

CHAPTER 14

LOCAL POLICIES FOR
HIGH-GROWTH FIRMS

ERIK STAM AND NIELS BOSMA

INTRODUCTION: THE RELEVANCE
OF HIGH-GROWTH FIRMS

THIS chapter investigates the main features of local policies for high-growth entrepreneurial firms.¹ Even though the focus is narrow in the sense that a specific type of entrepreneurship is concerned (high-employment growth firms) and that policies are to be aimed at the *local* dimension, we discuss the rationales, characteristics, and impact of these policies also in a wider perspective. We argue that without appreciating the broader context, well-intended local policies may prove to be unsuccessful. We make a distinction between enabling policies—removing barriers to new firm formation and business expansion—and policies that provide direct support to selected (potential) high-growth firms, for example, through training, mentoring, financing, and innovation support.

The relevance of focusing on high-growth firms is hardly debated. Many local authorities' principal concern is the creation of jobs, and several studies show that a minority of (young) firms is responsible for the lion's share of new jobs created. For instance, the British National Endowment for Science Technology and the Arts (NESTA 2009) found that 6 percent of all UK firms with 10 or more employees could be seen as high-growth firms adopting the OECD (2008) definition, that is, firms with average annualized growth in employees greater than 20 percent a year over a three-year period. These 6 percent were responsible for more than half of the new jobs generated by the UK firms employing 10 or more employees. Canadian research showed that hypergrowth firms (those with at least 150 percent growth in employment over four years) accounted for

¹ This chapter is partly based on Bosma and Stam (2012).

4 percent of continuing businesses between 1993 and 2003, but were responsible for 45 percent of net jobs created by continuing firms (Parsley and Halabisky 2008). This reflects older evidence (Storey 1994; Kirchoff 1993) that about 4 percent of the new firms are responsible for more than 50 percent of the net new job creation in a cohort of firms.

Next to these direct effects of high-growth firms on employment, there are perhaps even more important indirect effects on (regional) economic development (see Fritsch 2011). Young high-growth firms are an important driver of structural change (Bos and Stam 2014), and a stimulus for competition that is likely to increase productivity and employment levels in a region (Fritsch 2011).²

Policy efforts to promote entrepreneurship in the 1990s were often more focused on increasing the rate of entrepreneurship than on targeting particular types of entrepreneurship.³ These generally did not make sharp distinctions between promoting high-growth entrepreneurship and low-growth entrepreneurship. In contrast, current policy efforts in many OECD countries have an explicit aim to increase the number of “gazelles” (see Lilischkis 2011; Stam et al. 2012). Such programs tend to have a national, or at least “state level,” scope. Coherent and consistent local policies aimed at stimulating high-growth firms are still scarce, and there is an even more severe shortage of studies on policies for high-growth firms (with some exceptions, like Smallbone, Baldock, and Burgess 2002; Mason and Brown 2013).

DEFINITIONS

High-Growth Firms

Even though high-growth firms are central in this chapter, it makes sense to take into account the actors that started the process resulting in a high-growth firm, that is, ambitious entrepreneurs. Policy programs aimed at stimulating high-growth firms mostly try to connect to individuals who are (potential) ambitious entrepreneurs. Doing so acknowledges the emphasis on viewing entrepreneurship as a *process*, in line with the Shane and Venkataraman's (2000) key message discussing the research field of entrepreneurship. In the same line of reasoning it is useful to split up the high-growth firm population into young (gazelles) and established firms. While dealing with high-growth firms, this chapter thus also specifically distinguishes between ambitious entrepreneurs, gazelles, and established high-growth firms.

² Not all high-growth firms contribute to local competitiveness: some might react to changes in public spending or might exploit legal voids.

³ Entrepreneurship policy programs did focus on several groups of individuals, such as female entrepreneurship, immigrant entrepreneurship, and the unemployed.

Even though according to most definitions high-growth firms (for more details on common definitions see Bosma and Stam 2012) need to show continuous growth over a particular time period, this does not mean that they are likely to reveal a continuous growth path during their life course: the opposite is more likely. Many studies have shown the erratic nature of firm growth (Coad and Hözl 2009; Parker, Storey, and Van Witteloostuijn 2010; Garnsey, Stam, and Heffernan 2006): setbacks are the rule, continuous firm growth is the exception. However, high growth does not necessarily lead to instability; that is, high-growth firms are not more likely to go bankrupt than other types of firms (De Kok, Zhou, and Hartog 2012).

Stages toward High-Growth Firms

Local policies for high-growth firms should take into account the transitions that need to be taken before (sustained) high-growth of the firm can be reached. Stam and coauthors (2012) assess the individual level and emphasize four transitions that precede the realization of substantial growth by ambitious entrepreneurs. The four key transitions that precede high-growth firms (see Stam et al. 2012):

1. Turn individuals into ambitious individuals, either with respect to performance ambitions or entrepreneurial ambitions
2. Transform (ambitious) individuals into (ambitious) entrepreneurs (in whatever organizational setting). This involves a two-step process: triggering entrepreneurial intentions and realizing the start of a new business.
3. Stimulate entrepreneurs to become ambitious entrepreneurs
4. Realize the creation of new value (e.g., jobs in high-growth firms)

Ambition plays an important role in the first and third transition. According to the Oxford Dictionary, ambition is the “determination to succeed.” Sociologists Spenner and Featherman (1978) argue that ambition can be defined as a class of psychological orientations held with respect to two types of achievement: *role-residing* achievement and achievement as to *performance*. We have adapted this framework to include respectively entrepreneurial ambitions and (business) performance ambitions, in transition 1 and transition 3.

The transitions are not linear; different paths can lead to the creation of new jobs through ambitious entrepreneurship. Each of the transitions is marked by different determinants at the levels of individuals and contexts, and therefore concerns different policy areas. The first transition relates to general social and education policy, targeting ambitions, while the second transition concerns traditional entrepreneurship policy, focusing on entrepreneurial behavior. As for the third and fourth transition, more dedicated business policies can be offered that are more directly tailored to growth ambitions and the creation of new value. These policies concern, respectively,

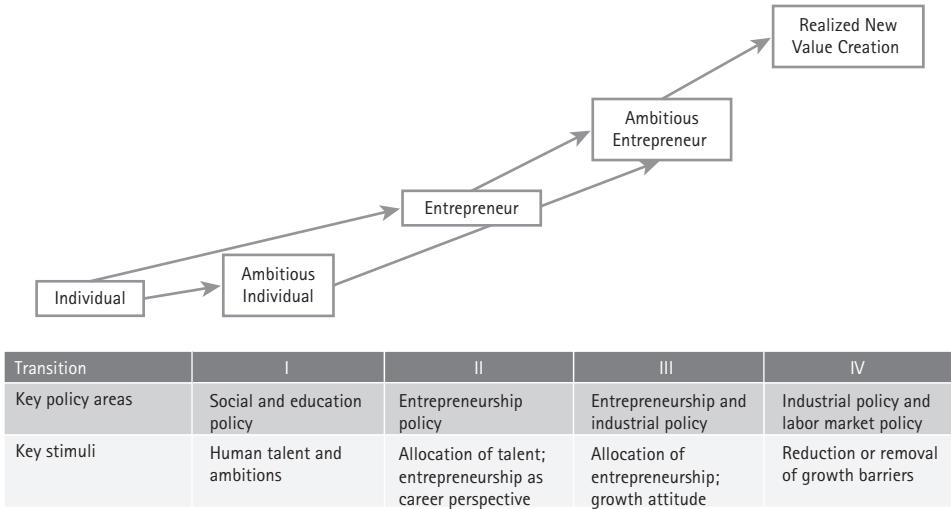


FIGURE 14.1 Correspondence between Four Transitions and Key Policy Areas

stimuli for human talent and ambitions, stimuli for entrepreneurship in general, incentives for the allocation of talent, incentives for the allocation of entrepreneurship, and removing the barriers for growth. Figure 14.1 summarizes this reasoning. It demonstrates that it is nearly impossible to address all key stimuli in all transitions at once.

LOCAL POLICIES

Local policies will be defined for the purposes of this chapter as policies that are designed and/or delivered by subnational governments and (semi)public organizations, including actions by regional and local governments and by state governments in federal countries, as well as policies that are designed by (supra)national governments but that have intended or unintended spatially uneven effects. This is a rather broad definition, but allows us to take into account nonlocal policies that have significant impacts on particular localities.

Policies by regional governments might include labor market regulations (e.g., at the state level in the United States) and targeted programs for high-growth firms (e.g., in Scotland and Wales). Regional development agencies might be important providers of venture capital and training in the region (like the former regional development agencies in the United Kingdom). Local governments have been important investors in local incubators and accelerators. Science and innovation policies designed by national and supranational governments may have distinctive regional and local effects.

Rationales and Reasons for High-Growth Firm Policies at the Local Level

Policy support for high-growth firms is normally legitimized by market failures (e.g., too limited supply of capital, due to information asymmetries, or too low investments in R & D due to the public good nature of R & D investments), system failures (e.g., a lack of interaction between firms and knowledge institutes, leading to a suboptimal exploitation of new scientific knowledge) or by more broader public goals like employment creation. Most often there is an implicit assumption of market failure in the sense of support needs of high-growth start-ups not being adequately met by the private sector because of incomplete formation on both sides of the potential market for business services.⁴ The underlying reasoning is that an increase in high-growth firms is serving these public goals, or that a suboptimal number of high-growth firms is caused by these market and system failures, leading to inefficient allocation of resources in society (in the case of market failure) or suboptimal levels of value creation (in the case of system failures).

The desired direct outcome of policy support could be a higher number of high-growth firms or faster growth (to a larger scale) of firms (see, e.g., Owen 2004). The ultimate outcome should be growth of market production (beyond the suboptimal level caused by market failures), more new value creation, measured as innovation and/or higher productivity levels, and more employment. Increases in market production, productivity, and employment need not go together (Coad and Broekel 2012; Daunfeldt, Elert, and Johansson 2014).

Another question is whether policies to support high-growth firms lead to an additional number of new jobs, or just reallocate jobs from established, slow-growing or non-growing organizations, to the set of high-growth firms (with potential productivity-enhancing effects). The limited amount of macroeconomic empirical research that is available suggests a net positive effect of an increase in the rate of ambitious entrepreneurship on aggregate national economic growth (measured as GDP growth; see Stam et al. 2011; Stam and Van Stel 2011) and on regional productivity levels (Bosma 2011). However, this in itself does not prove that policy support to stimulate ambitious entrepreneurship and/or high-growth firms will lead to improved aggregate economic performance. Policy support might also lead to substitution or deadweight effects (cf. Santarelli and Vivarelli 2007), having no positive influence on aggregate economic performance at best, and a negative influence at worst.

The only way to examine the positive effects of policy support is a properly designed evaluation program to trace the targeted effects of the policies and the effectiveness and efficiency of the policies in terms of improving aggregate economic performance. Storey (2003) has proposed a hierarchy of evaluation methodologies from simple monitoring exercises to more advanced evaluation exercises that seek to match assisted and nonassisted

⁴ Although private parties might disagree on this, emphasizing that private business service providers are much more important than governments in supporting high-growth firms (Fischer and Reuber 2003).

participants on observable differences or that make use of sample selection effects that control for observable and nonobservable differences between the two samples. Unfortunately, there are no such full-fledged evaluations of (local) policy programs for high-growth firms. There have been evaluations of other policy programs that might provide some useful insights into policy support for high-growth firms, for example, the microeconomic effects of the SBIR program (Lerner 1999: positive effect on the growth of SBIR-supported high-tech small firms) and the microeconomic effects of being located on a science park (Siegel, Westhead, and Wright 2003: no effect on firm performance).

In practice, high-growth firm policies are often driven by benchmarking, with the assumption that having more high-growth firms is better for economic performance, that is, that lower rates of ambitious entrepreneurship, gazelles, and high-growth firms than benchmark countries is a sufficient reason for policy intervention; even more so when output indicators (e.g., with respect to [un]employment) are unfavorable. Ingram, Luo, and Eshun (2010) showed that in the case of US state-level business incubator programs, this is an adequate framework for predicting the number of (state policy supported) business incubator programs: relatively low regional economic performance (either historically, or in comparison to neighboring states) and the adoption of incubator programs by neighboring states were revealed to have a positive effect on the number of business incubator programs started in a state over the period 1980–2004. Such a behavioral theory of state action might explain a lack of positive effects on aggregate economic performance, as these programs are not based on “clear” economic rationales so much as on satisficing behavior and “arms race competitions” (or mimetic behavior in policymaking; see Dobbin, Simmons, and Garrett 2007). This latter type of behavior might even lead to locational tournaments in which regions compete for attracting investments by young or established firms.

ENABLING HIGH-GROWTH FIRM POLICIES

Gilbert, Audretsch, and McDougall (2004) argue that only since the 1990s has a new set of policies emerged that focused on enabling the start-up and viability of entrepreneurial firms rather than constraining existing firms and that this approach became especially relevant when it was established that knowledge was a major source of competitiveness in emerging industries. Regional and local examples identified in the United States include policy programs in the Research Triangle (North Carolina) and Austin (Texas). In this section we will more extensively discuss the role of education policy and labor market policy in enabling the emergence and growth of firms. We do not discuss the tax and other financial policies because these are most likely initiated at the national level, without very distinctive regional level effects.⁵

⁵ We also do not discuss RTD (research and technology development) policies here, because these policies are most often nationally initiated, and they are often implicitly or explicitly targeted at particular (high-tech) industries, and thus cannot be labeled as enabling policies. For example, R & D tax credits

Education Policy

As most education institutes are local in reach and impact, education policies are an important element of local policies for high-growth firms. Education policy is an important policy area for increasing the inflow of ambitious entrepreneurs in a society. The capacity to set high personal but obtainable goals, the so-called need for achievement (McClelland 1961) is an important input for the growth of firms. This need for achievement is not a given trait but can be developed, and this happens to be most important during adolescence and youth (Stam et al. 2012). This implies that the primary and secondary education system becomes more relevant in a broad sense—for example, by influencing younger people's preferences, knowledge, and skills. This would also include securing the presence of (local) entrepreneurial role models in the educational program.

In addition to the importance of early education in targeting the first transition stage of raising generalized ambition (see above), tertiary education is an important context to support the transitions toward ambitious entrepreneurship, and its effectuation in the third and fourth transition stages. The development of ambitions to grow, innovate, or internationalize heavily depends on individuals' cognitive abilities (see chapters 3 and 6 in Stam et al. 2012). Education has a strong positive effect on the probability of having growth ambitions as an entrepreneur (Bosma, Schutjens, and Stam 2009), and, on average, more highly educated entrepreneurs have better-performing firms. Indeed, entrepreneurs have even higher returns to education than employees (Hartog, Van Praag, and Van der Sluis 2010), and enrolment in tertiary education also has a positive effect on the number of fast-growing firms at the national level (Teruel and De Wit 2011). Moreover, meta-analyses have shown that human capital is important for venture success beyond self-employment, and that this relationship is stronger for human capital investments with high task-relatedness. Entrepreneurship education at universities and in professional education seems reasonable for promoting ambitious entrepreneurship as well.

Labor Market Policy

Depending on the political system in a country, labor market policies and regulations are designed and implemented on the national, regional or municipal level. Labor market policy has significant direct and indirect effects on the growth of (new) firms. An important barrier to the employment growth of new firms is regulations that constrain the flexibility of labor markets, like strict employment protection legislation and non-compete agreements.

are sometimes taken to be horizontal or enabling policies, but in practice this kind of policy is targeted toward (high-tech, often manufacturing) firms that invest substantially in research and technology development.

Employment protection affects ambitious entrepreneurship by its impact on the opportunity costs of becoming an entrepreneur (or joining a fledgling new business). For ambitious employees, these may be relatively high in regimes with strong employment protection legislation: leaving their secure job for a highly insecure occupation as founder of a start-up may become less attractive in conditions of strong employment protection. Hence, ambitious entrepreneurship would benefit from more flexible labor markets. Moreover, employment protection will make ambitious entrepreneurs more reluctant to hire employees, as it may be hard to get rid of them in adverse situations, which is likely to be necessary in the very dynamic early phases of development of (potentially) high-growth firms (Garnsey et al. 2006). Thus, beyond being helpful in removing incentives that discourage prospective ambitious entrepreneurs from leaving their tenured jobs and creating new firms, a lower degree of employment protection would reduce the risks and impediments for new firms to create jobs and start growing.

Domain-specific experience matters for ambitious entrepreneurship. In both the independent entrepreneurship and intrapreneurship literatures, we find that management experience enhances entrepreneurial behavior and willingness to grow. Likewise, industry experience has been shown to be important for growth and success. Growth-oriented entrepreneurs tend to be relatively highly educated and rather wealthy in terms of household income (see Stam et al. 2012, chapter 5). This implies that not just any new entrepreneur is important, but that the focus should be on a special kind of individuals—that is, those who have much to lose when engaging in entrepreneurship, and accordingly face high opportunity costs. Rather than “necessity-driven” entrepreneurship (e.g., the transition to entrepreneurship by unemployed) policymakers should consider targeting experienced managers. Providing support and guidance to these potential high-growth entrepreneurs is merited. In the context of labor market institutions, labor market mechanisms should especially be made more flexible so that the individuals that are best positioned to grow a new venture will have more stimuli to do so. These individuals most likely face the highest opportunity costs for leaving their secure and well-paid jobs when embarking upon a high-risk, high-gain project. This means that making it more attractive for *the best and the brightest* to start a potentially high-growth enterprise is likely to be the most effective labor market policy action. An example can be to provide targeted support for talented people, for instance through creating awareness, training, and mentoring. This should not be seen as a discriminatory support program favoring those who are already well equipped for the job market, but merely as an additional tailor-made program that can exist next to other (targeted) programs for entrepreneurship; after all, the goal is the creation of jobs for all segments of the population.

Noncompete agreements—contract clauses that inhibit employees to pursue (potentially) competing projects once the employee leaves the incumbent firm—make it hard for employees that want to pursue innovative ideas with their own business in the same or a related market of their employer. Empirical research has shown that the abolishment of these noncompete agreements takes away the barriers for innovative high potential start-ups (Fallick, Fleischman, and Rebitzer 2006; Gilson 1999; Garmaise

2011; Marx, Strumsky, and Fleming 2009; Samila and Sorenson 2011). However, one should be careful in implementing this as a one-size-fits-all policy. The regional context is an important contingency in the effectiveness of these labor market policies: Fallick, Fleischman, and Rebitzer (2006) argued that the regional benefits of labor mobility in Silicon Valley (partly enhanced by California's policy not to enforce noncompete agreements) depended on the benefits from shared tacit knowledge outweighing losses from reduced employer incentives to invest in human capital. The advantage of abolishing noncompete agreements thus might depend on local industry characteristics (i.e., a high density of similar or related industries). These labor market regulations sometimes originate from the national level (e.g., employment protection legislation), but can also originate from subnational levels (e.g., the US state level, in the case of regulation that prohibits the use of noncompete agreements).

Broad-based exemptions from employment regulations based on firm size may support marginal businesses, but also put disproportionate burdens on firms beyond a certain firm size (Braguinsky, Branstetter, and Regateiro 2011; Garicano, LeLarge, and Van Reenen 2012). These legislations are established to secure employee rights that improve the quality of jobs in general. Providing exemptions for small firms might make sense as a generic entrepreneurship policy: they take away burdensome costs of compliance for start-ups, which are often relatively small. However, they also constrain the expansion of firms, and indeed might achieve the opposite effect of targeting high-potential firms (Shane 2009). Within the United States, there is substantial state and local variation in these kind of employment regulations (Feldman 2011). The main message here is not to abolish these regulations, but to harmonize them over regions, and to reconsider the phased nature of these regulations in order not to provide disincentives to grow businesses beyond a certain threshold.

TARGETED HIGH-GROWTH FIRM POLICIES

Truly high-potential ventures (and their entrepreneurs) tend to be well known in a limited industry circle, so it may be worth involving business angels, industry experts, and incumbent suppliers and/or customers to help identify ambitious entrepreneurs and connect them to each other. Next, some kind of mechanism is needed to screen and select those most promising individuals. For admittance, programs should require explicit orientation toward growth. Even though growth orientation cannot guarantee growth, growth in the absence of aspiration is extremely rare. Therefore, support programs should require explicit commitment to growth as a key criterion. Second, the longer a venture progresses in its development path, the more tangible proof of its growth potential should be required. In the early phases of new ventures, growth orientation and flexibility should be emphasized—corresponding with the third stage of our transition model. In the more advanced (fourth) stage, tangible proof of market acceptance may provide a feasible selection criterion.

One type of targeted entrepreneurship policy that has already existed for several decades is so-called business incubators. In the next section we will discuss the more recent and focused business accelerator programs.

Business Accelerator Programs

There is no single definition of incubators in the literature, but there are some common characteristics, including an element of space provision, shared services, on-site management with a business support function, a strong selection policy, and a supportive environment (cf. Hannon and Chaplin 2003). Business incubators are a diverse breed in that they have aimed at a broad variety of policy targets, from lowering unemployment, to neighborhood restructuring, to technology transfer, by lowering the barriers to entrepreneurial entry, and possibly to stimulate subsequent growth as well. There is no consensus on the business focus of the incubators: the focus is the result of the public and/or private interests involved in the business incubator. A recent type of high-growth firm policies that is attracting increasing attention is the so-called business accelerator programs (BAPs). BAPs have some similarities with business incubators, but BAPs have a more explicit focus on accelerating the growth of firms.

There are two types of BAPs: virtual BAPs and location-based BAPs. Virtual BAPs most often target gazelles that want to make the transition toward high-growth firms, while location-based BAPs most often target ambitious entrepreneurs that aim to develop their (nascent) business into a gazelle. Virtual BAPs are most often initiated by governments at the national (and sometimes regional, or supranational)⁶ level that provide a platform for peer learning, coaching, and business services for owner-managers of gazelles that want to make the transition toward a high-growth firm. Virtual BAPs are primarily funded with public money, but participants often also have to pay a (relatively) small fee, in order to be committed to participation. The implementation of these virtual BAPs is often done by private organizations (e.g., business consultants, business angels), sometimes in coalition with civil servants or university staff that provide additional expertise. The virtual BAPs can be implemented on a regional level in order to ease the accessibility for participants, and can have a sectoral focus in order to tailor the program to sector-specific needs, problems, and opportunities. Virtual BAPs can have offices that provide meeting points or training sites for the program participants, but do not provide real estate services to locate firms.

The location-based BAPs are based in distinctive premises, which provide offices and working space for the program participants, that is, the tenants of the accelerator. These location-based BAPs can be part of national policy programs, but are also initiated by private parties (e.g., the Google Campus in East London's Tech City, and the Rockstart Accelerator in Amsterdam, initially located at the premises of TomTom—one of the few

⁶ E.g., the Startup Europe Partnership.

“star” high-growth firms in the Netherlands). In practice most of them involve private and public organizations, and in that sense differ from the prior generation of business incubators that were often purely public organizations. Business accelerators provide different mixes of services, ranging from renting offices or workspaces, to educational services, to consultancy and financial services. The emphasis differs per program and also signifies the different (business) models these business accelerators pursue. There are hardly any evaluations of these business accelerator programs. Evaluating these programs is also more challenging than prior public programs because of the multistakeholder nature of the business accelerator programs. This means that next to the (different) targets of the (multiple) policy levels involved (national, regional, and municipal), targets of private parties should also be taken into account for evaluations.

INDUSTRIAL ORGANIZATION AND HIGH-GROWTH FIRM POLICIES

Multiple industrial policies have direct or indirect effects on high-growth firms. One category of industrial policies that is especially relevant here are policies that target particular industry-area combinations, also known as clusters or competence blocs. Entrepreneurship and in particular high-growth firms play different roles during the evolution of these clusters or competence blocs (see Braunerhjelm and Feldman 2006; Brenner and Mühlig 2007; Feldman, Francis, and Bercovitz 2005; Bos and Stam 2014).

The recent literature suggests that the role of entrepreneurship is crucial in the very early stage of cluster formation (Feldman, Francis, and Bercovitz 2005; Avnimelech and Teubal 2006; Breznitz, O’Shea, and Allen 2008) even though it is not a necessary condition. The probability of entrepreneurial sparks being ignited at the roots of cluster formation is likely to be dependent on the regional institutional setting: regions with an entrepreneurial culture require less intervening attention and have higher probabilities of such entrepreneurial sparks, while other regions may require more active and selective policy (Breznitz, O’Shea, and Allen 2008). In addition there are also examples of firms that have not been very successful but that have been of key importance for cluster formation through spin-off processes (Buenstorf and Fornahl 2009; Garnsey and Heffernan 2005). Thus, even relatively “unsuccessful firms” (in terms of job creation) may prove to be important for cluster formation and high-growth firms at a later stage.

Henrekson, Johansson, and Stenkula (2010) start from a competence bloc approach to analyze the phasing of policies that foster high-growth firms in particular industry-area combinations. The competence bloc approach emphasizes that the growth of (new) firms does not depend only on the entrepreneurial talents of the founder, but increasingly on the functioning of related capital, labor, and other markets, and the competences of actors in these markets. Henrekson, Johansson, and Stenkula (2010) distinguish four stages: business idea development, commercialization, rapid growth,

and stagnation (and possibly decline and exit). They identify entrepreneurs, inventors, and venture capitalists as key players in the initial stage of entrepreneurial activity in a particular industry-area combination. In the next phases, skilled labor, actors on secondary markets, and industrialists come into play. The explicit role of the local government will be to *enable* the development of the competence bloc, but this necessitates targeting particular actors at particular phases of the firm life course: suppliers of risk capital and inventors in the phases of business idea development and commercialization, entrepreneurs and skilled labor in the phases of commercialization and rapid growth, and industrialists and actors on secondary markets during the phases of rapid growth and stagnation (and possibly decline and exit).

A general local “blueprint” policy approach to high-growth firms is unlikely to be successful. Contexts will always matter and need to be appreciated for determining the most relevant accent at every stage of the process. Concerning the first phases De Groof and Roberts (2004), in their case of cluster policies in Belgian regions, point at the problematic factor of low growth orientation in weak entrepreneurial cultures. Kerr (2010) argues that migration, and particularly new immigration to the United States, may have facilitated cluster development directly after breakthrough innovations occur. However, from the case of Buenstorf and Fornahl (2003) it is rather unclear if there were any particular institutional settings that enhanced cluster formation in the region around Jena, as their evidence points at a large role of idiosyncratic spin-off events evolving around a pioneering (but unsuccessful) firm (cf. Klepper 2009; 2011).

As far as the phase directly after the emergent phase of local industry development is concerned, Gertler and Vinodrai (2009) attribute an important role to *anchor firms*, industrial associations and civic entrepreneurship, but only if these serve as mechanisms for aligning the interests and resources of diverse stakeholders in the cluster. Buenstorf and Fornahl (2003) come up with similar arguments, but especially stress the spin-off mechanism. In line with the process models offered by Henrekson, Johansson, and Stenkula (2010) and Feldman, Francis, and Bercovitz (2005), Avnimelech and Teubal (2006) stress the role of the development of venture capital markets as a critical aspect of local industrial development. However, the emergence of a substantial and effective venture capital market is more likely to take place after a critical mass of high-growth firms has developed in a region rather than vice versa (Braunerhjelm and Feldman 2006; Casper 2007).

POLICY MIXES

Local-National Policy Mixes

Local policies for high-growth entrepreneurship cannot be disentangled from policies at larger spatial levels. Table 14.1 illustrates that even though local policies obviously impact the local area as they are designed to do (some effects may be witnessed

Table 14.1 Multilevel Policy Sources and Effects

Policy source	Policy effects		
	<i>Local</i>	<i>Regional</i>	<i>National</i>
<i>Local</i>	Municipal business policies (e.g., incubators), land use regulations		
<i>Regional</i>	Regional development agencies, regional public venture capital	US state level labor regulations (e.g., non-compete agreements)	
<i>National</i>	National science policies (affecting local university policies)	SBIR, industrial policies (e.g., biotech), cluster policies	National employment regulation
<i>Supra-national</i>	European structural funds, European Investment Bank capital, European science and innovation policies (affecting local university policies)	European structural funds (ERDF), European Investment Bank capital	

in neighboring areas), many regional, national, and supranational (such as EU) policies also will have implications at the local level. For instance, changes in national science policies may have severe implications in areas that rely strongly on one or more universities. Another example is the Small Business Innovation Research (SBIR) program implemented in the United States. Even though this was a national program, the activities stemming from this program were highly skewed across regions: the (already strong) regions in California and Massachusetts especially benefited from the SBIR initiative. Grimm (2011) reports that the Lisbon Agenda provided substantial opportunities for German local policy programs through European Structural Funds, more so than in the previous situation, where the entrepreneurial policymaking was implemented top-down.

Local policies for high-employment growth firms are less likely to be less successful in areas where regional, national, and supranational policies are potentially conflicting with the proposed local policy. For example, local initiatives for fostering high-growth entrepreneurship may be more difficult where the national regulations protect employment (Henrekson, Johansson, and Stenkula 2010; Bosma and Levie 2010), or put disproportionate burdens on firms beyond a certain firm size (Braguinsky, Branstetter, and Regateiro 2011; Garicano, LeLarge, and Van Reenen 2012). One example in this respect is the underdevelopment of the high-tech industry in Ontario (Canada) in spite of high levels of R & D at local universities and firms, high flows of venture capital, and active support from the local government. According to Samila and Sorenson (2011, 25), “part of the answer may reside in the way common law in Canada effectively bars management-level employees from leaving to competing firms, even in the absence of actual non-compete clauses.” This observation also calls for more detailed studies on how the design

and implementation of noncompete and related laws varies by jurisdiction (either regionally or nationally).

It is essential to keep in mind that local policies should appreciate the local context in terms of resources, demography, cultural values, and industry structure. There is an abundant evidence of initiatives aiming to copy the Silicon Valley model in other regions (cf. Casper 2007; Hospers 2006). Most of these initiatives have not been successful because they could not capitalize on essential elements that were key to Silicon Valley's success, such as the presence of "star" universities, a supply of skilled labor, a culture in which knowledge sharing was facilitated, institutions enabling flexible labor markets, and an excellent financial infrastructure (Saxenian 1994).

Local policymakers also need to be aware of the strengths of close neighbors. Competing with them may be far less rewarding than collaborating (for example, through niches and stressing other regional amenities). Examples of this kind of policies are so-called locational tournaments in which regions compete in attracting (foreign direct) investments to their region. Such competitions are referred to as tournaments because payoffs are not awarded to all participants, but only to the winner. Participating in such a tournament involves substantial administrative and promotional costs for the regions involved, but only one of them can have a potentially positive outcome from the tournament. However, even this is not guaranteed for the winning region, as it can in the end be subsidizing new jobs at the cost of indigenous economic development. Competing with neighboring regions for investments in a specific industry could even lead to a net loss at a societal level.

Entrepreneurship Policy: Complementarities and Conflicts

From the perspective of ambitious entrepreneurship, it is positive that policies are offered to influence people's preferences for entrepreneurship, to enhance their knowledge and skills, to improve access to finance and labor, and to diminish the regulatory burden—at least to the extent that ambitious independent entrepreneurship is not possible without people willing to engage in self-employment first. In countries like Belgium and the Netherlands, these more generic entrepreneurship policies are well developed, and both countries also already offer growth-oriented policies. Policies for ambitious entrepreneurship, gazelles, and high-growth firms do not completely upset entrepreneurship policy thinking, but suggest that complementary interventions merit attention.

However, especially in the third and fourth transition (see figure 14.1), policymakers have to be aware that the design of policy interventions should deviate from earlier transitions. To stimulate people's ambition and lure them into self-employment, policies can be broad and untargeted—examples include general programs for entrepreneurship education, providing inspiration by means of role models and offering general tax deductions for the self-employed. Such policies can be labeled as "the more the better."

Table 14.2 Generic Entrepreneurship Policy versus High-Growth Entrepreneurship Policy

Policy goal	Generic entrepreneurship policy	High-growth entrepreneurship policy
Overall focus	Quantity	Quality
Entrepreneurs	Get more people to start new firms	Get the right people to start new firms
Entrepreneurial firms	Increase the number of entrepreneurial ventures	Improve the quality of entrepreneurial ventures
Operational environment	Facilitate SME entry and operation	Facilitate new firm growth
Resources	Mostly public	Public and private partnership
Resource distribution	A little to many	Much to a few
Fiscal	Reduce VAT for small firms	Accommodate dramatic change over firm life course
Type of support	Standard advice for firm creation and operation	Expert advice on growth and internationalization

Source: Autio et al. (2007).

To stimulate the next transitions, however, policies should be much more selective. For high-growth policies, Autio, Kronlund, and Kovalainen (2007) summarize the main distinctions. Their summary is provided in table 14.2.

Instead of focusing on quantitative aspects of entrepreneurship, to facilitate the third and fourth transition, policy should focus more on the qualitative aspects of entrepreneurship. Ultimately, welfare increases if the economy allows and rewards productive entrepreneurial initiatives, in whatever context. Whether this takes place in new or old, small or large firms, by self-employed or wage earners, is an empirical issue. Empirical evidence suggests that it is not self-employment or new (small) firms that drive economic growth, but that it is particularly ambitious entrepreneurship (Stam et al. 2009; 2011; 2012; Stam and Van Stel 2011; Wong, Ho, and Autio 2005) and the subsequent realization of gazelles and high-growth firms that positively affects economic growth.

Stimulating ambitious entrepreneurship requires, unlike traditional entrepreneurship policies, concentrating policy resources on just a few “high potentials,” rather than many individuals who never make it beyond self-sufficiency. Given limited public funding, this requirement may actually cause conflict between ambitious entrepreneurship and traditional entrepreneurship policies. In addition, stimulating self-employment may even harm ambitious entrepreneurship, as the incentives to stay self-employed may deter these solo entrepreneurs from expanding their business with recruiting other personnel. At first sight, a group of solo self-employed may substitute for a high-growth start-up, especially when project forms of organizing are dominant (e.g., in the construction industry and in multimedia productions). However, when it comes to scale economies and large-scale innovations, a thousand solo self-employed cannot substitute for one Google or Facebook. New firms that want to change the economy and

society are more likely to succeed with a large group of like-minded people that are committed to the collective endeavor.

CONCLUSIONS

In this chapter we have identified the types of local policies that are conducive to generating high-growth firms. Even though it has become widely recognized that these firms are an important driver of economic development, locally and nationally, there is less insight into the need, effectiveness, and efficiency of policies that enable or directly stimulate these high-growth firms locally.

We discussed the transitions that precede the realization of a full-fledged high-growth firm. Insight into these preceding transitions is necessary in order to increase the pool of potential high-growth firms and to target particular transitions in the path towards becoming a high-growth firm.

Important enabling high-growth firm policies can be found in the areas of education policy and labor market policy. Even though these enabling policies are rather generic in nature, they can be made more effective by targeting particular groups that are more relevant for particular transitions toward becoming a high-growth firm. These policies often have specific local effects, because they are implemented on a regional level, and sometimes because they are even designed on a regional level.

With respect to targeted local high-growth firm policies, we focused on the recent stream of business accelerator programs. These programs are often implemented with private parties, and sometimes they are even initiated by private parties, with only limited public support. In addition, there are many targeted industrial policies and regional cluster policies that also have direct implications for the presence of high-growth firms.

Most countries have a mix of national and regional policies for high-growth firms. In many cases the national policy programs are implemented in a region-specific way. In order for local policies to be effective they should not conflict with national and supra-national policies, and they should complement rather than compete with policies in neighboring regions. Recent findings seem to suggest that neighboring regions more often copy their neighbor's policies than they learn from them and implement these policies in a way that fits the region-specific characteristics or decide to implement other policies that better fit the region. A more intelligent policy approach also suits the competence bloc approach (Henrekson and Johansson 2009) and the recent smart specialization strategy for European regions (Foray, David, and Hall 2011).

In many cases generic entrepreneurship policies are complementary to high-growth entrepreneurship policies, because they increase the pool of potential ambitious entrepreneurs. However, there are several kinds of generic entrepreneurship policies that conflict with high-growth entrepreneurship policies, especially those policies that favor self-employed and small firms and in that way provide opportunity costs for entrepreneurs to hire employees (beyond a certain firm size).

REFERENCES

- Autio, E., M. Kronlund, and A. Kovalainen. 2007. *High-Growth SME Support Initiatives in Nine Countries: Analysis, Categorization and Recommendations*. Helsinki: Edita Publishing.
- Avnimelech, G., and M. Teubal. 2006. "Creating Venture Capital Industries That Co-evolve with High Tech: Insights from an Extended Industry Life cycle perspective of the Israeli experience." *Research Policy* 35 (10), 1477–98.
- Bos, J., and E. Stam. 2014. "Gazelles and Industry Growth: A Study of Young High-Growth Firms in the Netherlands." *Industrial and Corporate Change* 23 (1), 145–69.
- Bosma, N. S. 2011. "Entrepreneurship, Urbanization Economies, and Productivity of European Regions." In M. Fritsch, ed., *Handbook of Research on Entrepreneurship and Regional Development*. Cheltenham: Edward Elgar.
- Bosma, N., and J. Levie. 2010. *Global Entrepreneurship Monitor: 2009 Global Report*. Global Entrepreneurship Research Association.
- Bosma, N., V. Schutjens, and E. Stam. 2009. "Entrepreneurship in European Regions: Implications for Public Policy." In J. Leitao and R. Baptista, eds., *Public Policies for Fostering Entrepreneurship: A European Perspective*. New York: Springer.
- Bosma, N., and E. Stam. 2012. "Local Policies for High-Employment Growth Enterprises." Organisation for Economic Co-operation and Development, Paris.
- Braguinsky, S., L. G. Branstetter, and A. Regateiro. 2011. "The Incredible Shrinking Portuguese Firm." Nation Bureau of Economic Research Working Paper No. 17265.
- Braunerhjelm, P., and M. Feldman. 2006. *Cluster Genesis: Technology-Based Industrial Development*. New York: Oxford University Press.
- Brenner, T., and A. Mühligh. 2007. "Factors and Mechanisms Causing the Emergence of Local Industrial Clusters: A Meta-study of 159 Cases." MPI Working Paper No. 0723.
- Breznitz, S. M., R. P. O'Shea, and T. J. Allen. 2008. "University Commercialization Strategies in the Development of Regional Bioclusters." *Journal of Product Innovation Management* 25 (2), 129–42.
- Buenstorf, G., and D. Fornahl. 2009. "B2C-bubble to Cluster: The Dot-com boom, Spin-off Entrepreneurship, and Regional Agglomeration." *Journal of Evolutionary Economics* 19 (3), 349–78.
- Casper, S. 2007. *Creating Silicon Valley in Europe*. New York: Oxford University Press.
- Coad, A., and T. Broekel. 2012. "Firm Growth and Productivity Growth: Evidence from a Panel VAR." *Applied Economics* 44 (10), 1251–69.
- Coad, A., and W. Hözl. 2009. "On the Autocorrelation of Growth Rates." *Journal of Industry, Competition and Trade* 9 (2), 139–66.
- Daunfeldt, S. O., N. Elert, and D. Johansson. 2014. "The Economic Contribution of High-Growth Firms: Do Policy Implications Depend on the Choice of Growth Indicator?" *Journal of Industry, Competition and Trade* 14 (3), 337–65.
- Degroof, J. J., and E. B. Roberts. 2004. "Overcoming weak entrepreneurial infrastructures for academic spin-off ventures." *Journal of Technology Transfer* 29 (3–4), 327–52.
- De Kok, J., H. Zhou, and C. Hartog. 2012. "The Risk of Growing Fast." Scales Research Reports H201119, EIM Business and Policy Research.
- Dobbin, F., B. Simmons, and G. Garrett. 2007. "The Global Diffusion of Public Policies: Social Construction, Coercion, Competition, or Learning?" *Annual Review of Sociology* 33, 449–72.
- Fallick, B., C. A. Fleischman, and J. B. Rebitzer. 2006. "Job-hopping in Silicon Valley: Some Evidence Concerning the Microfoundations of a High-Technology Cluster." *Review of Economics and Statistics* 88, 472–81.

- Feldman, M. P. 2011. "Inadvertent Infrastructure and Regional Entrepreneurship Policy." In M. Fritsch, ed., *Handbook of Research on Entrepreneurship and Regional Development*. Cheltenham: Edward Elgar.
- Feldman, M. P., J. Francis, and J. Bercovitz. 2005. "Creating a Cluster While Building a Firm: Entrepreneurs and the Formation of Industrial Clusters." *Regional Studies* 39 (1), 129–41.
- Fischer, E., and R. Reuber. 2003. "Support for Rapid-Growth Firms: A Comparison of the Views of Founders, Government Policymakers, and Private Sector Resource Providers." *Journal of Small Business Management* 41 (4), 346–65.
- Foray, D., P. A. David, and B. Hall. 2011. "Smart Specialization: From Academic Idea to Political Instrument, the Surprising Career of a Concept and the Difficulties Involved in its Implementation." MTEI Working Paper, EPFL, Lausanne.
- Fritsch, M. 2011. "The Effect of New Business Formation on Regional Development: Empirical Evidence, Interpretation, and Avenues for Further Research." In M. Fritsch, ed., *Handbook of Research on Entrepreneurship and Regional Development*, 58–106. Cheltenham: Edward Elgar.
- Garicano, L., C. LeLarge, and J. Van Reenen. 2012. "Firm Size Distortions and the Productivity Distribution: Evidence from France." Centre for Economic Performance Discussion Paper No. 1128.
- Garmaise, M. J. 2011. "Ties That Truly Bind: Noncompetition Agreements, Executive Compensation and Firm Investment." *Journal of Law, Economics, and Organization* 27 (2), 376–425.
- Garnsey, E., and P. Heffernan. 2005. "High Tech Clustering through Spin Out and Attraction: The Cambridge Case." *Regional Studies* 39 (8), 1127–44.
- Garnsey, E., E. Stam, and P. Heffernan. 2006. "New Firm Growth: Exploring Processes and Paths." *Industry and Innovation* 13 (1), 1–20.
- Gertler, M. S., and T. Vinodrai. 2009. "Life Sciences and Regional Innovation: One Path or Many?" *European Planning Studies* 17 (2), 235–61.
- Gilbert, B. A., D. B. Audretsch, and P. P. McDougall. 2004. "The Emergence of Entrepreneurship Policy." *Small Business Economics* 22, 313–23.
- Gilson, R. J. 1999. "The Legal Infrastructure of High Technology Industrial Districts: Silicon Valley, Route 128, and Covenants Not to Compete." *New York University Law Review* 74, 575–629.
- Grimm, H. 2011. "The Lisbon Agenda and Entrepreneurship Policy: Governance Implications from a German Perspective." *Public Administration* 89 (4), 1526–45.
- Hannon, P. D., and P. Chaplin. 2003. "Are Incubators Good for Business? Understanding Incubation Practice—the Challenge for Policy." *Environment and Planning C: Government and Policy* 21, 861–81.
- Hartog, J., C. M. van Praag, and J. van der Sluis. 2010. "If You Are So Smart, Why Aren't You an Entrepreneur? Returns to Cognitive and Social Ability. Entrepreneurs versus Employees." *Journal of Economics and Management Strategy* 19 (4), 947–89.
- Henrekson, M., and D. Johansson. 2009. "Competencies and Institutions Fostering High-Growth Firms." *Foundations and Trends in Entrepreneurship* 5 (1), 1–80.
- Henrekson, M., D. Johansson, and M. Stenkula. 2010. "Taxation, Labor Market Policy and High-Impact Entrepreneurship." *Journal of Industry, Competition and Trade* 10 (3), 275–96.
- Hospers, G.-J. 2006. "Silicon Somewhere?" *Policy Studies* 27 (1), 1–15.

- Ingram, P., J. Luo, and J. P. Eshun, 2010. "Institutional Rivalry and the Entrepreneurial Strategy of Economic Development: Business Incubator Foundings in Three States." In W. D. Sine and R. J. David, eds., *Institutions and Entrepreneurship*. Bingley: Emerald.
- Kerr, W. R. 2010. "Breakthrough Inventions and Migrating Clusters of Innovation." *Journal of Urban Economics* 67 (1), 46–60.
- Kirchhoff, B. 1993. *Entrepreneurship and Dynamic Capitalism: The Economics of Business Firm Formation and Growth*. New York: Praeger.
- Klepper, S. 2009. "Spinoffs: A Review and Synthesis." *European Management Review* 6, 159–71.
- Klepper, S. 2011. "Nano-economics, Spinoffs, and the Wealth of Regions." *Small Business Economics* 37, 141–54.
- Lerner, J. 1999. "The Government as Venture Capitalist: The Long-Run Effects of the SBIR Program." *Journal of Business* 72 (3), 285–97.
- Lilischkis, S. 2011. "Policies in Support of High-Growth Innovative SMEs." INNO-Grips Policy Brief No. 2.
- Marx, M., D. Strumsky, and L. Fleming. 2009. "Mobility, Skills, and the Michigan Noncompete Experiment." *Management Science* 55 (6), 875–89.
- Mason, C., and R. Brown. 2013. "Creating Good Public Policy to Support High-Growth Firms." *Small Business Economics* 40 (2), 211–25.
- McClelland, D. C. 1961. *The Achieving Society*. Princeton, NJ: Van Nostrand.
- NESTA. 2009. *The Vital 6 Per Cent: How High-Growth Innovative Businesses Generate Prosperity and Jobs*. London: National Endowment for Science, Technology and the Arts.
- OECD. 2008. *Measuring Entrepreneurship: A Digest of Indicators*. OECD-Eurostat Entrepreneurship Indicators Program. Paris: OECD.
- Owen, G. 2004. "Where Are the Big Gorillas? High Technology Entrepreneurship in the UK and the Role of Public Policy." Entrepreneurship and Public Policy Project, Diebold Institute for Public Policy Studies, London.
- Parker, S. C., D. J. Storey, and A. van Witteloostuijn. 2010. "What Happens to gazelles? The importance of Dynamic Management Strategy." *Small Business Economics* 35 (2), 203–26.
- Parsley, C., and D. Halabisky. 2008. "Profile of Growth Firms: A Summary of Industry Canada Research." Industry Canada, Small Business Research and Statistics.
- Samila, S., and O. Sorenson. 2011. "Noncompete Covenants: Incentives to Innovate or Impediments to Growth?" *Management Science* 57 (3), 425–38.
- Santarelli, E., and M. Vivarelli. 2007. "Entrepreneurship and the Process of Firms' Entry, Survival and Growth." *Industrial and Corporate Change* 16 (3), 455–88.
- Saxenian, A.-L. 1994. *Regional Advantage: Culture and Competition in Silicon Valley and Route 128*. Cambridge, MA: Harvard University Press.
- Shane, S. 2009. "Why Encouraging More People to Become Entrepreneurs Is Bad Public Policy." *Small Business Economic* 33 (2), 141–49.
- Shane, S., and S. Venkataraman. 2000. "The Promise of Entrepreneurship as a Field of Research." *Academy of Management Review* 25 (1), 217–26.
- Siegel, D. S., P. Westhead, and M. Wright. 2003. "Science Parks and the Performance of New Technology-Based Firms: A Review of Recent U.K. Evidence and an Agenda for Future Research." *Small Business Economics* 20, 177–84.
- Smallbone, D., R. Baldock, and S. Burgess. 2002. "Targeted Support for High-Growth Start-ups: Some Policy Issues." *Environment and Planning C: Government and Policy* 20, 195–209.

- Spenner, K. I., and D. L. Featherman. 1978. "Achievement Ambitions." *Annual Review of Sociology* 4, 373–420.
- Stam, E., N. Bosma, A. Van Witteloostuijn, J. De Jong, S. Bogaert, N. Edwards, and F. Jaspers. 2012. *Ambitious Entrepreneurship: A Review of the Academic Literature and New Directions for Public Policy*. The Hague: Advisory Council for Science and Technology Policy.
- Stam, E., C. Hartog, A. van Stel, and R. Thurik. 2011. "Ambitious Entrepreneurship and Macro-economic Growth." In M. Minniti, ed., *The Dynamics of Entrepreneurship: Evidence from the Global Entrepreneurship Monitor Data*. Oxford: Oxford University Press.
- Stam, E., K. Suddle, J. Hessels, and A. van Stel. 2009. "High-Growth Entrepreneurs, Public Policies and Economic Growth." In J. Leitao and R. Baptista, eds., *Public Policies for Fostering Entrepreneurship: A European Perspective*. New York: Springer.
- Stam, E., and A. van Stel. 2011. "Types of Entrepreneurship and Economic Growth." In M. Goedhuys, W. Naudé, and E. Szirmai, eds., *Innovation, Entrepreneurship and Economic Development*. Oxford: Oxford University Press.
- Storey, D. J. 1994. *Understanding the Small Business Sector*. London: International Thomson Business Press.
- Storey, D. J. 2003. "Entrepreneurship, Small and Medium Sized Enterprises and Public Policy." In D. B. Audretsch and Z. J. Acs, eds., *The Handbook of Entrepreneurship*. London: Kluwer.
- Teruel, M., and G. De Wit. 2011. "Determinants of High-Growth Firms: Why Have Some Countries More High-Growth Firms Than Others?" EIM, Zoetermeer.
- Wong, P., Y. Ho, and E. Autio. 2005. "Entrepreneurship, Innovation and Economic Growth: Evidence from GEM Data." *Small Business Economics* 24 (3), 335–50.