Policies for High Growth Innovative Enterprises

Discussion paper for the 2013 ERAC mutual learning seminar on research and innovation policies

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Summary

What we know about HGIEs

In recent years, research has widely substantiated the importance of high-growth new enterprises (HGIEs) for job creation. The number and share of HGIEs in all enterprises is small, but the number and share of jobs they create is disproportionally large. The answer to the question why enterprises grow is complex, and possible barriers to growth are manifold. Put simply, high growth may be the results of entrepreneurs actively seeking economic opportunities, combined with the necessary skills, access to finance and favourable framework conditions.

What we can do to foster HGIEs

In Europe, policy attention for HGIEs is limited. Targeted national policies for HGIEs were found in a minority of Member States. The number of evaluation studies about HGIE policies is still small as well. It remains an open question whether the benefits of HGIE policy measures are higher than the cost of resources used and whether the same benefits could have been achieved with fewer resources spent on other policy measures.

Improving access to finance for HGIEs

Improving access to growth finance should be one priority for policy makers seeking to support HGIEs. This means for example to realise a single market for venture capital and support business angels networks.

Scale-up high-growth coaching

Coaching and mentoring may be very important to improve skills of inexperienced entrepreneurs. An infrastructure to encourage the replication of existing successful high-growth coaching networks throughout the EU could be set up.

Setting favourable framework conditions

There are ample examples of legal framework conditions unfavourable for high growth of firms. Such conditions may, for example, be related to investment regulation, start-up regulation, market entry barriers, labour law, bankruptcy law, taxation, and also to SME policies rewarding staying small.

Key issues policy makers should mind

Since there is evidence for the importance of HGIEs for employment creation, it appears to be worthwhile supporting them. However, policy makers should mind the following:

- There are no sufficiently solid empirical results yet that would allow identifying particularly beneficial policies for HGIEs.
- In order to use scarce resources efficiently, HGIE policies need to be based on market failure and to take into account possible state failure, too.
- There is empirical evidence that a larger number of HGIEs coincides with a larger number of “high failures” which Europe would also need to accept.
- High growth and highly visible firms should not be an end in itself. Moderate but continuous growth is more worthwhile than high but unsustainable growth. Continuous growth is the preferred growth mode of many “hidden champions” (unknown market leaders).
- Rather than trying to “pick winners”, policy makers should set framework conditions right to prepare a fertile ground for winners to pick themselves.

1 Background: towards a stronger European business sector

There is scientific evidence that high growth innovative enterprises (HGIEs) contribute decisively to job creation, innovation and economic growth in the EU. However, Europe has apparently performed relatively badly in generating HGIEs that quickly become global leaders. Thus, in recent years policy makers in Europe have shown increased interest in fostering HGIEs to strengthen the European business sector. The European Commission is currently developing a new innovation indicator taking into account HGIEs, in addition to the target of investing at least 3% of gross domestic product into research and development (R&D).

In order to further develop the understanding of effective policies for HGIEs in Europe, the Mutual Learning Seminar of the European Commission's General Directorate for Research and Innovation on 21 March 2013 deals with policies for HGIEs as one of three main topics. Within the HGIE session, particular foci are on (a) access to private debt and equity finance for start-ups, small and medium-sized enterprises (SMEs) and growing businesses, as well as (b) targeted public schemes to support innovative firms, as part of an overall innovation strategy.

The purpose of this discussion paper is providing concise background information and facilitating the discussion at the seminar. The paper addresses the following main questions: What do we know about HGIEs (chapter 2)? What can policy makers do to foster HGIEs (chapter 3)? What can policy makers do in particular to improve access to private finance (chapter 4) and to design targeted public schemes (chapter 5)? Finally, conclusions for policy makers are drawn and key questions for the seminar discussion are developed (chapter 6).[1]

2 High-growth innovative enterprises: What do we know?

2.1 Some definitions: high-growth enterprises, gazelles, and gorillas

The OECD defines **high growth enterprises** (HGEs) as "enterprises with average annualised growth in employees (or in turnover) greater than 20% a year, over a three-year period, and with ten or more employees at the beginning of the observation period."[2] A size threshold of ten employees is suggested to avoid the growth of micro enterprises distorting the picture. Excluded from this definition are companies that were born three years ago or less as well as companies that underwent a merger or take-over.

A certain share of high-growth enterprises are so-called "**gazelles**", defined as "high-growth enterprises born five years or less before the end of the three-year observation period."[3] Animal metaphors have some popularity in literature about HGEs – there is also the notion of "**gorillas**" for companies that grow quickly from start-ups to large

[1] This discussion paper is further developed from research for a policy brief in the framework of the project INNO-Grips on behalf of the EC; see European Commission (2011).

[2] OECD (2009), p. 28.

[3] See OECD (2009), p. 30 and Eurostat/OECD (2007), p. 61.

international players in high-technology markets.[4] In fact this may more accurately describe what policy makers desire, since the definition of HGEs includes for example companies that grow from ten to 18 employees within three years – reaching a size that does still not make much difference from a regional or national economy point of view.

The mutual learning seminar focuses on **innovative** high-growth enterprises. However, policy makers should be aware that high growth may not necessarily be related to innovative activity. High growth may for example also be related to increased demand in a business cycle upturn or to competitors seizing the market. Furthermore, while high growth may often stem from innovation, this innovation does not necessarily need to be technology-related. It may also be related to marketing or organisational innovation.[5]

2.2 Statistical evidence of HGIEs: fragmentary but developing

An overview of statistical evidence

Internationally comparable data about HGIEs are scarce and fragmentary. Due to different definitions and methods of data collection, there are large differences between the results of different studies.

The OECD's entrepreneurship indicators programme

The OECD-Eurostat Entrepreneurship Indicators Programme provides data about high-growth enterprises. Data are available for 16 European countries and five other countries, divided by manufacturing and services.[6] The most recent data available are for 2008. For this year, the US rate of HGEs in manufacturing was higher than in any European country for which data were available. However, in services the HGE rate in the US was lower than in most European countries; Sweden and Estonia had the highest rates. Furthermore, in 2009, France – for which no data are available for 2008 – had a higher rate than the US even in manufacturing. While this picture is only a fragment as three of the six largest European countries (Germany, UK, Poland) are missing, it shows that the US is not necessarily outperforming Europe in terms of HGE establishment.

Eurobarometer survey

A Eurobarometer survey in 2009 of more than 9,000 companies provided enterprise growth rates for all EU-27 countries.[7] The dataset cannot be compared with OECD data. It found that 12% of the companies in EU-27 had grown by over 20% on average per year in the previous three years, in terms of full-time employment or full-time equivalents. The largest share of HGEs was found in Norway (27%), followed by Romania (23%), Sweden (22%), Greece (21%) and France (20%). Considering the different economic conditions in these countries, the nature of high growth can be assumed to be very different. The lowest shares of HGEs were found in Latvia (3%), Belgium (4%) and Germany (5%).

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4 See Moore (1998).

5 See for example Rigby/Bleda/Morrison/Kim (2007), p. 18.

6 See OECD (2012), pp. 87.

7 See Gallup Organisation (2009), p. 15.

Bruegel study

A Policy Brief by the Bruegel think-tank in 2009 examined the age of the companies with the highest R&D expenditures among the largest enterprises from the US, Europe and other countries.[8] Of the US enterprises, 22% were founded after 1975 and 57% before 1925, and of the enterprises from other countries, 9% were founded after 1975 and 58% before 1925. In contrast, only 2% of the European enterprises were founded after 1975, while 86% were established before 1925. Thus the share of young enterprises among large innovative companies is much larger in the US and also in other countries than in the EU. If large innovative enterprises are young, they must have passed through a period of high growth. The US is apparently a much better breeding ground for HGIEs than Europe. Illustrative examples mentioned in the Bruegel report are Microsoft (founded 1975, the US' fourth largest R&D spender), Amgen (1980, tenth largest in R&D) and Cisco (1984, 12th in R&D). In Europe, the first relatively young company in the list is SAP, founded 1972 and Europe's 22nd largest R&D spender.

Herman Simon: continuous growth of "hidden champions"

One may contest the importance of big young global leaders for overall economic wealth in a country and point to the numerous "hidden champions" in Europe: smaller global leaders, some in niche markets, enterprises that may be long established but largely unknown to the public due to their specific products and services, but nevertheless very innovative and very important for creating jobs and wealth.[9] Economics professor Herman Simon found a particularly high number of such hidden champions in Germany (1307), Austria (116) and Switzerland (110) but also in Italy (76), France (75), the UK (67), and Sweden (49). Many hidden champions pursue ambitious growth targets but they do not aim at high growth but continuous growth. From 1995 to 2010 the 2,734 hidden champions in Simon's sample – which also includes non-European firms – performed average annual turnover growth of 8.8%.[10]

NESTA study

A study by the UK National Endowment for Science, Technology and the Arts (NESTA) published in 2010 explored business growth and contraction in Europe and the US, drawing from a purpose-built database of business growth in the period from 2002-2005 with individual records for six million businesses. Key results include the following: "European countries have on average a lower share of high-growth firms than the US. But they also have fewer medium-growth firms and fewer shrinking firms. At the same time, Europe has a much larger share of firms that neither expand nor contract in a three-year period. (...) The top half of firms grow faster in the US than in the average European country, while the bottom half shrink faster. Thus, the US has both faster-growing and faster-shrinking firms. (...) The faster successful companies grow, the faster unsuccessful companies in the same industry shrink."[11] These results may suggest that more high growth firms in Europe may also mean more high failures.

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[8] See Veugelers (2009), p. 2.

[9] See Simon (2009) and (2012).

[10] See Simon (2012), p. 113 in chapter 4 about "growing continuously".

[11] Bravo-Biosca (2010), p. 2.

2.3 Determinants of company growth: seeking opportunity is crucial

A crucial question for evidence-based and effective policies to foster enterprise growth is: Why do some enterprises grow while others do not? This general question requires a complex answer. Hölzl/Friesenbichler (2008) found that "there are many factors which can trigger the growth process, such as, for instance, new technologies, new organisational structures, internal capabilities that allow for cost reduction or allow the firm to react more quickly to market trends, the social capital of the entrepreneur, the use of unique opportunities".

A study by the World Economic Forum provided insights about growth determinants and strategies of young companies.[12] The study concluded that "many prior discussions in this area over-emphasize the risk dimension", highlighting "the importance entrepreneurs from around the globe place on taking a perspective of proactive opportunity" and the ability to survive "dark moments". Similarly, a survey of innovative German companies in the framework of the European project INNO-Grips suggested that the single most important reason for companies' growth was that the directors actually targeted growth.[13]

2.4 The importance of HGIEs in job creation – but also destruction

The importance of high-growth companies for job creation has in recent years been widely substantiated by economic research. The number and share of enterprises with persistent high growth is small, but the number and share of jobs they create is disproportionally large. However, there is also a small share of firms contributing disproportionally to job destruction.

A **Kauffmann Institute** study of the US economy in 2010 with data for 2007 contained 5.5 million firms. Only a small number of firms, the top-performing one, created a disproportionate share of additional jobs. Importantly, however, many of the jobs created by these fast-growing firms will disappear.[14] On a sub-national level, analysing business dynamics in 320 US Metropolitan Statistical Areas, Acs and Mueller found that "only start-ups with greater than twenty employees have persistent employment effects over time and only in large diversified metropolitan regions".[15]

A study by the **World Economic Forum** published in 2011 found that "the top 1% of all companies ranked by the level of revenue (job) creation contributes 44% (40%) of total sector revenue (job) creation".[16] It is however also worthwhile mentioning the concentration at the other end of the row: "The top 1% of all companies, ranked by the level of (..) job losses, accounts for (..) 46% of all sector (..) job losses."

Other studies include for example Storey (1994) with results for the United Kingdom (4% of new start-up survivors in the UK were responsible for 50% of jobs created by all new firms 10 years later) and Birch et al. (1997) for the US (3% of the fastest growing firms generated over 70% of new jobs created by new firms between 1992 and 1996).

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[12] WEF (2011), p. 6.

[13] See European Commission (2011), p. 83.

[14] See Stangler (2010).

[15] See Acs/Mueller (2008), p. 1.

[16] WEF (2011), p. 7.

3 Policies for HGIEs: What can we do?

3.1 Some helpful theory: market failure versus government failure

Policies promoting high growth of innovative enterprises should be in accordance with principal insights of economic theory. Most relevant here are the theories of market failure and government failure. Market failures with respect to policies in support of high-growth enterprises can, above all, potentially be traced back to externalities and imperfect information.[17]

An **externality** is an impact on a party that is not directly involved in a transaction. Externalities imply that prices do not reflect the full costs (negative externalities) or benefits (positive externalities). HGIEs can be considered to have positive externalities to society beyond the individual benefits of the entrepreneur, for example by introducing new products, services, production processes or business methods that enhance consumer welfare and that create spill-over benefits for other companies. However, growing enterprises may also produce negative externalities, for example by destroying the rents, market shares or employment of established enterprises.

Imperfect information may lead to inefficient investment decisions. For example, imperfect information about market conditions and resource availability can lead to suboptimal investments. A particular type of imperfect information is asymmetric information, i.e. one side is better informed than the other about a certain subject and may exploit this advantage for its own benefit or, likewise, one side is worse informed and holds up investment because of uncertainty. Access to growth finance is an example of asymmetric information: firms seeking finance are less well informed about finance options and their consequences than banks or funds offering finance.

Government failure theory deals with possible failures in governmental policy making. As regards the relationship between governments and companies, government failure can be traced back to one principal source: imperfect information. As regards HGIEs, policy makers' information is above all imperfect with regard to which companies may actually perform high growth in the future. Attempts to try to "pick winners" for promoting them may thus be doubtful. A special problem of imperfect information is biased information provided from companies potentially benefiting from policy support. Even governments that try to maximise social welfare may have to base their decisions upon information provided by companies or lobby groups which act strategically.

3.2 Country examples of HGIE policies: no evidence about efficiency yet

An overview about HGIE policies in selected countries

In Europe, targeted policies for high growth SMEs can mainly be found in the Nordic countries of Denmark (the former Gazelle Growth Programme and the current Accelerace), Finland (TEKES funding for growth-oriented SMEs, Finnish Growth Company Service, Vigo) and Norway (Incubator Grant, Seed capital scheme, Nyvekst). Further

[17] The following elaborations have been adapted from European Commission (2009), sections 3.2.3 and 3.2.4. See Murray/Hyytinen/Maula (2009), section 5.2.1, for a summary of possible market failures in the context of promoting high-growth SMEs.

European countries with such policies include Estonia (Estonian Development Fund), France (Gazelles Programme, France Gazelles fund), Ireland (High Tech Startup programme), Netherlands (Growth Accelerator "Groeiversneller"), and Spain (Neotec Fund). Beyond Europe, relevant policies can be found in Australia and the USA as well as in China, Singapore and South Korea. One of the most prominent and recent national policy activities for high-growth enterprises is the Startup America initiative by the US government. The Danish, Finnish and Dutch examples may be among the most long-standing ones in Europe:

In **Denmark**, Symbion, the largest science park in the country, runs a programme named Accelerace (http://www.accelerace.dk), a public-private partnership also supported by the European Union. According to the programme's description, Accelerace is "helping talented entrepreneurs and growth companies to bring their product quickly and efficiently to the market".[18] It was started in early 2008 with a pilot phase (2008-2009) followed by an operational phase with funding from 2010 onwards. By early 2013, Accelerace supported over 100 start-ups and growth firms. Its objective is to provide knowledge, tools and access to networks of customers, partners and investors that enable companies to commercialise their innovations or grow internationally. High growth in a global market is an explicit objective of the programme.

Finland stands out as a country with several policy activities to promote high-growth. The most prominent may be the VIGO programme (http://www.vigo.fi) which was introduced in 2009 by the Ministry of Employment and the Economy together with Finland's most important R&D&I funding agency Tekes and Veraventure, a venture capital investment company serving as the hub for public early-stage venture capital investments. VIGO is a type of incubator that focuses on young enterprises with high growth potential. VIGO is meant to bridge the gap between early stage technology firms and international venture funding. While an evaluation study of the Finnish innovation system is available that deals with general policies for fostering high-growth SMEs, it does not include an evaluation of specific policy measures in this direction.

In the **Netherlands**, the Growth Accelerator ("Groeiversneller") programme (http://www.groeiversneller.nl) supports ambitious growth of enterprises with an annual turnover between 2 and 12 million euro. Within five years, the participating firms' growth is supported by senior advice and contacts to networks of entrepreneurs and finance providers. Groeiversneller is an initiative by the Dutch Ministry of Economic Affairs and its Innovation Platform. The programme is implemented by a joint venture of PricewaterhouseCoopers, the Port4Growth platform, de Baak Management Centre VNO-NCW, Philips Applied Technologies, and AKD Prinsen Van Wijmen.

3.3 Cross-country analyses of HGIE policies: recommended foci

While the number of studies about high-growth firms has been increasing significantly in recent years, the number of studies about policies to support such companies is still small. Highly sophisticated analyses, applying for example cost-benefit analyses of specific instruments – also comparing the costs and benefits of alternative use of public

[18] See http://symbion.dk/en/business-development/accelerace/.

funds – or longitudinal studies with control groups of companies not receiving specific types of support, were not identified in the course of research for this paper. This does not only apply to policies for high-growth enterprises but to entrepreneurship policy in general: Economic research can as yet give no clear answers to the question which entrepreneurship policies are particularly conducive for enterprise development.

Among the most prominent studies about policies for high-growth enterprises are the ones by the OECD (2010) and Autio (2007). The **OECD** report suggests a set of combined elements to foster high-growth SMEs: improve the business environment, encourage entrepreneurial attitude, support the provision of training in young and small enterprises, improve access to debt and equity finance when necessary, and promote innovation and internationalisation activities of new and small firms. In practice, the OECD found that countries' policies for fostering SME growth tend to focus on R&D and access to finance, while neglecting skills upgrading and encouraging growth ambitions.

Autio et al. produced a comprehensive analysis of policies for high-growth SMEs in a study for the Finnish Ministry of Trade and Industry. They suggest that policies in support of HGIEs are distinctly different from SME policies.[19] The study mentions the following lessons learned from HGE policies in the nine countries of Australia, Brazil, Finland, Hong Kong, Hungary, Italy, Netherlands, Spain, and the UK:

- *Selectivity*: Initiatives seeking to promote HGEs must be highly selective because only a very small share of firms and entrepreneurs are willing and able to achieve rapid growth. Selectivity should increase with the maturity of the company.
- *Proactiveness*: Agencies can scan the environment for potential high-growth firms in order to develop customised support for them. However, excluded firms may complain of discrimination – a proactive approach should be implemented carefully.
- *Private sector collaboration*: Active participation of private-sector actors ensures experience-based skills in managing growth and enhances credibility of the initiative.
- *Professionalism*: The support agency needs to nurture its professionalism, competence, and a certain degree of exclusivity in order to be able to provide real value and to be credible.
- *Sustained efforts*: Since growth may take time and since high-growth firms may be volatile, sustained efforts are necessary, "prepared to accept casualties".
- *Focus on skills*: Since the management of growth is very demanding, the policy measure should emphasise the development of managerial competencies, involving experienced managers.

However, the studies do not deal in depth with the question whether there are market failures and possible government failure. It remains an open question whether the resources used in the analysed policy measures were used efficiently: Are the economic benefits created higher than the costs of the measures? Could the same outcomes have been achieved with fewer resources spent on other policy measures? Further research is needed to answer these questions.

[19] See also Autio's paper for the Mutual Learning Seminar in 2012.

4 Improving access to private finance

4.1 The current situation of accessing private finance in Europe

Importance of access to finance for company growth

Access to finance is crucial for new companies to set up, maintain, develop and grow their business. Some companies may be established with own funds and be maintained or grow with their revenues. Others may seek bank loans. Companies with considerable growth perspectives may be looking for venture capital (VC). Discussions and analyses about high growth of companies often focus on VC. There are empirical indications that a well-functioning venture capital market is conducive to growth not only of single companies but also of national economies: "Venture capital injects economic dynamism: An increase in VC investments of 1 ‰ of GDP is statistically associated with an increase in real GDP growth of 0.30 pp. Early-stage investments have an even bigger impact of 0.96 pp. The direction of causality is not always easy to establish. Yet, tests (...) in the biggest market, the US, suggest that causality runs from VC-investments to growth. There is also substantial micro-evidence that supports this view."[20]

Yet, bank loans are the preferred source of growth finance for European companies. In a 2009 survey, 64% of companies that expected to grow in the coming years stated that they would prefer to apply for a bank loan to realise these growth ambitions. Further 13% of companies preferred a loan from other sources. Only 6% stated that private equity would be their preferred source of growth finance.[21] This may relativise the importance of equity finance for company growth – or it may show the relative weakness of VC in Europe.

Difficulties in the availability of finance

Companies have to acquire funds in a complex and changing financial environment, in an environment that is particularly difficult in the ongoing financial crisis, and they have to deal with an increasing complexity and extent of financial reporting to their debtors. The level of difficulties to acquire finance differs starkly between European countries. An OECD survey in 20 European countries found that "the success rate for requests of bank loans is consistently higher for average enterprises than for enterprises experiencing high-growth. Young high-growing enterprises are the less successful in obtaining bank loans due to their lack of credit history and higher perceived risk".[22]

The economic and financial crisis has had starkly deteriorating effects on the VC market. While private equity investments in Europe had been tripling from 24 billion Euros in 2001 to 72 billion Euros in 2007, investments fell to 24 billion Euros in 2009, even below the 2001 value, and recovered to 46 billion Euros in 2011.[23] This decline and recent slight recovery is a world-wide phenomenon. Considering that the number of companies funded

[20] See Deutsche Bank Research (2010).

[21] See Gallup (2009), p. 9.

[22] OECD (2012), p. 108.

[23] See EVCA (2012), p. 4.

in 2010 was almost the same as in 2009, it is still difficult for high-growth oriented companies seeking VC to find adequate funding.

The level of development of venture capital markets and thus the difficulties to obtain VC are very different among European countries. In 2011 the European VC market in terms of investments was dominated by Nordic countries, with Sweden at the top (0.064% of GDP), followed by Denmark (0.052%) and Finland (0.044%) on position four. The UK took position three with 0.045%. At the other end of the line there were Greece (below 0.000%), Bulgaria (0.001%) and Romania (0.003%).[24]

Unclear economic foundation of policy interventions

The origins of imbalance between demand for finance enterprises and finance supply are well understood in economic science terms and can e.g. be explained by asymmetric information. However, as explained in an evaluation report of the Finnish innovation system, "determining the existence, magnitude and materiality of such a gap and finding the appropriate form and magnitude of government intervention to address the gap in a given region or at a given point in time are less clear".[25] Notwithstanding, improving access to finance is a typical instrument of SME and innovation policy.

Policies to facilitate access to finance

The European Commission and Member States have implemented a comprehensive system of policies and instruments to support enterprises with the most appropriate sources and types of finance at each stage of their life.[26] There are also instruments for HGIEs. In fact, an OECD report about policies for high-growth SMEs found that such policies in practice tend to focus on access to finance (and also R&D), while neglecting skills upgrading and encouraging growth ambitions.

An important issue may be to decrease entrepreneurs' transaction costs in finding finance. An element of policy support for HGIEs may be to create "**pathways of financing**". Website informing entrepreneurs about where to seek finance for certain stages in the life of an enterprise in a certain region may be helpful when all pieces of finance for this pathway exist.

There are indications that **enterprise taxation** – as a form of finance deduction, i.e. negative finance – can be even more important to enterprises than access to "positive" finance. A survey of Finnish companies in the context of an evaluation of the Finnish innovation system found that "small and young innovative firms think that reducing company and capital taxation is much more important for them than, for example, the availability of risk capital".[27]

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[24] See EVCA (2012), p. 32. Figures according to market statistics which are an aggregation of the figures according to the location of the portfolio company. At European level, this relates to investments in European companies regardless of the location of the private equity firm.

[25] Murray/Hyytinen/Maula (2009), p. 153.

[26] See http://ec.europa.eu/enterprise/policies/finance/financing-environment/index_en.htm.

[27] Murray/Hyytinen/Maula (2009), p. 167.

4.2 Exemplary initiatives to improve access to venture capital

Creating a European venture capital market

Europe faces a "combined problem" of a shortage of venture capital (VC) supply, a shortage of VC demand and, consequently, thin markets.[28] At present there is no integrated European VC market; the regulatory situation varies widely between Member States. The EU is seeking to unify the VC market and is promoting cross-border VC investments. Different national, administrative, regulatory and tax rules currently make cross-border investment difficult.[29] Public VC plays a relatively important role in Europe compared to the US. The European Investment Fund (EIF), whose shares are held by the European Investment Bank (EIB), the European Commission and financial institutions, is a specialist provider of risk finance and a major player in the European VC market. Establishing funds of funds, i.e. public funds that share risks of private VC funds, also contributes increasingly to developing the VC market in Europe. Given the current situation, public support to VC in Europe may be justified in terms of market failure because VC may frequently be "impatient", seeking swift exit of the investments, while public support may make it more "patient" for the benefit of longer-term growth.

Fostering business angels' networks

Investment in early-stage research-based start-ups is very risky so that they are no preferred investments for venture capital funds. Such investments rather tend to be a domain of private investors, so-called business angels. They do not only bring in finance but also management expertise and networks. Increasingly, business angels are forming networks, private or semi-public organisations, mainly at regional or national level. In 2010 there were 174 such networks in Europe.[30] Examples include among others the UK Business Angels Association, the Lewiatan Business Angels network in Poland, and the Business Angel Network Deutschland (BAND) in Germany. Regions and countries may seek to support such initiatives. Possible support measures include facilitating the creation and operation of business angels' networks, tax incentives or tax relief schemes as well as co-financing schemes for business angels. However, a recent study found that the effectiveness and efficiency of such support measures is unclear and in any case depending on how they are implemented. [31]

Linking R&D programmes with venture capital (Canada)

The Canadian experience suggests that a focus by governments on high-tech based SMEs combined with adequate levels of VC financing holds great potential for creation of "gazelles". These firms, once created, show unusual resiliency as measured by low failure rates and multiple growth spurts. There are no specific policies for grants to industry in Canada that focus on HGIEs. The Canadian Industrial Research Assistance Program (IRAP) switched its focus to concentrate on high-tech SMEs in the early 1980s aiming to attract VC funds for IRAP clients and to increase gazelle creation. The VC industry in

[28] European Parliament (2012), p. 11.

[29] See http://ec.europa.eu/enterprise/policies/finance/risk-capital/venture-capital/index_en.htm.

[30] See Centre for Strategy Evaluation Services (2012), p. 12.

[31] See Centre for Strategy Evaluation Services (2012), p. 37 and 44.

Canada did begin to support IRAP-funded high-tech SMEs. Between 1995 and 2007, VC funded high-tech SMEs contained about 12% gazelles. Over the same period the pool of high tech SMEs that received both VC funding and IRAP assistance contained 22% gazelles. These results suggest that a focus on high-tech SMEs within the proper support environment can stimulate gazelles' creation significantly.[32]

4.3 Exemplary initiatives to improve access to dept capital

On European level, two facilities support debt finance for research, development and innovation projects. In order to improve access to loans for European R&D projects, the European Commission, in cooperation with the European Investment Bank (EIB) introduced the Risk-Sharing Finance Facility (**RSFF**) in 2007. Sharing the risk between the Commission and the EIB allows the RSFF to produce additional loans for R&D projects. Moreover, projects with a higher risk than would otherwise be possible for the EIB are also considered. The loans will benefit those R&D projects, including infrastructure projects, which have a strong European dimension. Possibly beneficiaries include companies of all sizes, public and private research organisations as well as public-private partnerships. The EU and the EIB each provide up to 1 billion euro of risk coverage for potential losses for the period of 2007-2013, allowing the EIB to provide RSFF loans and guarantees of up to € 10 billion. The targeted minimum loan is 7.5 million euro.[33]

In 2011, the European Investment Fund (EIF), the EIB and the European Commission, launched the SME risk-sharing instrument (**RSI**), a guarantee facility for innovative SMEs to help them access finance from banks. The RSI builds on the RSFF which was found to be successful. The targeted loans are between 25,000 and 7.5 million euro. The RSI is expected to unlock 6 billion euro of loans until the end of 2013. From 2014 the EC intends to expand the RSFF under the Horizon 2020 Framework Programme for Research and Innovation.[34]

5 Targeted public schemes to support innovative firms

5.1 Overview of what policy makers can target with public schemes

There are numerous targets which public policies for HGIEs can seek to hit. The following is an overview of possible targets, suggesting covering some of the most important issues but not claiming completeness:

- Educational framework: This includes secondary education, higher education, further education, knowledge transfer from higher education institutes to business, and skills upgrading through mentoring and coaching. This is important for HGIEs in order to educate entrepreneurs and to be able to draw from a pool of highly qualified employees.

[32] See the related case study in European Commission (2011), p. 68-73.

[33] For further information see http://www.eib.org/products/rsff/index.htm?lang=en and the related links.

[34] See http://www.eif.europa.eu/what_we_do/guarantees/RSI/news/2011/2011_RSI.htm for further information about the RSI.

- Institutional framework conditions for businesses, comprising e.g. administrative requirements, labour law, bankruptcy law, taxation, and attitudes towards entrepreneurs.
- Specific industries deemed particularly innovative, for example technology-oriented industries. This may also include clustering policies for companies in specific industries.
- Specific regions: Policy makers may target regions not sufficiently adapting to structural change (e.g. old industrialised regions, rural regions).
- Specific types of firms: Policy makers may target spin-offs, innovative firms, new and young firms, SMEs, or firms in ownership transition.
- Specific business functions: Public schemes may target specific functions such as marketing (e.g. going international), sales (e.g. innovation-friendly public procurement), or financing (e.g. facilitate access to equity funds or debt, see above).

These possible targets cannot all be dealt in detail here. Two items shall be picked out considered as particularly relevant here: the institutional framework and coaching.

5.2 Targeting the institutional framework for entrepreneurship

There are ample examples of framework conditions unfavourable for high growth of firms. They may for example be related to the research and education system, investment regulation, start-up regulation, market entry barriers, labour law, bankruptcy law, taxation, and also to SME policies rewarding to stay small.[35]

Korea provides in insightful case of a policy shift towards high growth firms. The Small and Medium Business Administration applies more than 100 SME promotion measures. Recently the policy concept for SMEs has been directed towards competitive SMEs, away from protection of the weak. Transforming traditional SMEs to high-growth SMEs is the new policy focus. Some of the traditional SME policies have been criticised for inefficiency and ineffectiveness. Previously, the operational definition of an SME in Korea was an enterprise with less than 300 employees. Since enterprises with more than 300 employees could not receive any support, many enterprises did not seek growth. Similar **disincentives to grow** may potentially also exist in many European countries, and it may be worthwhile for policy makers to consider eliminating them.

Access to finance may also be hampered by unfavourable **regulations related to investment** and company shares: "There are a number of European countries where provisions governing the issuance of equity shares and registration make it very expensive to launch a company and grow it quickly."[36]

[35] For a very recent and detailed study about the importance of framework conditions for new firms as well as high-growth firms see Stenholm et al. (2013).

[36] Statement from professional investor Burton Lee in an interview for a Policy Brief of the INNO-Grips project, quoted from INNO-Grips Newsletter 1/2010, p. 6.

Highly regulated **labour markets** may be an important barrier for companies to grow.[37] As innovation policy advisor Burton Lee states: "To grow a company quickly, you need to hire staff quickly - and you need to be able to dismiss them again if necessary. It is so costly to dismiss employees in Europe that entrepreneurs and company managers are extremely cautious about hiring."[38] However, this argument becomes less strong considering the relatively large shares of high-growth enterprises in the Nordic countries of Denmark, Sweden and Norway with traditionally highly regulate labour markets, while Austria, a country with a fairly loose labour market regulation, has only an average share of high-growth companies.

Since the European culture is said to favour security, the risk of failure may be an important impediment to start and grow companies: "It is important to allow entrepreneurs to fail. Failing is very instructive, because next time you will do it better. This is where the need to modify **bankruptcy law** comes in. And there is a need for change in social attitudes towards entrepreneurs who failed, too."[39]

Social recognition of entrepreneurs or the lack of it, respectively, is apparently not a crucial impediment in Europe. A population survey of the Global Entrepreneurship Monitor 2010 in 21 innovation-oriented countries asked whether starting a company is considered an attractive professional option and whether successful company founders are highly respected. European countries did not perform worse than the US, South Korea and Australia in this respect and much better than Japan. In fact, the largest share of answers of "yes" for "company start-up is an attractive professional option" was found in the Netherlands (86%).[40]

In any case, as a recent study about enterprise growth put it, "how to tear down barriers to growth is a country-specific question. (...) Each government must do its homework and identify domestic roadblocks".[41]

5.3 Targeted coaching for high growth

High-growth coaching: how to scale up existing schemes

As the evaluators of the Finnish innovation system for high growth enterprises state, "most first time, owner-managers of high-growth entrepreneurial firms will likely not have sufficient skill sets (at least in a fully developed and tested form), and will necessarily need to have access to human capital and further levels of professional advice consistent with the growth needs of the enterprise".[42] A special means of accessing knowledge in the course of running and growing a business is coaching – a way to provide managerial

[37] See Baughn/Sugheir/Neupert (2008) who found that "labor flexibility is a significant predictor of the prevalence rates of high-growth entrepreneurship". See also Minniti (2008), p. 787, suggesting that in developed countries labour market reforms may be particularly conducive to "support the growth of high-performance ventures".

[38] Quotation from INNO-Grips Newsletter October 2010, p. 5.

[39] Statement from Burton Lee in an interview for this Policy Brief, quoted from INNO-Grips Newsletter 1/2010, p. 6.

[40] See Brixy et al. (2011), p. 19. Answers translated from German by the author.

[41] Rubin et al. (2012), p. ix.

[42] Murray/Hyytinen/Maula (2009), p. 168. See also Autio et al. (2007), p. 85.

competence at arm's length. Studies confirm the importance of coaching for growing a company. In the European Investment Fund's GIF programme, an appointed business director was found to be among the most appreciated support measures in addition to funding received.[43] The Swiss CTI Start-up programme claims that since 1996 to the present CTI reviewed 1,800 start-up projects, 200 start-up enterprises received the CTI start-up label, and 85% of them are still operating, some having shown remarkable growth.[44] This survival rate is much higher than for normal SMEs.

Help "crossing the chasm"

In particular, coaching may help grow smaller firms and cross the "chasm" between pilot markets and mass markets. Many young firms with high growth potential have spun out of higher education institutions and are led by managers with extensive research experience and mentality, not approaching their business from a market-driven perspective. In their first growth phase, public funding is often used effectively to advance the technological development of the initial invention. The business model is often focused on unique solutions for pilot customers. With this business paradigm high growth is rarely achievable. Management often does not understand how to make the transition from customised products for pilot customers to scalable products for larger markets. Even when management understands how to achieve this result technically, they often do not appreciate the changes that this strategy shift entails: networks change, new investment rounds are necessary, business plans and a new business strategy need to be developed, core competencies and organisation structure need to be aligned with emerging business processes. In such a situation, experienced coaching may be crucial.

In addition, coaching may not only provide advice but also facilitate access to finance. For example, the label of the Swiss CTI Start-up coaching programme has become an important determinant in attracting venture capital, angels' investment and other financing partners which are essential to further growth.

Exemplary initiatives

There are numerous coaching activities for entrepreneurs around the world, including for example the Platinn coaching association in Western Switzerland which uses the business paradigm shift concept described in the previous paragraph,[45] the Canadian Industrial Technology Advisors, [46] and the coaching element of the German High Tech Gründerfonds.[47] The EU supported several coaching networks in the past:

- The **smE-MPOWER** project was funded by DG Research from 2005-2007, establishing "a learning community of SME coaches and intermediaries, strategically sharing proven operational know-how". smE-MPOWER materials that assist an SME at

[43] See Centre for Strategy and Evaluation Services/EIM (2011), p. 65. See section 4.1.1 of this Policy Brief for GIF.

[44] See http://www.ctistartup.ch.

[45] See http://www.platinn.ch/eng/ .

[46] Provided by the National Research Council of Canada Industrial Research Assistance Program (NRC-IRAP); see http://ventureconnection.sfu.ca/index.php?/grow/nrc_irap_industry_technology_advisors_ita/.

[47] See http://www.high-tech-gruenderfonds.de/coaching.

any and all stages of innovation activities throughout the firm's life cycle are freely available under an open license arrangement.[48]

- The **Intelligent Manufacturing Systems** (IMS) programme supports R&D innovation within manufacturing, supported by DG Research. IMS includes Europe, Switzerland, Korea, USA, and Mexico and is building an international business innovation coaching network focused on facilitating the development of international manufacturing technology projects.[49]
- The **Harmony** project completed within IMS provided coaching explicitly designed to guide SMEs through the stages of developing and launching a business innovation collaboration project including e.g. strategic project planning, partner search, and intellectual property negotiations.

There are also specific coaching programmes for entrepreneurs aspiring for high growth – and high-growth programmes offering coaching. There are also "coach the coaches" activities: The European Commission supports the "high growth coach" programme, aiming "to adapt and deliver a UK development programme for coaches working with high growth companies", to be used by agencies engaged in high growth coaching in Romania, Lithuania, Slovenia and Hungary.[50] The Danish Accelerace programme for promising start-ups aspiring for high growth also includes coaching.

Despite these initiatives, many SMEs do not take advantage of coaching opportunities, and there is yet no appropriate infrastructure to encourage the replication of innovation-focused coaching networks throughout EU Member States. It may be worthwhile considering.

6 Lead questions for seminar discussion

The following questions shall guide the discussion in the seminar session about high-growth innovative enterprises. The answers to these questions should reflect the specific situations and approaches in EU Member States. The discussion offers a very good opportunity to exchange experiences made in Member States:

(1) What measures are particularly helpful or unhelpful to facilitate **access to finance** for high-growth innovative enterprises? What barriers do Member States face on the road to a Single Market for venture capital in Europe? What experiences were made when trying to promote business angels?

(2) What characteristics should **targeted schemes** for supporting high-growth innovative enterprises have? Is a focus on coaching and mentoring entrepreneurs worthwhile?

(3) What **framework conditions** would most urgently need to be modified in order to support high growth of enterprises? Should the focus be on general business

[48] See http://www.sme-mpower.net.

[49] See http://www.ims.org.

[50] See http://www.exponentialtraining.com/about/eu-projects.

regulations, investment regulation, labour law, bankruptcy law, SME policies rewarding to stay small, or on other conditions? Or should the whole set of framework conditions be targeted?

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