies how changes in employment through establishing new businesses affect total employment in a region. It shows that when a new business is established in a region's tradable sector, each new job in turn generates 0.4-0.8 additional jobs in the same region's non-tradable sector. The effect varies depending on the type of business established. The multiplier effect is particularly large for jobs demanding highly educated labour and for high-tech industries, where one new job, over time, leads to an additional three jobs in the non-tradable sector. This effect is lower in Sweden compared to USA, which can be explained by distribution of income effects, lower labour mobility and more generous unemployment compensation in Sweden, creating a potentially less price-sensitive labour supply. These findings are important for regional policy, as they suggest that in order to increase local employment levels, municipalities should target high-tech employers demanding highly educated labour.



Five policy areas for the future

Policy conclusions highlighted in the report can be summarised under five topics:

- Venture capital
- Taxes
- Labour market
- Clusters, regulations and business support
- Research and innovation

Venture capital

- A well-functioning venture capital market is best supported through a well-designed, high-quality legal environment (contract law, tax regulations, labour market legislation etc). Effective contracts that can be upheld are a decisive factor for a well-functioning venture capital market.
- Access to efficient stock markets which enables exit through listing is a necessary condition.
- Publically funded venture capital funds cannot compensate for the negative effect of institutions preventing the development of private venture capital. However, at some stages they may have a complementary effect.
- Tax transparent legal entities, which large multi-national investors are comfortable with, should be introduced in Sweden.
- A strong protection for patent and trademark rights is highly important and must harmonise with an effective competition policy - an aspect which is often overlooked.

Taxes

- In the area of tax legislation, a number of important reforms have been implemented. However, the entrepreneurship perspective is generally left out, even though lowering company taxes have been a step in the right direction. An overview of the entire tax system is increasingly urgent.
- In a global competition, taxation of companies and entrepreneurs cannot deviate significantly from other nations.
- It is essential that taxes are uniform between subjects: a small local company taxed higher than an established global company is not reasonable. That risks inhibiting the will to start a company as well as the ability for growth.
- Taxation of capital should be lowered to encourage investments.
- Taxation levels on options for employees in Sweden are discouraging, which prevents using them as an incentive for innovation and growth.

Labour market

- A flexible labour market is a prerequisite for entrepreneurship. Significant reforms have been implemented also in this area during the last decades. Without a flexible labour market other economic policies risk becoming inefficient.
- Labour market mobility is important to enable spin-offs and to secure the supply of relevant competence for venture capital financed businesses.
- Spin-offs require voluntary mobility on the labour markets; that employees choose to leave “safe” employment.
- Labour market regulations increase expected costs of starting and growing companies, which affects venture capital markets and increases the thresholds for entrepreneurship.
- In turn, mobility raises demands on a functioning housing and infrastructure policy.
- In general, labour market regulations should not contribute to increased costs for small business to hire or lay off employees.

Clusters, regulations and business support

- The evolution of dynamic clusters depends on the ability to attract both domestic and international start-ups. That ability depends, in turn, on the above mentioned policy areas. From an innovation and employment perspective the knowledge-based and innovative companies are of great importance for future growth.
- Enabling start-ups as a policy for innovation and employment must take in to account the interaction between new and mature companies, in particular, the role of mature companies as nurseries for start-ups and their ability to attract other businesses.
- One-sided efforts to support small businesses and start-ups entail risks, for example in the form of incubators and SME networks. The overall business environment which affects both mature as well as new businesses is of great importance.
- Rather than compensating SMEs for their disadvantaged position – a common purpose for economic policy measures over the last decades – policies should be aimed towards establishing a framework for a dynamic economy, which in turn encourages entrepreneurship with potential for growth and job creation.

- Identify reforms and policies that ease the establishment of new entrepreneurial businesses and create a fertile environment for new and existing companies to grow and reach their full potential.

Research and innovation

- Research, the development of knowledge, is a crucial component in an economy driven by innovation and growth. The importance of developing universities and government efforts to stimulate research and development holding commercial potential cannot be overemphasised.
- Despite commercial potential of research it is unrealistic, with few exceptions, that the researchers themselves become entrepreneurs.
- Interaction with existing companies and entrepreneurs is critical in order to facilitate commercialization through the possibility of cooperation between researchers and entrepreneurs. An interplay where they fill different but complementary roles.
- Economic incentives encouraging universities to establish better relations with entrepreneurs and businesses should be formulated.
- The multiplier effect is particularly significant for sectors demanding high-skilled labour and for high-tech industries. In Sweden, one new job in a region's tradable sector generates an additional three jobs in the same region's non-tradable sector over time.



The importance of entrepreneurship cannot be overestimated

In sum, an innovation and entrepreneurship policy formulated with a broad perspective is essential. Reforms within one policy area risk becoming inefficient when blocked by remaining obstacles in other policy areas. The final outcome depends on a holistic perspective, the framework.

It should be noted that it is not the entrepreneur alone who influences economic success. Successful entrepreneurs are dependent on a support system and an infrastructure, made up by public and private actors, which affect access to human capital, industrialists, well-functioning second hand markets, the rule of law, trust and transaction costs.

A focus on entrepreneurs should not disregard other necessary factors for a prosperous economy. Nevertheless, entrepreneurship is of vital importance; a lack of entrepreneurs cannot be satisfyingly substituted by a large supply of well-educated labour or an ever so well-functioning capital market.

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