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Framework Conditions for High-Potential Entrepreneurship: A Theoretical Structure and Its Implications[1]

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13.1. Introduction

This volume is devoted to the relationship between R&D strategies at the firm level and their broader economic consequences. Entrepreneurship, conceived of here as the creation of new businesses, is, along with the commercialization of innovative products and the refinement of production routines within existing firms, one of the key processes that mediate this relationship. Existing firms are able to draw on a range of resources to convert the knowledge that they create into value, which in turn leads to growth and employment; these resources include managerial talent, lines of credit, and relationships with other firms. Entrepreneurs have a much more challenging task: they may bring good ideas to the new enterprise, but they have to find and organize the kinds of resource that existing firms take for granted in order to take advantage of those ideas and have an effect on the broader economy.

Yet, they do. Recent research, referenced in more detail below, shows that new businesses are responsible for most of the net employment and growth in at least some high-income economies, notably the USA. Thus, even though the task of the entrepreneur is so challenging that it results quite often in failure, the impact of the minority of entrepreneurs who are successful is profound. Sometimes their success occurs along precisely the strategic lines

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that existing firms have considered and rejected or tried and failed. Where this is the case, entrepreneurs may be seen (at least to some degree) as completing the translation of existing firms' R&D investments into societal value. In other cases, they may be working with ideas drawn from academic research, again, converting the investment that generated that research (in this case, typically made by a government or a philanthropy, rather than an existing firm) into results that are very important to society.

Societies with too few entrepreneurial ventures, or perhaps too few successful entrepreneurial ventures, then, do not reap the benefits from R&D that they might like. While R&D and even innovation may be of value for their own sake, providing satisfying work for a few experts and adding to the global sum of human knowledge, their larger value comes when they get put to practical use. In addition to employment and growth, the value comes from improved consumer welfare, as people are able to do things that they want to do more cheaply than in the past or become able to do things that they could not do in the past.

So the question of what causes entrepreneurship is quite appropriate for a volume like this one. Or, to put it more sharply, the question of what causes a certain kind of entrepreneurship is quite essential for a volume like this one. Because only a certain kind of entrepreneurship, which I will call 'high-potential entrepreneurship', really matters for society. The causes of such entrepreneurship have been explored in some depth but too often in a fragmented fashion. In this chapter, I seek to pull the various threads together into a unified framework.

The chapter begins by reviewing what the literature tells us about the sources of high-potential entrepreneurship and its impact on society. It then advances a set of 'framework conditions' that seek to explain variation in rates of high-potential entrepreneurship over time and across societies. These conditions operate at three levels—the individual, the organization, and the society—and are interconnected, so that a society's capacity to generate high-potential entrepreneurship cumulates over time. The analysis offers, I conclude, important insights for public policy-makers, implying these rates of high-potential entrepreneurship will tend to change slowly and that policy leverage is difficult to exert.

13.2. The importance of high-potential entrepreneurship

Entrepreneurship is, of course, a word with many meanings. One wit (Pozen, 2008) has gone so far as to entitle an article 'We Are All Entrepreneurs Now'. While this sort of semantic flexibility may be a virtue in politics, where being seen as entrepreneurial is sometimes an asset, it creates challenges for analysts. In this chapter, my purpose is to shed light on the role of entrepreneurship in

linking R&D strategies to their economic impacts and, more specifically, exploring linkages outside the context of existing firms. That means that I can adopt a straightforward definition of entrepreneurship—the founding of a new business.

This decision also allows me to rely on others' work over the past decade that uses a similar definition, such as research that draws on cross-national data from the Global Entrepreneurship Monitor (GEM). Although the central question of whether and how much entrepreneurship contributes to economic growth has not been fully resolved, the evidence points to the value of decomposing entrepreneurship into several components. Of these components, the most important seems to be high-potential entrepreneurship—new businesses that have grown very rapidly.

A casual review of early GEM data suggested that there was no clear relationship between the level of development of a country and its rate of total entrepreneurial activity**.** However, once a distinction was made between 'necessity' entrepreneurs, who have no other employment options, and 'opportunity' entrepreneurs, who undertake entrepreneurship for motives other than sheer desperation (Reynolds et al., 2002), a clearer pattern emerged. Higher rates of opportunity entrepreneurship seemed to be associated with better economic performance.

Within the high-income countries, most entrepreneurship is opportunity entrepreneurship. In data restricted to these countries, researchers also found that total rates of entrepreneurship at the regional and national level were closely associated with economic growth (Wennekers and Thurik, 1999; Ács, Audretsch, Braunerhjelm and Carlsson, 2006). Haltiwanger (2008), for instance, provides evidence that firms that are less than five years old account for nearly all net job creation in the USA.

This finding set the stage for a further decomposition of the data. Even within the high-income countries, most entrepreneurs create few jobs and often none at all. This outcome is the logical result of their aspirations; most entrepreneurs do not want to build a business that goes beyond their basement or a single office or a small establishment. A tiny fraction of aspiring entrepreneurs (Autio 2007), on the other hand, dream of emulating Bill Gates or Richard Branson by building a big and durable business. While their dreams do not often come true, those that do achieve success have important consequences for the societies in which these entrepreneurs live.

Turning from the literature on entrepreneurial aspirations to actual firm performance, we find that a small number of young firms have a hugely disproportionate impact on the broader economy. Wong, Ho and Autio (2005) and Autio (2005), for instance, summarize a variety of studies showing that 1–10 per cent of new firms generate 40–75 per cent of new jobs. The literature reviewed by Henrekson and Johansson (2010: 240), reaches the

same 'clear-cut' conclusion: 'A few rapidly growing firms generate a disproportionately large share of all new net jobs.' Ács, Parsons, and Tracy (2008) show that just 2.2 per cent of all firms in the USA accounted for the bulk of net job creation and economic growth in the United States between 1994 and 2006.

The precise definitions and terminology in this growing literature vary. The GEM literature, such as Autio (2005), labels these aspirants 'high-expectation', because they are identified by a question that asks them how many jobs they expect that their firms will eventually create. Ács, Parsons, and Tracy (2008) use the term 'high-impact' and the definition that the firm has doubled in size and revenue in a four-year period. Following Autio (2003), I will use the term 'high-potential', which is also common in the literature, because I am concerned with prospective as well as realized opportunities.

One key reason for this disproportionate impact is that new firms are more able than established businesses to create and to absorb radical technological innovations that open up new markets and support new business models (Christensen and Rosenbloom, 1995). Competition from successful new entrants, in turn, forces their older rivals to adapt or face extinction (Fritsch and Mueller, 2004). This dynamic can drive productivity growth across the broader economy, as it seems to have done in the USA in the decade prior to the current recession (Cotis, 2007). While it is true that this competition destroys jobs in older firms, the literature cited above focuses on net job creation, showing that the additions outweigh the subtractions.

High-potential entrepreneurship is likely to become even more important in the future for high-income nations. Production processes are more easily standardized and modularized than in the past and therefore more easily offshored and imitated. A steady stream of high-potential start-ups may allow these nations to cope with the outflow of economic activity that these trends imply. Like the Red Queen in Lewis Carroll's *Alice in Wonderland*, the rich will have to run faster just to stay in the same place. High-potential entrepreneurship is one crucial way to do so.

13.3. Explaining high-potential entrepreneurship

The importance of high-potential entrepreneurship to economic growth in the high-income countries compels us to seek to understand better the conditions under which it is more or less likely to occur. Entrepreneurship scholars have recently begun to explore these issues, building on research that focuses on total entrepreneurial activity. However, because the individuals, opportunities, and institutions involved in high-potential entrepreneurship are different from those involved in other forms of entrepreneurship, the received wisdom must be modified somewhat to suit our needs.

GEM and other projects have given entrepreneurship scholars more data than they had to work with ten years ago. In parallel with the expansion of data availability has come a revolution in scholarly perspective. Thornton, writing in 1999 (1999: 19), concluded that in work prior to that date, 'the supply-side perspective, which focuses on the individual traits of entrepreneurs, has been the dominant school of research'. That is no longer the case. Entrepreneurship journals these days are more likely to feature studies of the 'demand-side' than the 'supply-side' (to use Thornton's terms).

The stage was set for this turn by the broader focus on institutions within economics. Baumol (1990), surveying many centuries of history on a global scale, organized entrepreneurship into productive, unproductive, and destructive categories, and made the case that the rules of the game in society induce potential entrepreneurs to select one or the other of these. Murphy, Shleifer and Vishny (1991) similarly distinguished between rent-seeking and entrepreneurship and considered which societal institutions might make equally talented people select one rather than other.

As the focus on the demand for entrepreneurs sharpened, a set of relatively narrow but very productive research streams emerged. The financial environment for new businesses, for instance, has captured enormous scholarly energy (e.g. Lerner, 2009). The availability of knowledge and information to entrepreneurial ventures, too, has been of great interest to researchers (e.g. Ács et al., 2009). The ways in which entrepreneurs draw on social networks constitutes a third aspect of the context for entrepreneurship about which we know much more now than we did a decade ago (e.g. Casson, 2010).

Somewhat less effort has gone into synthesizing these threads into a broader fabric of explanation. Levie and Autio (2008) advance the GEM model, which includes a very broad range of national framework conditions and entrepreneurial framework conditions that in turn shape individual capacities to perceive and act on opportunities. This impressive effort produces a model that is comprehensive, but is also somewhat static. In a recent working paper, Autio (2009) takes this work a step further in trying to explain what he calls 'the curious absence of high-growth entrepreneurship in Finland'. The conclusion is nuanced but suggests that 'experience matters', which points to the need for a more dynamic conceptualization of the process.

Henrekson and Johansson (2009) introduce the idea of a 'competence bloc' into their effort to synthesize an explanation for variations in high-potential entrepreneurship. They identify a range of actors and institutions that contribute to the entrepreneur's ability to generate and exploit high-growth opportunities. Many of these overlap with the GEM model, but envisioning them as a bloc suggests interactions and system-level properties that are not present in that model.

Shane's 'individual/opportunity nexus' (2003) provides the third and most important pillar of a synthesis. This work conceives of the entrepreneurial process as occurring sequentially through time, characterized by the phases of discovery, evaluation, and exploitation (Shane and Venktaraman, 2000). Although somewhat less comprehensive than the GEM model, and more oriented to the individual entrepreneur than to the entrepreneur's social context, the dynamic nature of Shane's treatment is striking.

My effort is focused on a particular set of opportunities, those with the potential for rapid growth, as well as a particular set of individuals who have the requisite capabilities to perceive these opportunities. These individuals are available to become entrepreneurs thanks to the kinds of framework conditions identified by the GEM model, which interact in the systemic fashion of competence blocs. In addition, the time horizon for understanding framework conditions is extended for a much longer period.

13.4. Framework conditions: The general argument

High-potential entrepreneurship is a complex phenomenon. This complexity undermines single-factor theories and should dissuade policy-makers from the temptation to search for a 'magic bullet' to stimulate it. For instance, secure property rights, including intellectual property rights, embedded in a well-functioning legal system, may be necessary but are not sufficient to explain high-potential entrepreneurship. Among other things, property rights do not necessarily provide adequate incentives for knowledge creation.

On the other hand, a thriving system of non-proprietary academic and governmental research may make a society knowledge-rich, but its presence may not be sufficient to ensure that the high-potential opportunities it generates will be exploited. A ready supply of high-risk venture funding, to pick a third possible 'magic bullet,' may be necessary if start-ups are to be scaled up rapidly, but cheap finance alone may not be sufficient to induce would-be entrepreneurs to shoulder non-pecuniary risks to their social status or career prospects that 'taking the leap' would entail.

Rather than searching for single factors, we need to adopt a comprehensive framework for explaining variation in high-potential entrepreneurship across countries and over time. Multiple institutional systems—cultural, political, economic, and educational—interact to produce a social context that is propitious for it. These institutional systems interact over time through the adaptive work of various agents, not just entrepreneurs, but also policy-makers, financial decision-makers, managers, and others.

These actors adjust their behaviour, including their routines for making and enforcing institutional norms and rules themselves, in order to reduce

conflicting institutional influences. Institutions thus tend to fit together harmoniously from the agents' point of view. In such a setting, simultaneous change in multiple-institutional systems, as seems to be required to alter something as complex as the rate of high-potential entrepreneurship in a society, may be very difficult to motivate and coordinate. The future is strongly conditioned by the past.

This approach draws on work by scholars seeking to explain similarly complex phenomena. Pierson (2004), for instance, considers the historical process by which welfare states come to have stability: they create the conditions for their own perpetuation and are 'locked in' by a complex web of beliefs, commitments, incentives, and habits. Murmann (2003) explores technological innovation in a similar fashion, as does the work of Greif (2006) on an even grander scale on market-based economic institutions. High-potential entrepreneurship is complex enough and important enough to society to fit comfortably in such company.

Of course, we should bear in mind that this process of institutional self-reinforcement is a matter of dependence, not determinism. Especially when powerful external pressures are present, the trajectory of institutional change may deviate from its historical path. And sometimes small changes accrete over time to produce tensions among institutions that can lead to conflict and disruption (Thelen and Mahoney, 2010).

Inspired by this work on path dependence and cumulative institutional capacity, and drawing particularly on Shane (2003), I advance a framework for understanding high-potential entrepreneurship in the next three sections. If high-potential opportunities are to be created, society must be rich in intellectual and economic resources and open to innovation. These are fundamentally questions of political economy. If such opportunities are to be recognized, society must possess a diverse array of sophisticated and ambitious individuals. This set of conditions has mainly to do with culture and human resources. If high-potential opportunities are to be exploited, society must value risk-taking and be able to redirect substantial resources to particularly promising new enterprises. These issues lie in the realm of management and organizations.

To put it another way, we can productively group high-potential entrepreneurship framework conditions into three clusters that correspond with three levels of analysis. *Societies* create opportunities for high-potential entrepreneurship through the operation of political-economy framework conditions. *Individuals* recognize opportunities for high-potential entrepreneurship when enabled by socio-cultural framework conditions. *Organizations* exploit opportunities for high-potential entrepreneurship if resource-mobilization framework conditions permit them to do so.

13.5. Political economy and the creation of high-potential opportunities

My detailed argument begins with a discussion of political economy. In order for high-potential opportunities to be created, much less recognized and exploited, the social context for entrepreneurship must be changing more rapidly or profoundly than existing businesses can respond to. Firms, like other agents, tend to continue doing what they have done in the past. The more a new opportunity would require changing existing routines, the less likely incumbents are to seize it. The prospect of new competition, moreover, may prompt them to seek protection through the political system. Opportunities for high-potential entrepreneurship will appear more frequently in highly dynamic economic systems where political protection for existing businesses is scarce.

If established businesses were so perceptive and so nimble that they recognized and seized all the available opportunities, new businesses would be unnecessary. In practice, the standard operating routines of established businesses make it difficult for them to recognize and act on new opportunities, especially high-potential opportunities (Nelson and Winter, 1982; Christensen, 1997).

The emergence of new markets, either through the introduction of new customers or as a result of changing tastes, is one source of change with which existing businesses may have trouble coping. For example, the opening of a large new foreign market could be a powerful stimulus to high-potential entrepreneurship, especially if the demands of the new customers are different from those at home. Changing tastes in the domestic market, especially sudden and dramatic ones, are likely to be even more powerful stimuli for high-potential entrepreneurship. Such changes in taste may arise for a variety of reasons, such as saturation of existing demand, the whims of fashion, and, perhaps most important, product and process innovation.

Innovation, in turn, stems in large part from the creation of new knowledge. The extent and location of knowledge creation depends significantly on economic and political institutions. These institutions (such as financial markets and tax law) may provide incentives for existing businesses to create new knowledge even as their established routines (such as the 'wall' that often separates R&D from production within firms) interfere with these businesses' ability to recognize the value that they have created. The greater the tension between knowledge creation and opportunity recognition within existing businesses, the more likely it is that disgruntled employees will depart to pursue high-potential entrepreneurship based on ideas rejected by their employers (Auerswald and Branscomb, 2003).

Opportunities based on new knowledge created by non-business organizations, such as academic or government laboratories, tend to be even more difficult for existing businesses to recognize. These organizations are supported primarily by political institutions, either directly through government appropriations or indirectly through tax incentives for charitable contributions. The routines of laboratory researchers are distinct from most business routines, and communication between the world of research and that of business is often fraught with barriers. Entrepreneurs may be better positioned than existing businesses to recognize high-potential opportunities drawing on laboratory-based science and engineering (Rosenberg, 2003).

Opportunities for high-potential entrepreneurship, however promising, are far less likely to be pursued if government agencies or existing businesses, however clumsy, are perceived by potential entrepreneurs to be likely to place a 'thumb on the scales' and alter market outcomes arbitrarily to suit their interests. Such a bias in favour of existing businesses may be caused by onerous taxes on entrepreneurs, by regulations that protect incumbents, by unfair trade practices of incumbents against which new entrants have no recourse, or by collusion between government and incumbents. Effective systems of real- and intellectual-property rights, policies that control excessive market power, and political practices that allow potential and new interests to be expressed in the policy process limit the chances that the economic system will be rigged against start-ups.

13.6. Culture, human resources, and the recognition of high-potential opportunities

While the economic and political institutions of nations shape the relative availability of opportunities for high-potential entrepreneurship, the extent to which entrepreneurial individuals recognize and seize them depends on cultural factors as well. High-potential opportunities, especially those resulting from the development of new knowledge, are more likely to be recognized by people with high levels of education and experience. Cultural diversity also enhances recognition by widening the range of evaluations placed on uncertain opportunities. A society with a strong and diverse human-resource base might nonetheless experience relatively low rates of high-potential entrepreneurship if potential high-potential entrepreneurs perceive financial disincentives and discouraging cultural cues about risk-taking.

High-potential entrepreneurship marries extreme ambition with technical expertise and market savvy. While the scale of an individual's ambition may not depend closely on his or her education and experience, his or her level of expertise and savvy are likely to. Education allows a potential entrepreneur to

access and appreciate new knowledge; business experience provides insights into how it might be applied. GEM finds, not surprisingly, that high-potential entrepreneurs are better educated, better off, and better connected than other entrepreneurs (Bullvaag et al., 2006). The educational and occupational mix of a society thus shapes its capacity for high-potential entrepreneurship. These demographic patterns tend to change only slowly over time, shaped by a society's collective resources and commitments.

Cultural diversity, too, tends to be relatively fixed in the short-run, due to historic patterns of immigration and social mobility. Holding education and experience constant, diversity affects high-potential entrepreneurship by increasing the likelihood that unexploited market niches and technical combinations will be perceived as opportunities, rather than ignored. As Carlsson and Jacobson (1997) put it in a different context, the blending of cultures enlarges the 'search space' in which opportunities are sought. People holding diverse values will resolve uncertainties about these opportunities differently, driving disagreements that lead to spin-offs and start-ups. Florida (2003, 2005) provides evidence of a strong association between diversity and high-potential entrepreneurship at the regional and, to a lesser extent, national levels.

High-potential entrepreneurs typically risk more than other entrepreneurs. Their education and experience make it likely that they have reasonably secure and remunerative career options within existing businesses as alternatives to going out on their own. The cost of entrepreneurial failure to these individuals involves more than the loss of a salary and any capital invested. They stand to lose in addition organization-specific human and social capital if a return to their prior career track is prohibited in the case of failure. Where the individual opportunity costs of entrepreneurial behaviour are low, high-potential entrepreneurship will thrive.

High-potential entrepreneurship involves non-pecuniary as well as financial risks and payoffs. The non-pecuniary benefits of high-potential entrepreneurship might include the esteem of family and friends, the expansion of social networks, and the pleasures of acquiring new knowledge and tackling a challenge—even if the venture fails in the end. Whether such rewards can be expected depends in the first place on the values that potential entrepreneurs have absorbed throughout their lives. These expectations may be shaped as well by cultural cues, including the status accorded entrepreneurs in the media.

13.7. Organizations, managers, and the exploitation of high-potential opportunities

The exploitation of high-potential opportunities requires that entrepreneurs draw on more substantial and more diverse outside resources—including

money, talent, connections, and knowledge—than other forms of entrepreneurship. High-potential entrepreneurship is defined by rapid and extended growth, driving demands for these resources on a scale that quickly outstrips the personal capacities of even the most experienced and well-heeled founders. Scaling up brings qualitative as well as quantitative changes in resource requirements, particularly managerial skills. In societies with high rates of high-potential entrepreneurship, entrepreneurs are embedded in an institutional framework that nurtures organizations and individuals—in addition to the entrepreneurs themselves—who are able to evaluate high-potential opportunities well and to leverage their control of critical resources to enhance exploitation.

The most obvious resource required by high-potential start-ups is money. The 'burn rate' (monthly or quarterly spending) varies substantially across sectors and over time, but regardless of the initial level, it accelerates quickly when these firms are successful. Manufacturing firms that move from prototyping to production, for instance, typically face a step change in costs. When the pockets of the founders and their 'family and friends' are emptied, new investors must be solicited. This solicitation process must overcome substantial transaction costs, especially negotiating an appropriate valuation for the firm and control rights over it (Gompers and Lerner, 2001). National financial institutions, including private and public markets and government grant and loan programs, may be more or less effective in surmounting these obstacles.

High-potential start-ups also need to recruit a rapidly-changing array of high-level technical and managerial talent. Skills and strategies that are critical in a firm's earliest phases tend to become less so as it grows and may even become irrelevant or counterproductive. The decision to join such a firm once it is already up and running is similar to that of engaging in high-potential entrepreneurship, as discussed in the previous section, albeit with more information and perhaps lower risk. A deep and mobile talent pool will make high-potential entrepreneurship easier. Well-developed social networks that may involve entrepreneurs, investors, and specialized service providers can facilitate recruitment as well.

Knowledge, beyond that brought to the firm by new employees, is a third external resource upon which high-potential entrepreneurship is dependent. Social networks are a crucial means to access such knowledge. For instance, highly-competitive and rapidly-moving technical fields in which many start-ups are involved rely more heavily on such networks for information exchange than formal vehicles such as conferences and publications. Current business information, too, is transferred through informal relationships as well as through specialized media. Other things being equal, societies rich in social capital, particularly among elites, will probably give rise to more high-potential entrepreneurship.

13.8. A little bit of evidence

I have argued, then, that societies create opportunities for high-potential entrepreneurship, individuals recognize them, and organizations exploit them, and that there are institutional framework conditions that operate at each of these three levels. I am not able in this space to provide a comprehensive test of this framework. Elsewhere, I have made a first pass at an application to the history of the United States, which has maintained a relatively high level of high-potential entrepreneurship (Hart, 2011). Although there are no consistent data of the quality of GEM, I believe that this has been a characteristic of the US economy for decades and helps to account for the nation's economic success.

I will briefly, however, explore empirically one of the major implications of my argument. I have suggested that high-potential entrepreneurship is the outcome of a complex set of interactions among a number of major institutional systems in society. These institutional systems are interactive, co-evolving, and typically self-reinforcing. That suggests that the level of high-potential entrepreneurship will change slowly, if at all, in the absence of a major disruption in society, such as a war or economic depression.

I will use GEM data in order to look at this issue. GEM operationalizes high-potential entrepreneurship as the entrepreneur's expectation that his or her business will employ 20 or more people within five years. Obviously, entrepreneurial expectations are not always fulfilled; indeed, entrepreneurs of all stripes fail more often than they succeed. On the other hand, some start-ups succeed well beyond their founders' expectations. Nonetheless, as Wiklund and Shepherd (2003) and Autio (2005) show, there is a correlation, albeit imperfect, between initial expectations and eventual growth.

High-potential entrepreneurship is, of course, a rare occurrence. In fact, it is so rare that it is necessary to aggregate data across a number of years, even in a survey as large as GEM, in order to study it. About 1.5 per cent of the surveyed population in the USA, for instance, fell into this category between 2000 and 2004. That share was roughly three times the rate of major continental European and highly-developed Asian countries for which data were available in these years. As Bullvaag et al. (2006: 6) put it, this rate puts the USA 'in a league of its own'.

More countries have been added to the GEM project over time, and the US position appears less exceptional when this broader perspective is available. New Zealand, Iceland, and Canada nearly match the US level, while China exceeds it. Still, when the data from 2000 to 2006 are aggregated, the major countries (including the UK, Germany, Sweden, and Spain) for which the full data are available remain in the same positions and at roughly the same levels

(Autio 2007). By 2009, it became possible to do a comparison of two separate five-year periods, and the result is unchanged (Bosma and Levie, 2010).

Of course, by the lights of my argument, even a decade is a relatively short time. As the GEM data cumulate longitudinally and in a wider range of countries, the hints from this cursory effort might be followed up more carefully. It may also be possible to examine the impact of social disruption with the most recent data, as a result of the financial crisis of 2008 and resulting economic downturn. Iceland, for instance, which was forced to secure assistance from the International Monetary Fund very early in the global crisis, would be an interesting candidate for such a project, along with the USA, where the 'great recession' still lingers, with unemployment rates over 9 per cent in mid-2011.

13.9. Possible futures

The bottom line of my argument for policy-makers is that they must be patient as well as determined. They might also need to be a little lucky in the sense that, while they may be able to shape the broad conditions within which entrepreneurs operate, the internal dynamics are not in their direct control. Leadership firms, which become role models and spawn spin-offs, for instance, cannot be created by fiat. Self-reinforcing feedbacks must develop within the entrepreneurial system, often in ways that policy-makers cannot anticipate.

An impressionistic scan around the world suggests that there are some nations that have been successful in carrying through a high-potential entrepreneurship policy, although perhaps not under that name. China is the most obvious and biggest. A few smaller, wealthier countries, such as Ireland, Singapore, and Israel (along with Iceland) stand out in recent GEM data, but were hardly known as hotbeds of high-potential entrepreneurship twenty or thirty years ago.

As my argument would suggest, each of these countries has followed a different evolutionary path to its present position (Breznitz, 2007). For countries considering what to do, much can be learned from experiences elsewhere, but there is no point in slavish imitation. Institutional endowments differ and so do the external conditions at any point in time. The words of Gerschenkron (1962: 4), though written for a different purpose, still ring true: 'No past experience, however rich, and no historical research, however thorough, can save the living generation the creative task of finding their own answers and shaping their own future.'

Looking forward, it will be ever more important for high-potential entrepreneurship policy to be attuned to the globalization process, which may

provide a means to short-cut some aspects of indigenous institutional development. Not only can markets increasingly be found globally, but so too can knowledge, talent, and money. The 'micro-multinational' (Copeland, 2006) start-up can assemble resources and exploit opportunities in ways that were not available to start-ups in years past. Policy-makers may want to consider easing access to such resources, whether through R&D collaboration, migration policy, or capital-access rules.

At the same time, however, the globalization process may sap away some of the benefits that have historically been associated with high-potential entrepreneurship. Just as resources can be gathered offshore, so too can jobs flow offshore. The folk wisdom of Silicon Valley for some time has been that every start-up there needs to have an offshoring strategy. Difficult trade-offs as well as opportunities lie ahead.

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