

# Paths to Prosperity

*PROMOTING ENTREPRENEURSHIP IN THE 21<sup>ST</sup> CENTURY*

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MONITOR GROUP

## MONITOR GROUP

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<b>Executive Summary .....</b>	<b>2</b>
<b>Introduction .....</b>	<b>8</b>
<b>Understanding Entrepreneurship and Its Benefits .....</b>	<b>12</b>
<b>Environments for Entrepreneurship .....</b>	<b>20</b>
<b>The Policy Labyrinth.....</b>	<b>28</b>
<b>Ask the Entrepreneurs .....</b>	<b>34</b>
<b>Models of Entrepreneurship Development .....</b>	<b>54</b>
<b>Conclusions &amp; Recommendations.....</b>	<b>66</b>
<b>Appendix .....</b>	<b>71</b>
<b>SELECTED PROFILES OF ENTREPRENEURIAL ENVIRONMENTS .....</b>	<b>71</b>
<b>SUGGESTIONS FOR FURTHER READING .....</b>	<b>82</b>
<b>ENDNOTES .....</b>	<b>83</b>

# Executive Summary



**ENTREPRENEURSHIP IS ONE OF THE DRIVING FORCES** of the modern global economy. It is a primary source of job creation, prosperity, and economic competitiveness. But although the effects of entrepreneurship on economic progress are widely recognized, there is little understanding of how best to promote it. Many policy measures are available but there is no agreement about which are most effective. As a result, many governments at the national, regional, and local levels are attempting to foster entrepreneurship in unproductive and uncoordinated ways, doing too many things at once or resorting to generic rather than locally meaningful plans.

There is no one best way to foster entrepreneurship: it requires practical, targeted strategies, based on an understanding of the specific conditions faced by entrepreneurs in a particular area or region. Drawing on decades of experience advising governments on economic competitiveness, Monitor Group has studied and identified the crucial factors that encourage or impede entrepreneurship throughout the world. This report presents key findings. It provides policymakers with better tools to assess the state of the entrepreneurial environment in their region, and with better strategies to improve it.

There is no one best way to foster entrepreneurship; it requires practical strategies targeted to specific conditions.

Monitor's perspective on entrepreneurship stems from two sources. One is the Monitor Entrepreneurship Benchmarking Initiative Survey, a multi-year project to identify and measure key weaknesses in entrepreneurial environments around the world. Carried out in 22 countries to date, the Survey has yielded a wealth of insight into the critical barriers currently facing entrepreneurs across a variety of regions.

## SEEDLINGS

Like healthy plants, healthy companies thrive when started in a supportive environment.

Monitor's expertise on entrepreneurship also stems from first-hand experience through more than 150 projects in regional economic development around the world. In particular, Monitor has developed a deep understanding of industrial clusters, which are geographically proximate groups of interconnected companies and associated institutions that form the competitive basis of an economy. Entrepreneurship must be promoted from existing clusters and directed towards creating new ones. To facilitate this process, Monitor has mapped 94 percent of world GDP by competitive industry cluster. It has also developed different models of how entrepreneurship arises within specific industrial and economic circumstances.

The main findings from these two initiatives are:

- *Although most research on entrepreneurship policy occurs at the national level, entrepreneurship is in critical ways a local phenomenon.* Among the levers available to policymakers, many of the most important are at the regional or local level.
- *Surveys of entrepreneurs around the world indicate that much conventional wisdom about these policy areas is misleading or simply wrong.* Although many governments attempt to promote entrepreneurship by easing administrative burdens, building incubators, or increasing access to venture capital, other policy areas are more important to entrepreneurial success. In particular:
  - *Mindset:* Entrepreneurial values, attitudes, and motivations have a disproportionate impact on levels of entrepreneurial activity throughout the world.
  - *Skills Development:* The teaching of entrepreneurial skills at all educational levels is a strong and often neglected determinant of successful new business formation.

- *Financing Strategies:* A system of equity financing—not just venture capital—is vital to entrepreneurship. Especially important are seed and angel investments, as well as efficient stock markets and listing regulations that encourage companies to go public.
- *Taxes and Incentives:* Lowering income taxes, increasing deductions for entrepreneurship, and providing the right incentives for the commercialization of R&D are likely to be high-impact policy measures in most environments.

**At the country level,** results from the Monitor Entrepreneurship Benchmarking Survey reveal a shifting world order of entrepreneurial dynamism (see appendices).

- *India and China* registered the highest aggregate scores overall. Despite important challenges in key areas, both countries are surging as environments for entrepreneurship.
- *The United States* scored strongly as well, outdoing all nations in key factors such as entrepreneurial motivations, quality of business services, and availability of networking organizations.
- *European countries* were relative underperformers, with the Nordic nations especially hurt by what respondents consider a problematic lack of positive entrepreneurial attitudes and motivations.
- *In the Middle East and North Africa,* results were generally encouraging despite important challenges. Tunisia exhibited strengths across all areas. Other countries performed well in particular factors, e.g. Lebanon with regard to entrepreneurial mindset.

As the survey and other research show, any effective attempt to shape the entrepreneurial environment requires two steps:

- First, it requires that policymakers gather **better information**, enabling a detailed understanding of the strengths and weaknesses of a particular entrepreneurial environment.
- Subsequently, it requires that policymakers craft a **better strategy**. Some weaknesses in the entrepreneurial environment matter more than others, and should be addressed from an existing industrial and institutional base.

Much of the confusion, poor policy making, and wasted resources seen in the attempt to promote entrepreneurship follow from the widespread habit of copying a handful of high-profile success stories. Most regions seek to emulate Silicon Valley, trying to encourage entrepreneurship through university spin-offs funded by venture capital. This “classic” model is wholly unsuited to the vast majority of regions in the world. Monitor has identified **four different models of how entrepreneurship develops within specific economic and industrial settings**.

- In the **classic model**, intellectual property developed at or near major research universities is commercialized, often with the help of venture capital.
- In the **anchor firm model**, large companies produce entrepreneurial ventures either through spin-offs or as employees depart to start their own business.
- In the **event-driven model**, downsizing at established companies or research organizations forces and motivates entrepreneurial efforts by large cohorts of people.
- In the **local hero model**, a local entrepreneur achieves great success and creates opportunities for more entrepreneurs.



In each case, the set of available resources and the proper role of policymakers will vary. Cities and regions must first determine which model or combination of models is most relevant to their situation, then look for resources within the environment that could be channeled towards the promotion of entrepreneurship.

#### **PROMOTING ENTREPRENEURSHIP: WHAT TO DO ON MONDAY MORNING**

Policymakers with responsibility for promoting entrepreneurship in their region can create a locally meaningful strategy by following four basic steps.

- Determine which of the four models of entrepreneurship development is most appropriate for local circumstances (pp. 55-65). This will help identify in broad terms the assets that are likely to be missing from the region.
- Identify industry clusters that can serve as platforms for entrepreneurship, making a realistic assessment of the corporate, academic, and public institutions that can generate new businesses or furnish them with support (pp. 22-25).
- Conduct a quick survey of entrepreneurs, and those who work closely with them, for first-hand insight into the key resources that are needed in the local entrepreneurial environment (pp. 35-41).
- Having identified the right model, and learned from entrepreneurs what they lack, choose a focused set of policy measures to intervene in critical areas (pp. 42-43).

# Introduction



**ENTREPRENEURSHIP IS ONE** of the most powerful drivers of growth and prosperity in the modern global economy. Few factors have as great an impact in producing innovation, creating jobs, or generally contributing to a dynamic and competitive economy. By generating prosperity and by integrating larger sectors of the population into the socioeconomic fabric, entrepreneurship also yields political benefits in the form of greater national security. But while the importance of entrepreneurship has become increasingly clear, there is little agreement about the most effective ways to promote it.

Few factors have as great an impact in producing innovation, creating jobs, or generally contributing to a dynamic and competitive economy.

Drawing on decades of experience advising governments on economic competitiveness, Monitor Group has identified the key factors that encourage or impede entrepreneurship around the world. This report presents findings from Monitor's research and is aimed at policymakers at the national, regional, and local level wishing to promote entrepreneurship in their jurisdictions. Its objective is to provide them with better tools to assess the state of their entrepreneurial environment, and better strategies to improve it.<sup>1</sup>

Monitor's research on entrepreneurship centers on two ongoing initiatives. One is the Monitor Entrepreneurship Benchmarking Initiative Survey, developed by Monitor and various international experts. A comprehensive survey that identifies and measures key weaknesses in a given entrepreneurial environment, the survey

## DUBAI, THEN AND NOW

The remarkable transformation of Dubai from a sleepy backwater in the 1950s to today's vibrant city owes much to local entrepreneurs.

enables policymakers to target the factors that are most in need of change. Carried out in 22 countries to date, the Survey has yielded a wealth of insight into the critical barriers currently facing entrepreneurs.<sup>2</sup>

Second, Monitor has developed a deep understanding of industrial clusters – geographically proximate groups of interconnected companies and associated institutions that form the competitive basis of an economy. Entrepreneurship must be promoted from existing clusters and directed towards forming new ones. To facilitate this process, Monitor has mapped 94 percent of world GDP by competitive industry cluster, and developed different models of how entrepreneurship supports and interacts with them.

This report is organized in six sections:

- *Section 1* defines entrepreneurship and discusses its economic, social, and political benefits.
- *Section 2* argues that the promotion of entrepreneurship must be based on an understanding of the entrepreneurial environment – the economic, legal, institutional, and cultural factors that promote or impede new business formation. This section considers the interrelation between entrepreneurship and industrial clusters, stressing the key role of regional and municipal policymakers in creating favorable conditions for entrepreneurs.
- *Section 3* considers the vast array of policy options available for the promotion of entrepreneurship, and outlines a plan of action to identify the ones most likely to work in a particular environment.
- *Section 4* presents the Monitor Entrepreneurship Benchmarking Initiative Survey and discusses major findings from the 22 countries surveyed to date.

- *Section 5* considers some of the ways in which entrepreneurship flourishes within specific economic and industrial circumstances. It presents three important alternatives to the “classic” model of entrepreneurship seen in places like Silicon Valley, which is ill-suited for most regions and should give way to locally relevant strategies.
- *Section 6* provides conclusions and recommendations.

The appendix features selected country findings from the Monitor Entrepreneurship Benchmarking Survey, providing an outline of key strengths and weaknesses in the entrepreneurial environments of China, India, the Middle East and North Africa, Russia, and the United States.

# Understanding Entrepreneurship and Its Benefits



**NEARLY 70 YEARS AGO**, Joseph Schumpeter famously portrayed the dynamic of capitalism as “the perennial gale of creative destruction” caused and manifested by continuous waves of innovators and entrepreneurs.<sup>3</sup> Despite the great power and insight of this observation, few economists, policymakers, or development agencies sufficiently valued the role of entrepreneurship in economic growth and development for the balance of the twentieth century. Only in the past decade or so has a number of important studies finally begun to lay bare not just the benefits of entrepreneurship but its actual workings<sup>4</sup> (See Suggestions for Further Reading.)

Still, much of what is said today about entrepreneurship remains partial, vague, or simply inaccurate. Many studies fail to make a distinction between the act of entrepreneurship and the enabling context in which it takes place. Many even fail to define entrepreneurship clearly, whether in its various forms or in contrast to related subjects like innovation or the economic role of small businesses. More importantly, cause and effect are often muddled. Even a well-known and well-regarded index like the Global Entrepreneurship Monitor, rigorously developed by Babson College and the London Business School, fails to distinguish between different kinds of entrepreneurship or to say anything about its causes rather than the degree to which it happens to be taking place in various parts of the world. Other studies rely purely on anecdotal evidence. On the prescriptive side, recommendations for the promotion of entrepreneurship tend to be generic nostrums based on a few outstanding success stories like Silicon Valley or Boston’s Route 128. These examples are rightly celebrated, but their

## ROAD TO RICHES

Entrepreneurship provides one of the surest paths to a growing, vital economy and long-term prosperity.

particular and exceptional features are not widely understood. Too often regions with no hope of replicating these success stories nonetheless doggedly set out to do so.<sup>5</sup>

Controversy and confusion in the study and promotion of entrepreneurship is understandable given its varied and complex nature. The purpose of this report is to identify key factors and sensible strategies within that complexity. A preliminary step, however, is simply to define the term with care.

At the broadest level, entrepreneurship is the creation and operation of new enterprises,<sup>6</sup> often through the recognition of new opportunities or gaps in the existing market. Part of the obstacle in coming to a more rigorous understanding of entrepreneurship is that this definition can stand for a wide range of economic activities, from self-employment due to personal preference or the lack of alternatives (so-called “necessity” entrepreneurship); to “microentrepreneurship” involving the

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launch of household businesses; to small firms that find a niche and do not expand beyond it; to the creation of high-growth and high-potential companies.

Entrepreneurship matters in all its forms, from the housewife who obtains a sewing machine and takes on work to support her family; to the small businesses that form the backbone of many local economies; to the Microsofts and Googles of this world. Never-

theless, promoting each kind of entrepreneurship requires different policies and strategies. This report is focused primarily on the environment for high-growth entrepreneurship. The policies it studies and recommends are geared to promote the kind of entrepreneurship that radically transforms industries and economies, creating significant potential for profits, jobs, and prosperity.



## The Benefits of Entrepreneurship

Many of the hopes societies once placed on state stewardship of the economy or on the role of large corporations are giving way to a belief in the benefits of entrepreneurship. This belief is justified. The capacity of governments to support entrepreneurs, or simply to stay out of their way, has played an essential role in many of the development success stories of the past fifty years. This is true whether one considers the remarkable rise in productivity experienced by the United States over the last two decades; the global rise of India and China; or a spate of smaller economic miracles like Israel, Singapore, and Taiwan.

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The benefits of entrepreneurship are vast and sort into three categories: economic, social, and political. These categories are interrelated and overlapping, but they are useful nonetheless in mapping the full range and extent of entrepreneurship's positive impact on communities and societies.

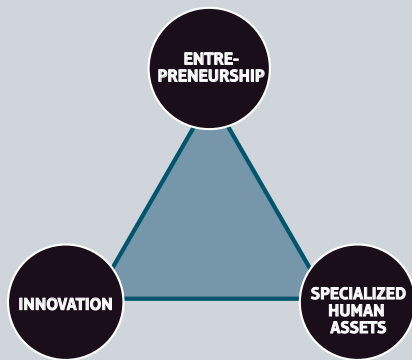
### Economic Benefits

Most attention devoted to entrepreneurship focuses on its economic benefits, and in particular on the relationship between entrepreneurship and growth.<sup>7</sup> The literature on this subject is extensive and convincing. Studies have repeatedly shown, for example, that small and medium sized enterprises generate a majority of new jobs while big companies periodically shed them.<sup>8</sup>

By creating new companies, providing employment, and opening up entirely new markets, entrepreneurship is a powerful driver of economic growth. But it is even more important than that. Entrepreneurship is also one of three principal sources of economic competitiveness, meaning the capacity to produce sustained increases in productivity leading to high and rising levels of prosperity. (See sidebar on The Triangle of Competitiveness.)

## THE TRIANGLE OF COMPETITIVENESS

Entrepreneurship, Innovation, and Specialized Human Assets form the vertices of the Triangle of Competitiveness, a triad of interrelated, mutually reinforcing factors allowing the regions that possess them to achieve high, sustainable levels of productivity and prosperity.<sup>9</sup>



Entrepreneurship has already been defined. **Innovation** in this context means the successful commercialization of new ideas. It is distinct from invention, which develops new ideas but does not necessarily take them to market, and it extends beyond products and services to include changes in business models and processes. Specialized Human Assets are individuals with specific training, abilities, and characteristics that enable them to thrive in organizations and make them more competitive. They may encompass a wide range

of talent, from scientists and engineers, to capable managers and business service providers, to a sufficient pool of skilled and knowledgeable workers. Specialized Human Assets stand in contrast to low-cost, unspecialized workers who can always be replaced by hiring farther down the road or across the sea.

These three factors are especially critical for advanced, knowledge-based economies, but they are also proving crucial to developing countries as they undertake production of higher-value goods and services.

As illustrated in the Triangle, the importance of Entrepreneurship lies in both a direct and a mediated contribution to economic competitiveness. On the one hand, new entrants have a direct impact on the general level of economic competition in the market, constantly pushing both themselves and already established firms to strive for greater value and productivity. At the same time, Entrepreneurship combines in a mutually reinforcing manner with Innovation and Specialized Human Assets, simultaneously feeding off them and enabling their development. The end result is a more competitive economy, leading to a sustained and rising standard of living.

In the modern global economy, the basis of competitiveness is shifting from traditional assets like land, labor, and capital, toward knowledge assets and human assets. Entrepreneurship plays a critical role in developing the potential of all these types of assets by creating new companies, commercializing new forms of knowledge, and fostering the development of new skills and capabilities. Entrepreneurial ventures are quicker to discover and pursue opportunities. When they succeed, they revolutionize markets. When they fail, they still play a critical role by keeping incumbents under constant competitive pressure and thus stimulating progress. Over time, entrepreneurship becomes the principal mechanism through which economies evolve and regenerate. Both developed and developing economies would stagnate without it.

One of the main ways in which entrepreneurship makes economies more competitive is as a primary driver of commercial innovation.<sup>10</sup> Of course, not all entrepreneurship is innovative, and not all innovation is produced by entrepreneurs. However, entrepreneurs have a better track record than established companies when it comes to introducing path-breaking products and services.<sup>11</sup> Microsoft saw opportunities that IBM ignored, and then missed opportunities that Google seized. Statistical studies have shown that high-growth startups have a positive impact on knowledge spillovers in the economy, and that even moderately successful entrepreneurial firms seem to have a greater capacity to innovate than other businesses.

In addition to the net positive effect on innovation levels, entrepreneurs appear to operate more efficiently than their larger counterparts. Despite investing comparable amounts towards innovation, entrepreneurs seem to produce higher quality innovations with greater efficiency than more established firms.<sup>12</sup> In sum, entrepreneurship creates innovation, which drives productivity improvements.

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In the end, the economic competitiveness of nations and regions is a function of the companies within them.<sup>13</sup> It is companies, rather than countries, that compete in the modern global marketplace, and it is companies that by succeeding create the conditions for a high and rising standard of living. This means that **helping create new companies is one of the most important things a government can do to ensure a competitive economy.**

### Social Benefits

Entrepreneurship has three principal social benefits. First, it provides a pathway to advancement based on merit, as opposed to family, ethnicity, social class, or other factors that often impede social mobility and spread discontent. As such, it provides hope and inspiration to people even in desperate economic straits.

Second, entrepreneurship helps to assimilate immigrant and marginal populations. This is true not only of very diverse societies such as the United States, which was built literally by immigrant entrepreneurs, but also, increasingly, across the developed world, where immigrant populations are growing rapidly.

Third, entrepreneurship encourages the development of new and valuable attitudes, skills, and capabilities. Entrepreneurial firms typically demand and reward creativity and resourcefulness in their employees—qualities inherently and increasingly valuable in the global economy. By opening up new fields of endeavor, such firms also introduce novel sets of skills into the economy. In India, for instance, the rise of companies like Wipro and Infosys has led to significant growth in the number of programmers and other IT professionals, with profound implications for other Indian companies and educational institutions. Entrepreneurial firms, particularly those with global aspirations, also have pioneered advances in operations and logistics as well as in sales, marketing, and customer service. In short, successful entrepreneurial firms typically organize work in new ways, and in the process transform employees into more valuable and productive citizens.

## Political Benefits

While the economic benefits of entrepreneurship are increasingly well documented, its political ramifications receive far less attention than they should.<sup>14</sup> In fact, entrepreneurship is a powerful, rarely acknowledged source of security and stability.

Indirectly, entrepreneurship creates a safer society through the economic and social benefits already noted. For example, by contributing to the general level of prosperity, entrepreneurship helps start or accelerate a virtuous cycle where economic well-being creates security that in turn produces more prosperity. To some extent this cycle would operate regardless of the specific way in which wealth is generated. But here is where the social benefits of entrepreneurship become relevant. When an economy rests on too narrow a base, it may leave out too many people and create disenfranchised minorities. Entrepreneurship, by contrast, is meritocratic, rewarding talent and initiative rather than status or connections. This means it is an ideal path for the integration of minorities and communities that would otherwise be blocked by class or ethnic barriers.

The argument is often made that globalization makes wars between states less likely by reinforcing cross-national interests. Thomas Friedman phrased this as the principle that no two countries with a McDonald's will go to war with each other.<sup>15</sup> But even if it turns out to be true that multinational corporations deter international wars, that does not mean they can prevent the wars that violent factions wage against their own societies, or the world at large. For the youth of the Middle East, Asia, Africa and Latin America, flipping burgers will not be enough. Entrepreneurship creates jobs for local people, rewards merit, integrates immigrant and marginal communities into the socioeconomic fabric, and over time establishes cross-border relationships. It opens doors and gives a broader sector of the population a stake in the economy, and thus, as well, in its ongoing and peaceful functioning.

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# Environments for Entrepreneurship



**BY ITS VERY NATURE,** entrepreneurship is an economic choice requiring immense individual agency. No one had to tell Bill Gates to start Microsoft. At the same time, it is no coincidence that Microsoft was created in the United States. The economic, technological, legal, and cultural environment in which entrepreneurs operate makes an enormous difference, often determining their original decision to start a new business as well as their subsequent chances of success. While entrepreneurship can not be conjured out of thin air by decree, the conditions that make it possible can be directly influenced by the agency of policymakers, companies, industry associations, universities, not-for-profits, and many other organizations.

Policymakers can play a significant role in fostering entrepreneurship at various levels. Some of the key policy levers are found at the national level, others are local, and most have aspects of both. Central governments, for instance, influence everything from national taxes, to laws on financing and bankruptcy, to the proper functioning of stock markets. Other factors, like the availability of a local pool of talented workers, managers, and professional service providers, are influenced at the regional and municipal levels. In many areas, however, national and local policy initiatives overlap. Education, R&D, and infrastructure can be funded at both levels. The basic laws for bank loans to small businesses are set at the national level, but the willingness of local banks to lend varies greatly by region. In cases where the national and local levels of entrepreneurship policy interact, an integrated, cooperative approach is needed.

### **BANGALORE, INDIA**

By acting as hubs of entrepreneurship, cities like Bangalore can change the economic destiny of regions and nations, especially when government policy supports—or does not impede—entrepreneurial activity

Entrepreneurship does not take place in a void, at random, or under the general influence of homogeneous macroeconomic conditions. It occurs in specific places that create the right conditions for it, and within the context of a particular set of incentives, opportunities, and barriers. Indeed, the need to shape and influence the entrepreneurial environment has become increasingly evident to a growing number of policymakers worldwide. Promoting entrepreneurship has risen to the top of the economic agenda at all levels of government in many countries, from high-level mandates like the European Union's Lisbon agenda,<sup>16</sup> to a shift in regional development strategies away from "smokestack chasing." Instead of attracting a few big firms through tax incentives, which is a precarious and easily imitable strategy, many regions now favor approaches based on fostering local clusters of innovation and entrepreneurship.

### **Countries, Regions, and Cities: Defining Spheres of Action for Entrepreneurship Policy**

Much high-level thought on entrepreneurship takes place at the country level. Comparisons are made between the entrepreneurial environment in the United States and Europe, or India and China. This makes sense, insofar as national policies often determine the resources available to entrepreneurs, as well as the barriers and opportunities, risks and rewards they encounter. At the same time, entrepreneurship is a profoundly local phenomenon. It occurs at the level of cities and of sub-national economic regions.<sup>17</sup>

Even in cases where policy measures are taken at the national level, their real impact is often regionally determined. The legislation that allowed American pension funds to invest in venture capital created a fresh source of financing for entrepreneurs throughout the country, but had a disproportionate impact in high-technology regions. Basic research and development may be funded at the national level, but its commercialization can take place under regulation by states



and provinces. Determining where the responsibilities and opportunities lie for promoting entrepreneurship is a crucial first step in finding better strategies for achieving it.

### Entrepreneurship and Regional Clusters

One important reason to study entrepreneurship at a regional or municipal level is the relationship between entrepreneurs and industry clusters. These are geographically proximate groups of interconnected companies and associated institutions, linked by customer, supplier, and other relationships. Well-known examples would be London in financial services, Bavaria in automobiles, the north of Italy in fashion, Bangalore in software and business outsourcing, or Hollywood in film-making. Clusters make for more productive, innovative companies, and are the foundations of national economic competitiveness.<sup>18</sup> If helping create new companies is among the most important things a government can do to raise the standard of living over time, helping these companies connect and form clusters is a close second.

The relationship between clusters and entrepreneurship is symbiotic and runs both ways. On the one hand, gifted entrepreneurs can singlehandedly create new clusters from scratch. There was no software cluster in Seattle before Bill Gates, just as there had been no aircraft and defense cluster before William Boeing.

Once a cluster forms, the industries that constitute it become mutually reinforcing. Information flows freely, specialized human assets are developed within the cluster or flock to it from other regions, and the region becomes a repository of specialized expertise, technology, and institutions. All of this creates an environment ripe for entrepreneurship, as individuals working within the cluster become aware of market needs and opportunities, find sources of funding, and hire local managers

Determining where the responsibilities and opportunities for promoting entrepreneurship lie is a crucial first step in finding better strategies for achieving it.

and workers. Globalization may have made the world flatter, and technology may have made it smaller, but personal interaction and physical proximity continue to determine how new companies and industries form.

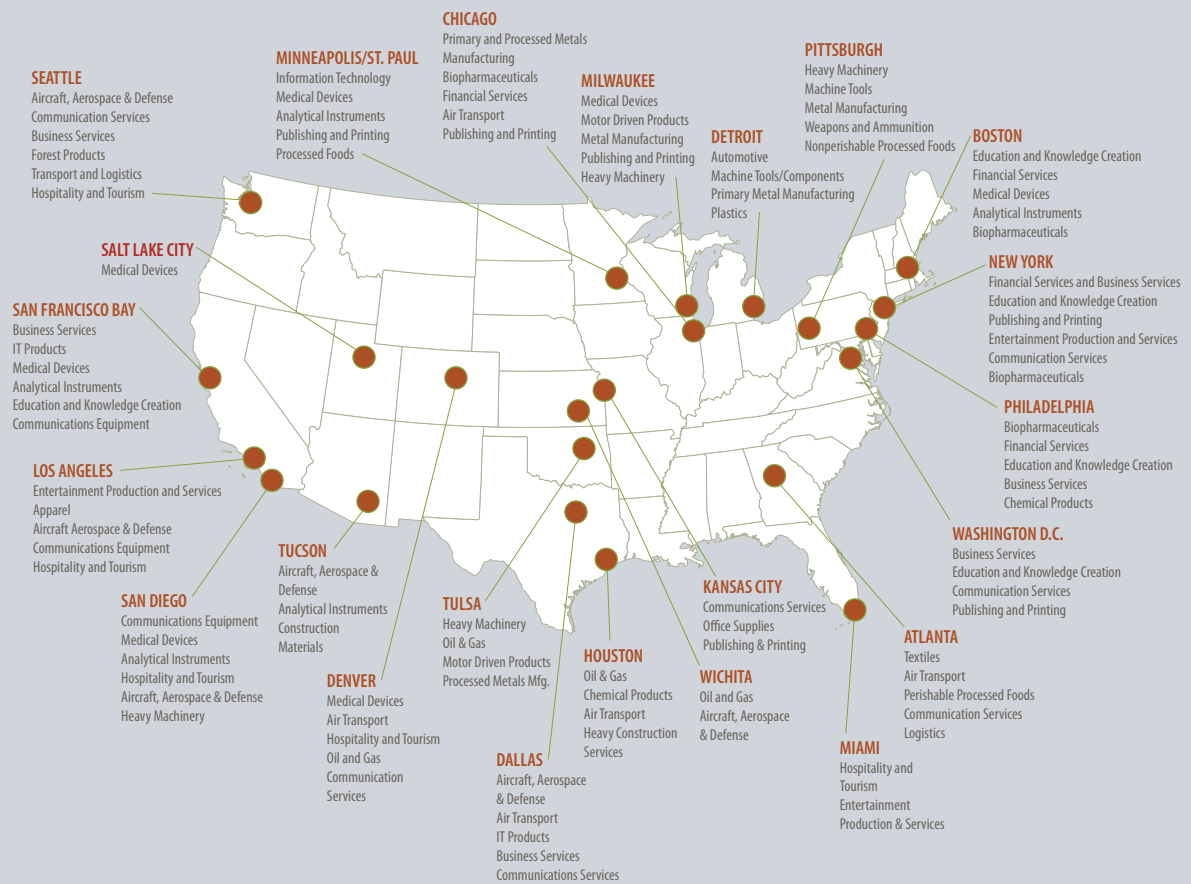
However entrepreneurship is measured, whether by the growth in business establishments over time, the amount of startup capital invested, or more detailed figures on the creation of fast-growing, industry-specific companies, some of the most meaningful data will be found at the level of regions and cities. Cities, in particular, are crucial to the formation of clusters and entrepreneurship

**Cities, in particular, are crucial to the formation of clusters and entrepreneurship because they act as natural poles for the aggregation of people, knowledge, and industry.**

because they act as natural poles for the aggregation of people, knowledge, and industry.<sup>19</sup> This was true of Florence in the fourteenth century (with clusters in textiles and leather goods), of Sheffield and Solingen in the nineteenth (cutlery and weaponry), and of New York, Sao Paulo, London, Bangalore, and Shanghai in the twenty-first.

It has long been evident that some regions develop into hotbeds of entrepreneurship, while others languish. Even in countries that favor big business or a state-guided economy at the national level, certain areas manage to retain a competitive edge by fostering entrepreneurs. Silicon Valley is to the rural south of the United States as Catalonia is to Andalusia, the Piedmont to the Mezzogiorno, Bangalore to Orissa, or the cities of coastal China to the interior. A study of clusters begins to unveil the reasons why this is so, and to map the existing industrial base out of which new businesses and clusters are likely to arise.

**GROUNDS FOR ENTREPRENEURSHIP: SAMPLE U.S. CLUSTERS IN SELECTED ECONOMIC AREAS**



Note: Clusters included are significantly large with disproportionately high 2006 employment compared to the U.S. Economic areas were selected to illustrate the role of cities in promoting competitive industry clusters. Source: Monitor Regional Competitiveness Cluster Mapping Dataset 2008; Monitor Analysis.

## CASE STUDY: ENTREPRENEURSHIP IN THE SAN DIEGO AREA

The greater San Diego area provides a good example of how entrepreneurship can flourish when policymakers create incentives and opportunities. San Diego illustrates the mutually reinforcing relationship between entrepreneurship and industrial clusters, as well as the cooperative role that national and local governments can play.<sup>20</sup> While policy cannot give rise to entrepreneurship by fiat, it can gradually and actively shape the right environment for it to occur.

In its earliest days, San Diego primarily attracted agricultural and marine industries, as well as tourism. The economy that developed based on these industries was narrow and only modestly prosperous. The local government, however, worked to attract two types of institutions that proved critical to the economic future of the city: the first were military, the second research-based and academic.

### The Role of the Military

In 1908, Theodore Roosevelt visited San Diego and was persuaded to open a naval

base once the city agreed to dredge the harbor. The U.S. Representative from San Diego lobbied for military installations and succeeded in bringing a Navy Training Center, Camp Pendleton, and the Naval Air Station in North Island. In each case, the city accommodated by providing land and other incentives. The home-porting of the Third Fleet in San Diego led to the development of the naval laboratory that went on to become the Space and Naval Warfare Systems Command – SPAWAR. The laboratory created a research community focused on government and Department of Defense priorities. This attracted talented scientists, who made important advances in communications technology. Many went on to start companies like Linkabit and Qualcomm, which over the years gave rise to other firms. At the same time, large defense companies attracted to the area by the military presence also generated spin-offs. For example, General Dynamics created General Atomics, a division focused on developing peaceful uses for nuclear energy. Subsequently, Robert Beyster left General Atomics to found Science Applications Investment Corp. (SAIC), now one of the nation's

leading technology consulting organizations. In the 1990s, the end of the Cold War and the downsizing of the military left many defense engineers and managers out of a job, which led many of them to start their own businesses. Soon, San Diego could boast clusters in transportation and logistics, communications, analytical devices, IT, aerospace, and sporting goods.

the CONNECT San Diego program. This led to the rise of clusters in biotechnology, pharmaceuticals, medical devices, and education and knowledge creation.

By pursuing sustained, coordinated policies to encourage specific industries and the entrepreneurial companies they spawned, San Diego launched itself on a path to ongoing growth and renewal.

### The Role of Research Institutions

In the late 1950s and early 1960s, three major research institutions were established in San Diego: the Scripps Research Institute, the Salk Institute (for which the city zoned and donated land), and the University of California at San Diego, which was founded as the result of a campaign organized by SAIC and General Atomics. The city became a national center for R&D in bio-science and oceanography, attracting further world-class institutions that gave impetus to entrepreneurship as basic research was commercialized. Over time, these institutions went beyond biotechnology and began to interact with local industry, in part through university-led efforts like

# The Policy Labyrinth



**POLICYMAKERS LOOKING FOR WAYS TO CREATE** a more welcoming environment for entrepreneurship have recourse to a wide range of alternatives. In fact, that is precisely the problem: not a dearth but an overabundance of options. The table on the following pages presents a sample of possible measures advocated recently in an already vast and rapidly growing literature on entrepreneurship.

So many factors affect whether people become entrepreneurs, and their odds of success, that governments find it hard to determine where to intervene or how. Should they create investment funds? Facilitate bank loans to small businesses? Increase the number of R&D facilities? Lower taxes on stock options? Educate people on the benefits of entrepreneurship? The possibilities are endless, which is to say of little use and little impact, if not ranked by priority and coordinated. As books, journals, and reports on entrepreneurship multiply, “solutions” proliferate to the point where they completely obstruct any clear course of action.

One problem with current agendas for the promotion of entrepreneurship, as illustrated by the table on the next page, is that they make it almost impossible to set priorities, identify the few key areas that are likely to yield the greatest returns, and address them through a series of targeted policies. The challenge is to identify the right measures in the right sequence. A second, related problem is that too many regions default to generic, ready-made strategies like incubators, science parks, or venture capital funds. Knowingly or unknowingly, they equate entrepreneurship

#### **WHICH WAY TO ENTREPRENEURSHIP?**

There are many paths to a more entrepreneurial environment, but policymakers must know how to choose the best one.

with the Silicon Valley model and pay little heed to local conditions. This approach usually assumes absent resources (e.g., a world-class research university nearby) and neglects local strengths, like existing industrial clusters that could provide a feasible base for new ventures.

### **POLICIES TO SHAPE THE ENTREPRENEURIAL ENVIRONMENT: Too Much to Do, Often with Too Little Impact**

#### **Improving Access to Capital**

- Establish community or regional investment funds tied to local funding campaigns
- Establish minimum small business lending thresholds for banks and lending institutions
- Create angel funding networks
- Allow indirect personal contributions to seed funding (e.g., through pensions)
- Establish government subsidies or loans for new and growing firms
- Establish a centralized organization to advise entrepreneurs on available financing options and strategies
- Streamline listing regulations for growing firms seeking to raise public funds
- Streamline regulatory barriers to mergers and buy-outs
- Establish organizations to facilitate firm buy-outs
- Ensure lending policies are no more stringent for new and growing firms than for established companies

#### **Developing and Attracting Specialized Human Assets**

- Create an entrepreneurship curriculum for primary and secondary schools
- Create university courses and programs on entrepreneurship, as well as distance-learning partnerships
- Establish and support entrepreneurship programs for mid-career professionals
- Support endowment giving to increase the number and size of local colleges and universities
- Set up co-op and internship programs at entrepreneurial firms
- Provide greater access to post-secondary schooling through scholarships, awards, or executive sabbaticals for promising individuals
- Set up a regular talent scan in schools, colleges and industry for high-potential and serial entrepreneurs
- Set up mentorship and apprenticeship programs for high-potential individuals
- Support new venture competitions
- Recruit strategic talent to a region by offering relocation assistance and other forms of aid



## **POLICIES TO SHAPE THE ENTREPRENEURIAL ENVIRONMENT: Too Much to Do, Often with Too Little Impact**

### **Assistance and Support to New Businesses**

- Increase the number, variety, and quality of business support services to fill the needs of new and growing firms
- Offer discounts, grants and matching funds to ensure the availability of affordable support
- Set up a centralized agency for all support services and government programs
- Increase the number and size of incubators, and offer specialized ones for different types of desirable firms
- Create business associations
- Appoint an ombudsman to advocate for the needs of startups (e.g., an Entrepreneurship Advocacy Office)
- Provide incentives for spin-offs from research institutions and anchor firms

### **Promoting the Commercial Application of Technology**

- Increase the number and size of specialized R&D facilities
- Establish joint or shared R&D facilities that bring together universities, companies, and the public sector
- Provide grants and financing plans for scientific equipment
- Establish formal technology transfer mechanisms to capture knowledge spillovers
- Provide incentives for colleges, government research centers and anchor firms to make their technology available to new and growing firms for commercialization
- Subsidize new and growing firms seeking to acquire or develop the latest technology
- Increase the number, variety, and quality of business support services to fill the needs of new and growing firms

### **Improving the Infrastructure**

- Upgrade the physical infrastructure (transportation, utilities, telecommunications) to support new and growing firms
- Offer subsidies such that the cost of accessing infrastructure is not prohibitive

### **Creating Legal and Fiscal Incentives**

- Review personal income tax levels to ensure individuals are not discouraged from starting or growing firms
- Provide personal tax and health insurance breaks for entrepreneurs
- Ensure that business taxes have a similar effect for new, growing, and established firms
- Establish tax policies that do not interfere with the launch or growth of new ventures
- Provide tax incentives for R&D and its commercial application
- Strengthen intellectual property rights
- Provide legislative incentives for the use of stock options
- Ensure that stock options laws apply equally to new, growing and established firms
- Ensure that competition laws treat all firms equally, and prevent established companies from blocking new entrants to the market

### POLICIES TO SHAPE THE ENTREPRENEURIAL ENVIRONMENT: Too Much to Do, Often with Too Little Impact

#### Easing the Administrative Burden on Startups

- Refine regulations to ensure that they do not interfere with the startup process, and that they apply to new and existing firms in a predictable way
- Refine government procurement policies so that they apply equally to new and established firms
- Ensure that labor regulations do not discourage hiring of either small or large numbers of employees
- Ensure that the administrative cost of compliance with government regulations does not unfairly burden new firms
- Streamline the number of required licenses and permits to reduce the time and complexity of starting a business
- Establish a “Small Business Clause” or a “Startup Clause” when considering future administrative requirements
- Provide support for business tax filing

#### Fostering an Entrepreneurial Mindset

- Dedicate a regular media column or publication to profile successful and high-potential entrepreneurs
- Sponsor conferences, workshops and business case competitions in conjunction with business associations and networking organizations
- Establish entrepreneurship awards, research grants and scholarship programs
- Create a regional publicity campaign to attract innovative and entrepreneurial individuals
- Support regional enhancements and initiatives like parks, entertainment complexes, or affordable pre-school education to attract diverse, young people and families
- Lower the social and reputational stigma of failure

Any effective attempt to shape the entrepreneurial environment requires two steps:

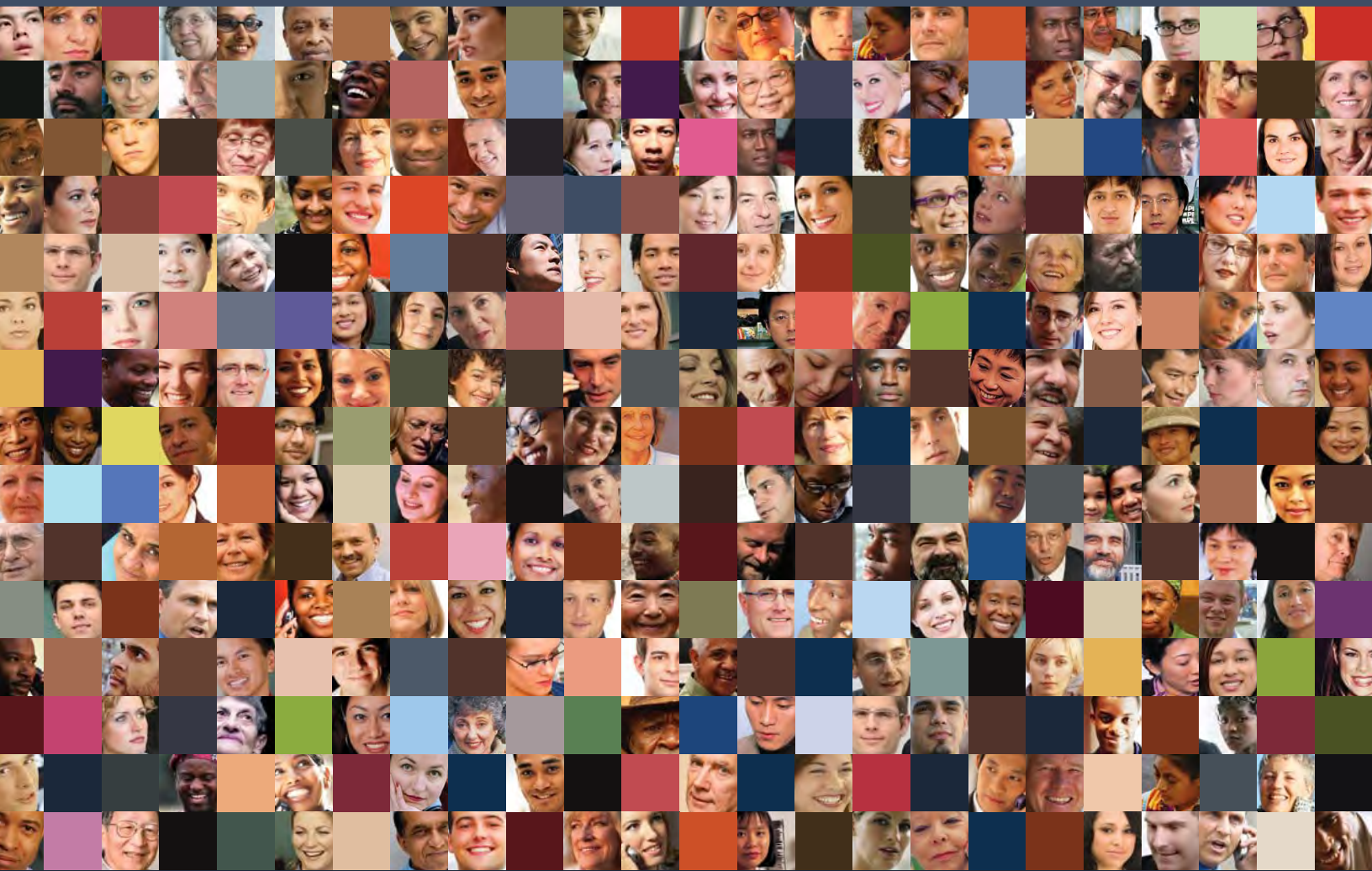
- First, it requires that policymakers gather **better information**, enabling a detailed understanding of the strengths and weaknesses of a particular entrepreneurial environment. What exactly is missing? Is it financing, human assets, certain kinds of specialized business services, or something else? The answers to these questions should come directly from entrepreneurs and those who work closely with them, like investors, bankers, lawyers, industry associations, and government officials.
- Subsequently, it requires that policymakers craft a **better strategy**. Some weaknesses in the entrepreneurial environment matter more

than others, and even after identifying those that matter most, you still face the problem of supplying the missing factors. Instead of trying to become the next Silicon Valley, regions should pursue locally relevant strategies. Entrepreneurship is more likely to emerge and become sustainable if it can draw its human, financial, intellectual, and material resources from an already existing base.

The aim of Monitor's research on entrepreneurship is to address the need for both data and strategic focus. From an information-gathering perspective, Monitor has created and deployed a series of **survey instruments allowing regions to determine the major hurdles affecting their entrepreneurs**. The centerpiece of this effort is the Monitor Entrepreneurship Benchmarking Survey, a comprehensive, statistically rigorous survey of entrepreneurial conditions that was originally developed in collaboration with various international experts in 2003.<sup>21</sup> The Survey, which functions as a highly detailed diagnostic tool, is based on a model of entrepreneurial policy drivers that tracks critical factors in seven key areas: Financing, Skills and Talent, Technology and Infrastructure, Support Services, Legislation, Administrative Burdens, and Mindset. Respondents include actual entrepreneurs and others with first-hand knowledge of their needs.

At the same time, Monitor has developed **strategies for entrepreneurship based on an understanding of how it actually takes place within specific industrial and economic contexts**. In particular, four models of entrepreneurship have emerged from Monitor's extensive work on industrial clusters and regional economic development. One of the main objectives of this report is to show that powerful alternatives exist to the well known paradigm of venture-backed, university-sourced, high-tech entrepreneurship. While two regions may face identical weaknesses in their entrepreneurial environment, they may profit from entirely different strategies based on the local economic conditions and industrial structure.

# Ask the Entrepreneurs



**ENTREPRENEURSHIP ARISES** from a confluence of factors. Some are individual, like the personality, intellectual capacity, heritage, and life situation of particular entrepreneurs. Others are contextual, like the general availability of business services, qualified managers and employees, or sources of funding. Regions wishing to promote entrepreneurship cannot rely on the agency of a few entrepreneurial individuals, but must reduce barriers and raise incentives overall. This requires that they be able to identify which aspects of the environment are most in need of change.

To address this need, Monitor and various international experts developed the Monitor Entrepreneurship Benchmarking Survey, a survey instrument that measures all the essential conditions for entrepreneurship within a given country or region.<sup>22</sup> By asking entrepreneurs, investors, business service providers, and government officials to rate the availability of financing, ideas, talent, and other important environmental factors, the Survey provides policymakers with a tool to diagnose critical areas for improvement. These responses can also be correlated through statistical regressions to regional entrepreneurship performance,<sup>23</sup> providing an objective measure of the impact of each factor on actual levels of new business formation.

Five qualities differentiate the Monitor Entrepreneurship Benchmarking Survey:

- It gains its insights directly from entrepreneurs, and those who work closely with them.

#### THEY KNOW!

First-hand knowledge of the most critical resources in an entrepreneurial environment — those present and those lacking — can only come from entrepreneurs themselves and those who work closely with them.

- Unlike other entrepreneurship indicators, it measures the causes of entrepreneurship rather than merely the rate at which it is taking place.
- It is global in scope. Most thinking on entrepreneurship tends to focus on Western Europe and the United States, with some outlying cases like Singapore or Israel considered as well. Monitor aims to identify the factors that assist or hinder entrepreneurs across most regions of the world.
- It is practical and comprehensive, identifying the actual binding constraints in the entrepreneurial environment rather than giving equal importance to all desirable factors.
- It is statistically rigorous.

To date, the Monitor Entrepreneurship Benchmarking Survey has been **deployed in 22 countries**, in North America, Europe, Asia, and the Middle East, as well as in different stages of economic development.<sup>24</sup> This allows for useful benchmarking and comparison across countries, enabling nations not just to detect the strengths and weaknesses of their entrepreneurial environments, but to know who are the top performers and what might be learned from them. The Survey continues to be expanded, both horizontally, by incorporating new countries, and vertically, by descending into greater levels of regional detail.

While some results from the Monitor Entrepreneurship Benchmarking Survey are preliminary and will serve as points of departure for further research, they have already begun to shed light on some of the main obstacles to new business formation around the world.

**Results from the Survey so far contradict in significant ways the conventional wisdom regarding entrepreneurship.** First, they suggest that some of the most frequently recommended policy measures for the promotion of entre-

## KEY AREAS MEASURED IN THE MONITOR ENTREPRENEURSHIP BENCHMARKING SURVEY

To give a comprehensive picture of the entrepreneurial environment, the Monitor Entrepreneurship Benchmarking Survey measures 31 factors in seven key areas. The Survey gauges these areas through 120 short statements that are evaluated using a 5 point scale ranging from “strongly agree” to “strongly disagree.” The Survey targets entrepreneurs and small business owners, as well as leaders in business and the public sector with a direct understanding of the challenges affecting local entrepreneurs.

The policy areas measured in the Survey fall under different national and local jurisdictions. Some will be exclusively or primarily influenced at the national level, like bankruptcy law, or rules regulating IPOs and the use of stock options. Others are primarily areas for local intervention, like the development of skilled managers or the supply of business services to entrepreneurs. All levels of government have a role to play in shaping the environment for entrepreneurship.

- **Financing** — This section of the Survey measures the availability of funds for new ventures. It asks questions regarding the sufficiency and availability of debt and equity financing at all stages of company formation; the use of other financing strategies for startups; and the availability of exit strategies like IPOs and buy-outs allowing entrepreneurs and investors to capitalize on their success.
- **Skills and Talent** — This component gauges whether specialized human assets are being developed in the region, from entrepreneurs, to managers, to workers. It asks about the quality of the workforce, the availability of skilled managers for new and growing businesses, and whether entrepreneurship and entrepreneurial skills are taught at various educational levels, from primary and secondary school.
- **Technology and Infrastructure** — Measures the adequacy of physical and technological infrastructure

(transportation, utilities, telecommunications, R&D equipment and facilities), as well as whether it is cost-accessible to startups.

- **Support Services** — Gauges the quality and availability of business support services, including: 1) professional service firms in accounting, law, consulting, and other disciplines; 2) government support programs; 3) formal and informal business networks and organizations; 4) incubators; 5) programs helping new companies commercialize research developed by universities and government research centers.
- **Legislation** – Evaluates the legal environment for entrepreneurship, including taxes, the use of stock options, and the openness of markets to competition.
- **Administrative Burdens** – Evaluates the regulatory environment for entrepreneurship, to assess whether permits, registration, and other bureaucratic requirements interfere with new business creation.
- **Mindset** – Measures the levels of entrepreneurial values, attitudes, and motivations in a particular environment, as defined by legitimacy of entrepreneurship as a career path; the belief in individualism; attitudes towards personal wealth, taxes, and stock options; and the social stigma of bankruptcy and failure.



preneurship are less significant than commonly thought. In particular, the various country surveys indicate that, at least in advanced economies, incubators, venture capital funds, and administrative burdens are not nearly as important as they are usually made out to be.

If the Survey shows that conventional wisdom overvalues certain factors, it also shows that it fails to place sufficient emphasis on others. In particular, results point to a small set of factors that seem to be far more significant than previously thought. These include:

- Access to specific forms of equity financing for entrepreneurs. These include seed and angel investments for startups at their earliest stages; and then buy-outs and public listings at a more advanced stage, both to raise capital and to reward entrepreneurs for their success.
- The availability of tax credits and incentives for the commercialization of new technologies.
- The preponderance of an entrepreneurial mindset in the population, as defined by specific values and dispositions like individualism, a belief in the legitimacy of entrepreneurship as a career choice, and the capacity to recover quickly and without excessive social stigma from a failed business attempt.
- The teaching of entrepreneurial skills and of an entrepreneurial mentality at all educational levels, from elementary school to university.

These results provide policymakers with some basic guidelines for action towards the promotion of entrepreneurship. Nevertheless, they can not be taken as a universal strategy. Each region is a unique environment, suffering from particular weaknesses and capable of calling on particular strengths.

For example, results indicate that while the climate for startups in Nordic countries benefits from a strong technological and physical infrastructure as well as considerable government support, it is hampered by relatively low levels of entrepreneurial motivations, caused in part by the social stigma associated with bankruptcy. Pro-

By determining what matters most, what matters moderately, and what does not matter at all in a particular environment, the Survey allows policymakers to establish meaningful priorities.

motoring the visibility and legitimacy of entrepreneurs, or investing in entrepreneurship education, are thus more pressing issues in these countries than increasing access to broadband or funding new R&D facilities.

By going deeper into the sub-components of the Survey, it is possible to identify with even greater specificity where the roadblocks to entrepreneurship lie. In China, results suggest that spin-offs, in particular, remain an underutilized strategy to promote entrepre-

neurship out of the existing industrial structure. In India, respondents perceive a challenge in the administrative burdens associated with starting a business, but report no difficulties in gaining access to capital. By determining what matters most, what matters moderately, and what does not matter at all in a particular environment, the Survey allows policymakers to establish meaningful priorities.

The Monitor Entrepreneurship Benchmarking Survey has yielded a wealth of data on the entrepreneurial conditions of each participating country. While these are too many and too diverse to be presented in full in this report, the following pages offer some of the key, high-level findings that obtained across most countries.

## Financing

While the importance of adequate sources of funding for entrepreneurship is obvious, it is not always clear which kind of financing is most necessary at a given time or in a particular environment. The Monitor Entrepreneurship Benchmarking Survey evaluates all the various possible sources of funding in a given region, as well as how accessible they are to entrepreneurs.

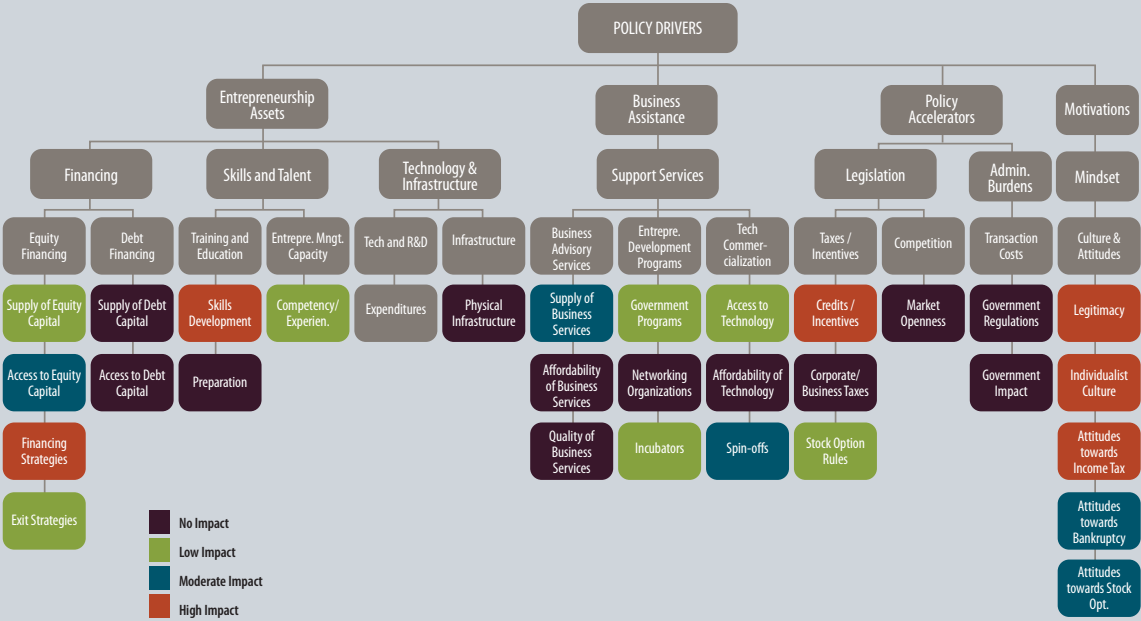
**WHICH POLICY AREAS HAVE THE GREATEST IMPACT ON ENTREPRENEURSHIP?**

Results from the Monitor Entrepreneurship Benchmarking Survey provide a picture of the strengths and weaknesses in the entrepreneurial environment, but do not immediately reveal which policy areas are likely to have the greatest impact when improved. Assuming weakness in several factors, where should policy-makers focus their efforts?

To answer this question, results from the Survey are statistically correlated with actual levels of entrepreneurial performance in the surveyed country or region. By correlating each component

of the Survey with performance figures, it is possible to determine its statistical fit with higher levels of entrepreneurial activity and thus its probable impact.<sup>25</sup>

The chart below displays all Survey components color-coded by their likely level of impact. It suggests, as discussed before, seven high-impact policy areas that emerged in all countries. Just as importantly, it points to areas—like debt capital, workforce preparation, or physical infrastructure—that would probably have little impact on entrepreneurship even if strengthened. The chart is based on aggregate Survey figures, and would differ for any particular country or region.



### ON WHICH POLICY AREAS SHOULD PARTICULAR REGIONS FOCUS?

Once policymakers identify the gaps in the entrepreneurial environment, and once they determine which of those gaps are in high-impact areas, they have the two pieces of information required to set an agenda for the promotion of entrepreneurship.

Consider the matrix below. The vertical axis measures the impact that specific policy areas are likely to have on actual levels of entrepreneurship, as determined by past statistical correlation. For instance, results from the Entrepreneurship Benchmarking Initiative Survey suggest that corporate taxes are weakly correlated with worldwide levels of entrepreneurship, which means that lowering corporate taxes would probably not lead to a significant number of new startups. “Financing Strategies,” on the other hand, show a strong correlation with entrepreneurial activity, suggesting that by helping create an efficient market for IPOs, policymakers would provide a significant incentive for entrepreneurs. The

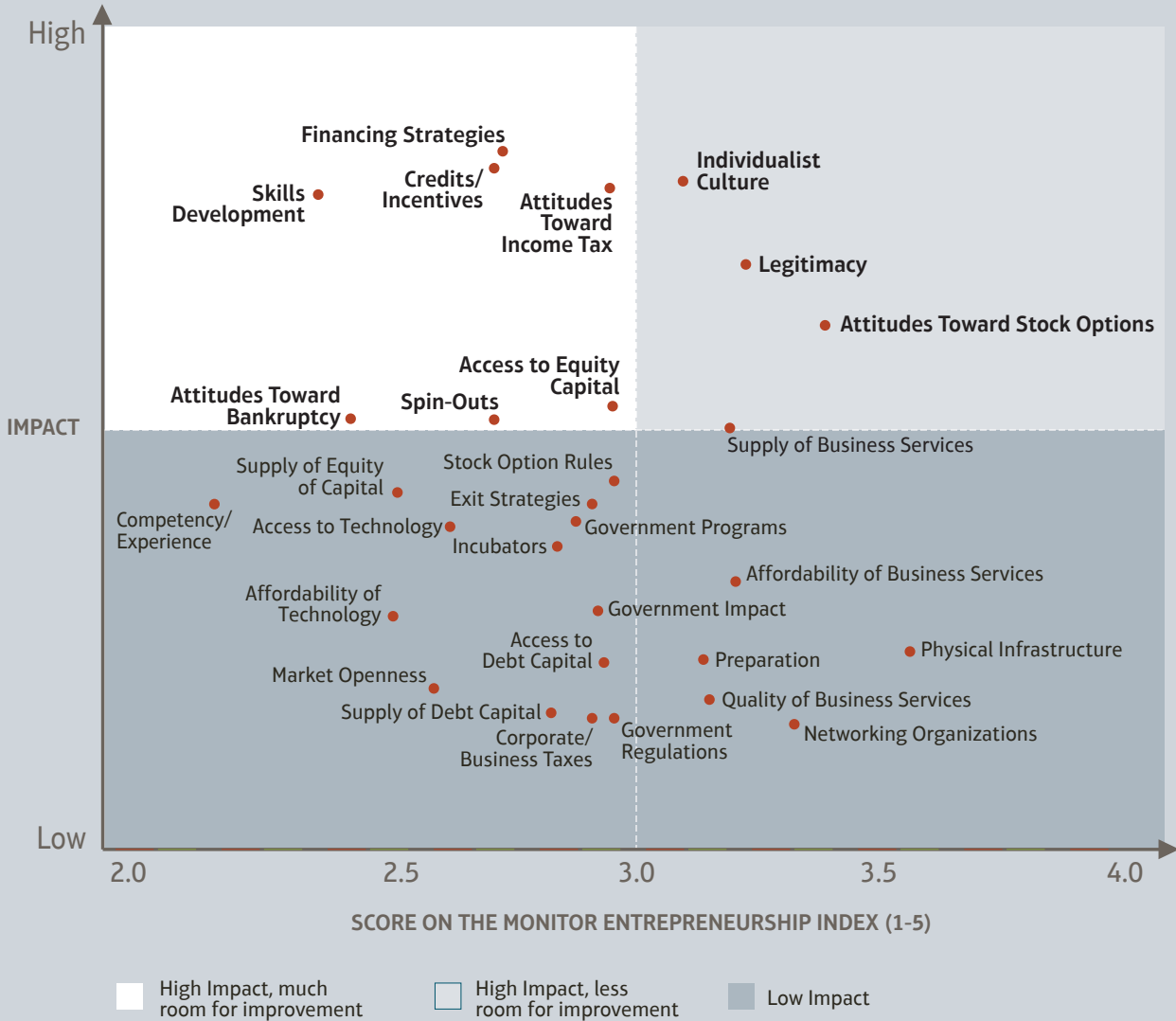
higher up in the chart, the more likely a policy area is likely to have an impact.

The horizontal axis measures the score that each policy area received in the Monitor Entrepreneurship Benchmarking Survey, out of a total possible score of 5. This gives a sense of how much room for improvement there is in that area. “Competency and Experience,” for instance, which measures the quality of the workforce, received an average score of 2.35, suggesting there is much room for improvement in that area. “Physical Infrastructure,” on the other hand, registered an average score of over 3.5, suggesting less room for improvement.

Policymakers should focus resources on areas that fall within the top left quadrant, as these are likely to be high-impact, and show significant room for improvement. Policy areas in the top right quadrant are also important, but will be harder to improve as they already score relatively high on the Survey. Areas in the bottom left quadrant are in need of improvement but

will probably have less of an impact on levels of entrepreneurship, while areas in the bottom right quadrant would be both

difficult to improve and ineffectual. The chart below shows aggregate values, and would vary by country or region.

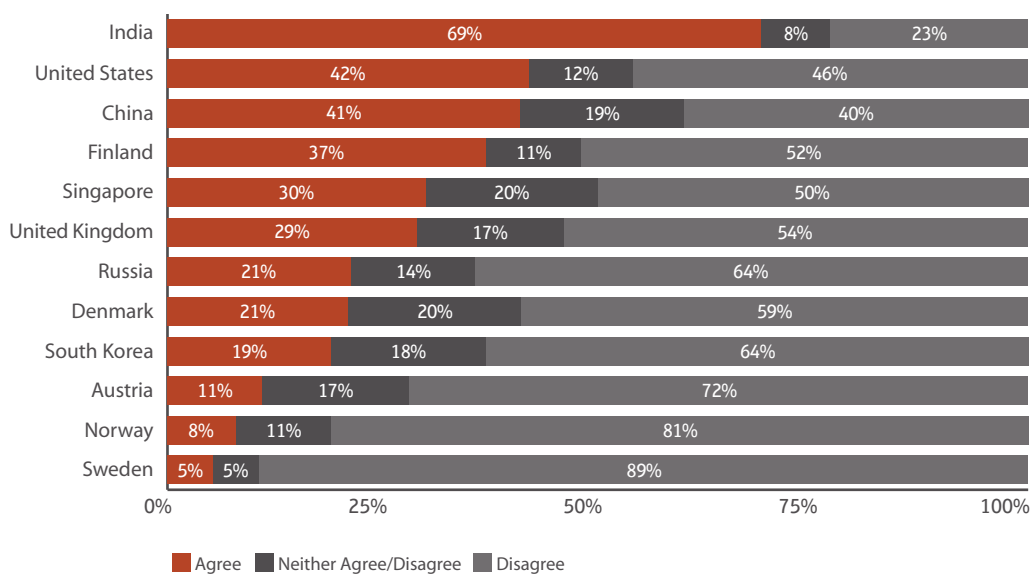


Results from the Survey suggest that equity financing has a much stronger correlation to entrepreneurial performance than debt financing. More specifically, they also suggest that venture capital is failing to cover a crucial financing gap at the earliest stages of the startup cycle.

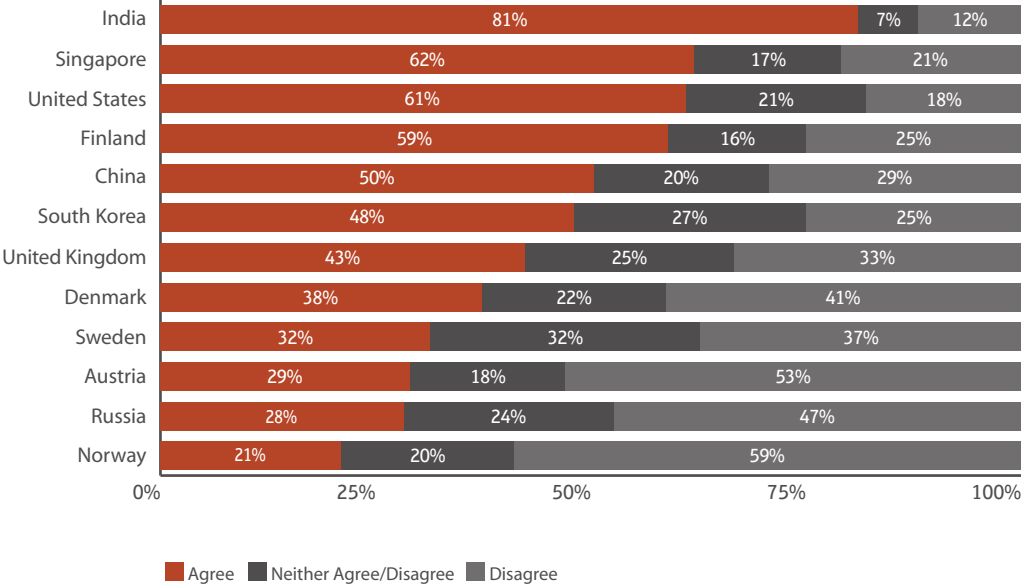
On average, 52% of respondents worldwide said there is a sufficient supply of equity capital for growing firms, but only 37% said there is a sufficient supply for *starting* them. This discrepancy is also apparent when respondents are asked about the availability of seed versus venture capital. In the United States, 45% of respondents say there is a sufficient supply of venture capital to grow high-risk firms, but only 32% think there is a sufficient supply of seed capital to start them.

Follow-up interviews confirm that while venture capital is reasonably available for companies that have already proved their viability, it remains much harder to obtain for a brand new business idea. This points to a critical need for robust networks of angel investors and other sources of seed capital at the regional level. While venture capital remains critical for the growth of new businesses, it is seed capital that ultimately determines whether they are formed in the first place.

#### There is a sufficient supply of equity capital for starting new firms



There is a sufficient supply of equity capital for growing firms



Just as important as early-stage funding for startups is the availability of financing strategies further along, once a company has achieved a certain degree of success and is ready to jump to the next level. Indeed, the category of the Survey that covers financing strategies like public listings, mergers, and buy-outs, showed a high statistical correlation with actual levels of entrepreneurship worldwide.

South Korea, India, and Singapore are the leaders in this area, with 61%, 59%, and 55% of respondents in those countries agreeing that growing firms regularly use initial public offerings to raise capital. In the United States, only 22% of respondents agree, and levels are even lower in Europe.

IPOs and similar mechanisms are one of the primary ways in which entrepreneurship shifts into high gear. But aside from being an effective source of funds for expansion, the mere possibility of a future public listing acts as a powerful incentive for potential entrepreneurs, by promising very large rewards in return for the great

risks and efforts they must take. Without IPOs, mergers, and buy-outs, entrepreneurs have no way to cash in on their success and be rewarded for the large risks they assume. This imbalance between risks and rewards dissuades people from pursuing entrepreneurial opportunities. Results from the Survey suggest that for most regions, creating well-functioning stock markets and favorable listing regulations should be policy priorities for the promotion of entrepreneurship.

### Incentives, not Assistance

The Survey evaluates a number of areas in which governments can intervene directly for the promotion of entrepreneurship. These include everything from creating programs to directly support new and growing firms with R&D commercialization; to building physical infrastructure like incubators or communications networks;

Imbalance between risks and rewards dissuades people from pursuing entrepreneurial opportunities.

to lowering corporate taxes; to simplifying the regulatory and administrative requirements with which new firms must comply.

According to the Survey, some actions most commonly recommended for the promotion of entrepreneurship are far less effective than claimed. Incubators, for instance, showed a low statistical correlation with levels of entrepreneurial activity, as did government programs for direct assistance to entrepreneurs. Corporate taxes, administrative requirements, and regulations showed no correlation whatsoever. Income taxes, on the other hand, do show a correlation, suggesting that the countries that produce the most entrepreneurs are those where the level of taxation does not deter individuals from seeking to become rich and accumulate wealth.

Another policy measure that showed significant correlation with entrepreneurial activity around the world is the provision of tax incentives and credits for the commercialization of research and development. These incentives, however, should be



available specifically to entrepreneurs. When asked if the government has developed tax incentives to increase the overall amount of R&D, 57% of respondents worldwide agree; when asked if those incentives have gone to the *commercialization* of R&D, the figure drops to 47%; and when asked if they have gone towards its commercialization in new and growing firms, it drops even further.

These findings will apply in some regions more than others. In general, however, they suggest that high-growth entrepreneurship in developed and developing economies will not be brought about by putting a physical roof over the heads of entrepreneurs, or even by simplifying the administrative and regulatory process of starting a business. Lowering income taxes, increasing deductions for entrepreneurship, and providing the right incentives for the commercialization of R&D are likely to have a much greater impact.

## Mindset and Motivations

The old adage, “Whether you think you can, or think you can’t, you’re right,” is borne out by the results of the Monitor Entrepreneurship Benchmarking Survey. People’s views about themselves, their business, and the nature of success and failure turn out to be equally if not more important than factors like venture capital, business planning, or intellectual property regulations.

In the past, “cultural” explanations of entrepreneurship have created an illusion of impotence by failing to define the term with any degree of precision: culture is treated as a mysterious, intangible, monolithic structure, instead of being analyzed into a series of specific attitudes that can be identified, promoted, and instilled. The Survey identifies a few key attitudes and beliefs affecting the likelihood that individuals will take part in entrepreneurial activities. These are core entrepreneurial values, distinct

Incubators, showed a low statistical correlation with levels of entrepreneurial activity, as did government programs for direct assistance to entrepreneurs.

from national, ethnic, or religious identity, and observable in all regions of the world with high rates of entrepreneurship. They are:

- The status and social legitimacy of entrepreneurship.
- The level of individualism in society, understood as a willingness to assume risks and take independent action.
- Attitudes towards wealth, especially with respect to taxation, stock options, and other policies determining how much individuals are allowed to profit from their economic activity.
- Attitudes towards failure and bankruptcy, including the social stigma incurred by those who try to start a business and fail, as well as the likelihood that they will try again.

One of the most remarkable findings of the Monitor Survey is that, in aggregate, these cultural components are significantly more important than other indicators

Culture is not something monolithic but a series of specific attitudes that can be identified, promoted, and installed.

in helping to explain entrepreneurial performance. In every country, the Motivations component of the Survey showed the strongest statistical correlation with observed levels of entrepreneurial activity.

Results at the country level were often surprising. **China and India, for instance, came in second and third in entrepreneurial motivations, trailing only the United States and well ahead of all surveyed European countries** (Sweden was last). When asked whether most people consider becoming an entrepreneur a desirable career choice, 70% of Chinese, Indian, and American respondents agreed, in comparison with 35% in the United Kingdom, 27% in Singapore, and just 3% in Finland.

In the United States, the legitimacy of entrepreneurship and the belief in individual action is as strong as one would expect them to be. In India and China, entrepreneurial hopes and attitudes seem to be ahead of the financial, administrative, and educational infrastructure that is actually available. This is a good thing, as entrepreneurship has always depended on a healthy disregard for reality. Elsewhere, the cultural and mental component seems an important impediment to entrepreneurship despite the existence of sound infrastructure, a relatively supportive government, skilled managers, and a qualified workforce.

### **Attitudes Towards Bankruptcy**

Along with a general disposition for individualism and with widespread social legitimacy for entrepreneurship as a career, one of the most important determinants of entrepreneurial activity is the willingness of people to take risks and their capacity to recover quickly from any setbacks. This is evident from Survey results that show attitudes towards bankruptcy across the various participating

#### **LAURA PARKIN, WADHWANI FOUNDATION**

“In the Indian middle class there is still an inherent bias against entrepreneurship. It used to be that your first choice in life was a government job. Then it became a multinational. Now we’re finally seeing a generational change. In the past five years, Wadhvani has gone from having roughly 500 students in entrepreneurship clubs around the country to having 55,000. That means young people are becoming more open-minded about entrepreneurial careers. Startups, however, are still lacking in legitimacy with the parents’ generation — which is why if you work for a startup, your marriageability goes down. If you really want to get married, you work for a multinational.”

countries. Indeed, respondents throughout the world identify the fear of bankruptcy as a key mental and societal barrier to entrepreneurship.

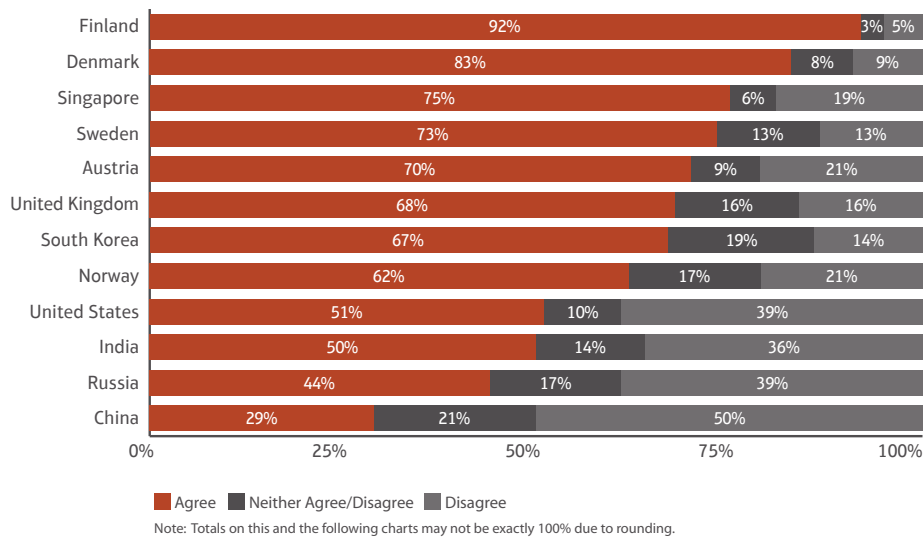
At one level, easing the burdens of bankruptcy is a legislative matter. While bankruptcy law must be socially responsible to creditors and investors, it must also give

it is crucial to understand and address the social and psychological impacts of bankruptcy — which are less tangible but equally destructive.

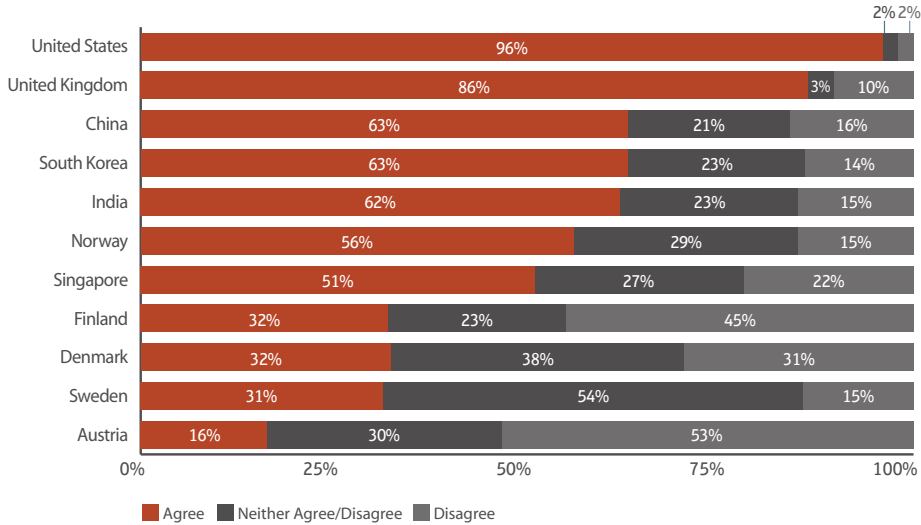
entrepreneurs a second and a third chance when they fail in good faith. In many countries, the financial costs of bankruptcy are too onerous and creditors have a claim on the assets of failed businesses for too long.<sup>26</sup> But beyond these quantifiable costs, it is crucial to understand and address the social and psychological impacts of bankruptcy — which are less tangible but equally destructive. In Silicon Valley, business failures

are considered a valuable form of experience. In other countries, they carry a stigma that keeps entrepreneurs from ever trying again, or from launching startups in the first place.

#### Fear of bankruptcy prevents people from starting firms



It is common for people who have failed in business to try again



While the real and perceived costs of bankruptcy are a powerful disincentive to entrepreneurship in every country that took the Survey, they seem to be more of a problem in some places more than others. Responses in the Nordic countries were dire, with a large majority of participants agreeing that fear of bankruptcy prevents people from starting a business. The United States, on the other hand, had one of its strongest showings in this category, with an impressive 96% of respondents saying that it is common for people who fail in business to try again. That figure provides a snapshot of one of the critical competitive advantages of the United States vis-à-vis the rest of the world—one that has nothing to do with research facilities or financial resources, and everything to do with attitude.

Teaching Entrepreneurial Skills

Entrepreneurship requires human as well as financial capital. It requires motivated and creative individuals not just to start new businesses, but to run them and work for them once they begin to grow. The Skills and Talent category of the Monitor Entrepreneurship Benchmarking Survey measures the availability of entrepreneurial human capital in a region along three dimensions: the quality of the workforce,

the availability of skilled managers, and the degree to which entrepreneurial skills are being taught to the population.

In most countries, Survey results indicate considerable room for improvement. Opinions on the availability of skilled managers and workers were generally low, with only 17% of respondents worldwide agreeing that many people know how to manage new firms, and only 35% agreeing that the workforce is well trained and prepared for job opportunities in new firms. At the same time, results suggest that neither the quality of the workforce nor the availability of skilled managers is strongly correlated in statistical terms with actual levels of business formation. Thus, while training better

Only 13% of respondents agree that primary and secondary education devote enough time to teaching entrepreneurship and new firm creation.

workers and managers may be important for a region's economy as a whole, it does not appear likely to have a marked impact on levels of entrepreneurship.

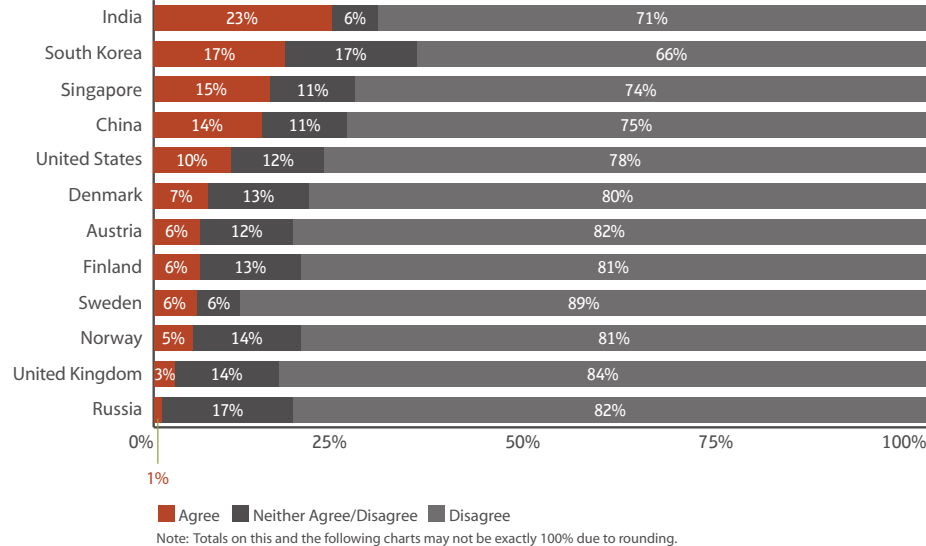
What does seem to have a significant impact on levels of entrepreneurship throughout the world is the teaching of entrepreneurial skills and attitudes at all educational levels – from elementary school to college and beyond, in business schools as well as later in life through executive education

programs. Here again, the Survey suggests there is much to be done. On average, for instance, only 13% of respondents agree that primary and secondary education devote enough time to teaching entrepreneurship and new firm creation. India is the surprising leader in this category, followed by South Korea, Singapore, China, and the United States. Figures improve somewhat, but not by much, when respondents are asked if colleges and universities offer a sufficient amount of teaching to students as well as to mid-career executives.

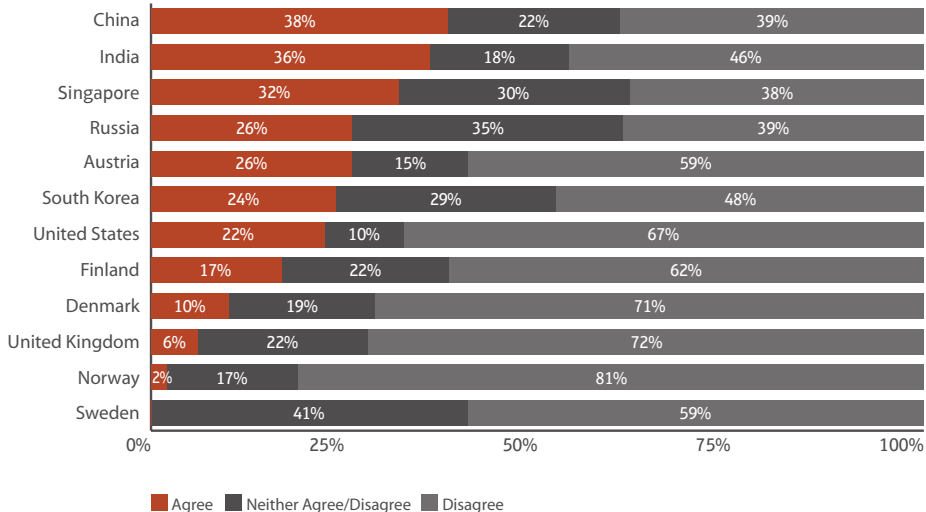
Much is made these days of which countries produce the highest numbers of scientists and engineers. Just as important is to ask which countries produce the entrepreneurs that create the businesses where most of those scientists and engineers will work. This has to do with imparting an entirely different set of entrepreneurial skills. Teaching entrepreneurship to children, adolescents, and college students, es-

pecially by providing them with hands-on experiences and tangible role models, is one of the only ways to instill the critical practice, mindset, and attitudes that are such a direct determinant of new business formation.

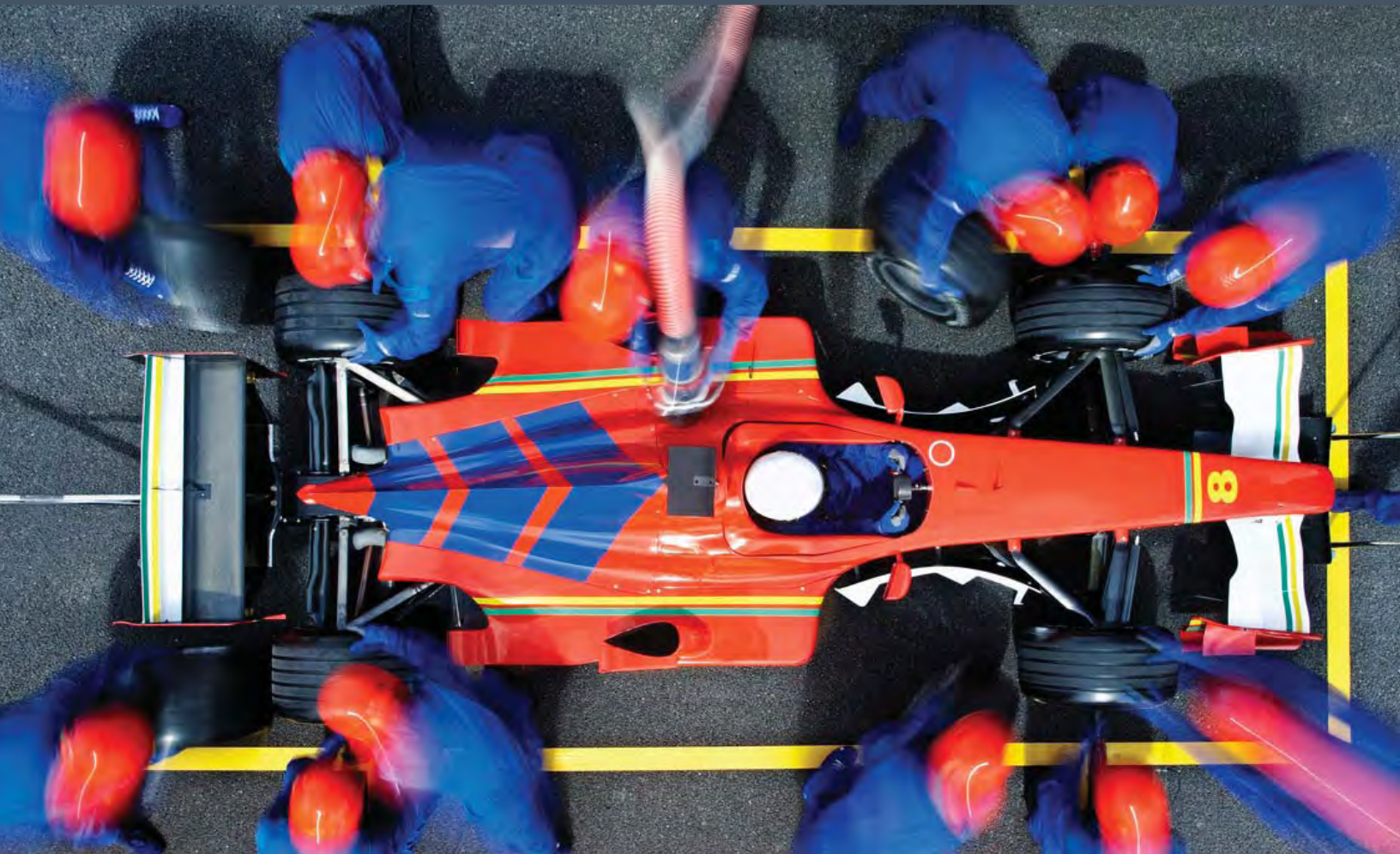
**Primary and secondary education devotes enough of time to teaching entrepreneurship and new firm creation**



**Colleges and universities offer a sufficient amount of teaching on entrepreneurship to mid-career professionals**



# Models of Entrepreneurship Development





**THE BIGGEST OBSTACLE** to better entrepreneurship policy is the failure to realize that there is more than one path to follow, and that the choice of path should depend on local conditions. The success of Silicon Valley has captured the world's attention, to the point where most regions around the world are stubbornly intent on following in its footsteps. This plan is not likely to work, because in the vast majority of cases, some if not all of the necessary environmental conditions for success are missing.

In the “classic,” Silicon Valley model of high-tech entrepreneurship, intellectual property developed in a research university or government laboratory is commercialized with the help of seed or venture capital investment. This system has worked well in a few other places, including Boston in the United States and Cambridge in England. But in general, it is only likely to succeed in the presence of a world-class university or government research facility, which are few and far between. And even if a top research facility does exist in the area, there is no guarantee that it will lead to the creation of a commercial cluster. A nearby financial center may also be necessary, as early-stage investors often prefer to be geographically close to the companies they fund. Furthermore, the model requires a culture of collaboration between academia and business, which often is difficult to foster.

Because of the huge and widely publicized gains from the classic model of entrepreneurship, policymakers tend to have it in mind when making decisions about their

#### HOW IT ALL COMES TOGETHER

Entrepreneurship requires money, ideas, business acumen, and motivation. These differ from nation to nation and region to region. They must be combined and coordinated to achieve the desired outcomes.

regions and which industries to promote. This had led to a rash of attempts to create software, biotechnology, or ICT clusters in places where they make little sense.

In the course of advising policymakers and conducting research on regional economies, Monitor has seen entrepreneurship flourish in a number of different ways and through various processes. In particular, Monitor has identified four generic models of how entrepreneurship develops within specific industrial and institutional circumstances. Of these, the classic model is just one. The other three, which are far more likely to work in the absence of a top research university, are based on anchor firms, systemic events that make entrepreneurship attractive to a large number of people, and “local heroes.”

- In the **anchor firm model**, startups emerge from existing companies either through corporate spin-offs or by the departure of experienced employees who identify a business opportunity and decide to pursue it independently.

The relationship between the new venture and the anchor firm is often symbiotic rather than competitive, with the latter often acting as a first customer or a source of financing. That is why this

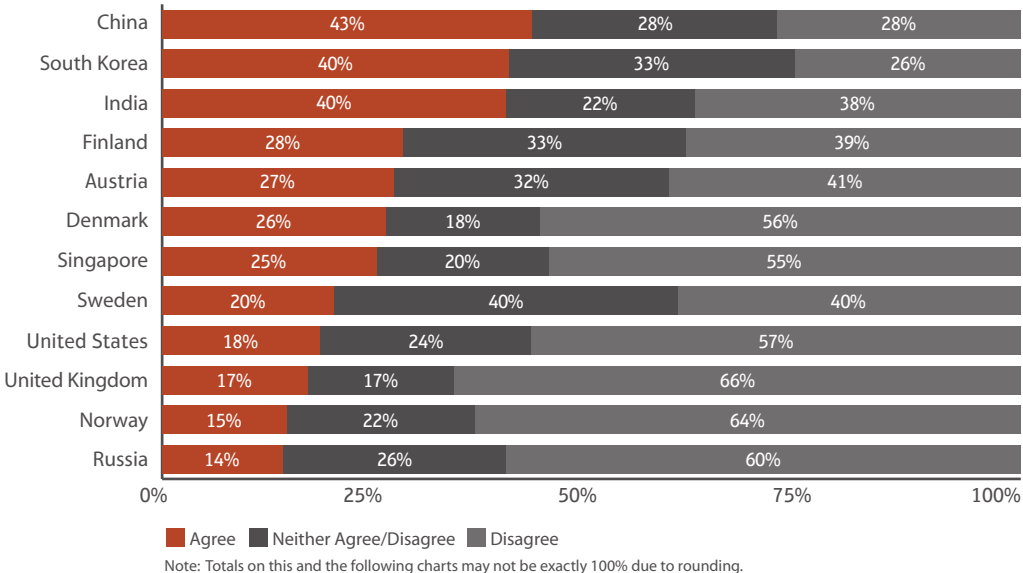
There are four generic models of how entrepreneurship develops within specific industrial and institutional circumstances.

model can give rise to entrepreneurial clusters instead of merely pitting entrepreneurs against their former employers, or forcing them to relocate far afield.

Logically, the anchor firm model is applicable to more locations than the classic model, as there are many more successful large companies than top-flight research universities. To take an example from the Middle East, Tabuk, in the northwest of Saudi Arabia on the Red Sea, has three major companies but no research universities or facili-

ties. Promoting the classic model of entrepreneurship in Tabuk is likely to be difficult, as few of the basic conditions are in place. Promoting the anchor firm model makes more sense, as spinout firms can be created from the major companies there.

Well established firms regularly work with new and growing firms to commercialize research and technologies



The anchor firm model is likely to be one of the most widely applicable, particularly in the developing world. Almost every country has a handful of large private-sector or state-owned firms that could form the basis of future entrepreneurial clusters. Furthermore, results from the Monitor Entrepreneurship Benchmarking Survey suggest that the potential for collaboration between large firms and smaller entrepreneurial ventures is not being fully exploited. Asked to evaluate the statement that

“Well established firms regularly work with new and growing firms to commercialize research and technologies,” only 18% of U.S. respondents expressed agreement. Numbers in other countries were not much better (see previous page). Policy-makers thus have a crucial role to play in engaging with large corporations and developing incentives that make spinoffs and collaboration between large and small firms attractive.

- **“Event-driven”** entrepreneurship occurs when a major industrial or economic event throws significant numbers of people out of work, confronting them with the choice of leaving the area or starting a company. Because of the sudden abundance of skilled, experienced workers in one place, entrepreneurial ventures become more feasible. This is what happened in San Diego at the end of the Cold War, when all the expertise that had been built around communications technology for military purposes was released into the market, leading to the creation of highly successful entrepreneurial ventures like Qualcomm (see sidebar on pp. 26-27). The model also seems to have come into play in South Korea following the 1997 Asian financial crisis, which led to massive layoffs from the country’s large industrial conglomerates. Although further evidence is required, it now appears as if that event produced a significant increase in entrepreneurship.<sup>27</sup> In effect, the layoffs amounted to a forced freeing of managerial talent out of the chaebols and into the market. A more gradual instance of event-driven entrepreneurship is provided by the Washington, DC area, which as a result of repeated efforts at government downsizing saw an increase in startups and new ventures.

The events that drive entrepreneurship in this model can be quite large, operating at the level of the nation state, or they can be

relatively small microeconomic incidents. A good example at the large end of the scale is Israel, where the rise of a world-class high-technology sector was precipitated by two major events: first, the founding of a nation with such limited natural resources that a knowledge-based economy became the only option for development; and then, the immigration of nearly one million Jews from the former Soviet Union in the 1990s, many of them with valuable science and engineering backgrounds. On the other hand, much smaller incidents can create waves of entrepreneurship without requiring the vast resources of the state. Companies that are forced to relocate factories abroad, for instance, can work with local policymakers to foster entrepreneurial opportunities for their workers and managers.

The events that drive entrepreneurship in this model can be quite large, operating at the level of the nation state, or they can be relatively small microeconomic incidents.

- The final model for entrepreneurship is that of the **“local hero.”** In this case a local entrepreneur, starting small, eventually gains significant size and possibly even international prominence, fostering in turn local opportunities for other entrepreneurs. One example in the United States is Medtronic, the company that created the first implantable pacemaker. Founded in 1949 by Earl Bakken, a Minneapolis-based engineer, Medtronic not only became a global leader in its field but also spawned nearby many medical device startups and service firms. With active help from state government and the University of Minnesota, the region now has one of the largest medical device clusters in the United States.

By definition, the kind of extraordinary individual required for the local hero model will be a rare occurrence. For this reason, the model is an option of last resort, to be pursued in the absence

of alternatives, or in rural areas and other environments that lack anchor firms or universities. Nevertheless, even if local heroes can be few and far between, it is possible to actively look for outstanding local entrepreneurs, provide them with support, and turn them into role models for the region. It is also possible to solicit their cooperation in creating a better entrepreneurial environment for others in the region.

One of the biggest mistakes made by regional development agencies, national investment agencies and other policymakers is trying to promote the wrong entrepreneurial model. Dazzled by the well-publicized success of a few high-tech centers, they try to imitate them regardless of local conditions. For most regions, especially those in emerging nations, one of the other models is much more likely

to succeed. The challenge is to assess the environment accurately so as to promote the correct path.

In the developing world, some of the more successful software and high-tech incubators have also pursued links with anchor firms to get around the absence of one of the key ingredients of the classic model, which is venture capital.

The four models are not generally present in a pure form, tending rather to overlap and interact within any particular region. In Silicon Valley, for instance, large corporations like Hewlett Packard and Intel, which were once startups themselves, came to play a crucial role as anchor firms. In the developing world, some of the more successful software and high-tech incubators have also pursued links with anchor firms to get around the absence of one of the key ingredients of the classic model, which is venture capital. They have met with companies, learned about specific challenges they face in meeting market needs, then proceeded backwards to carry out the necessary research.

They have met with companies, learned about specific challenges they face in meeting market needs, then proceeded backwards to carry out the necessary research.

If the four models do not generally operate in complete isolation from one another, they are also not likely to be exhaustive. Entrepreneurship is a richly varied

phenomenon and new paradigms are likely to emerge with further study. Nevertheless, these models serve to account for the vast majority of cases in which regions have been able to produce a systemic, self-sustainable increase in entrepreneurial activity.

MODELS OF ENTREPRENEURSHIP DEVELOPMENT: REGIONAL EXAMPLES	
Classic	<p><b>Silicon Valley, USA</b>  <b>Route 128, Boston, USA</b>  <b>Cambridge, England</b></p>
Anchor Firm	<p><b>Research Triangle, North Carolina</b> – The region begins to recruit big firms like IBM, Alcatel, GE, BASF, and Union Carbide in the 1960s. Over time, and in conjunction with the influence of strong local universities, these companies spin-out smaller firms and attract other large businesses to the region, creating a competitive cluster.</p> <p><b>Vancouver, Canada</b> – In 1990, videogame maker Electronic Arts opens offices in Vancouver after acquiring a small local production company. Attracted by the city’s lower costs relative to the Bay Area and by a pre-existing base of creative talent working in film and television production, EA expands operations, helps local startups develop, and launches the growth of an electronic media cluster.</p>
Event-Driven	<p><b>Washington, D.C.</b> - Government downsizing and federally mandated outsourcing provide the incentive for skilled workers to move into the private sector. A booming entrepreneurship develops in the District and adjacent communities in northern Virginia.</p> <p><b>South Korea</b> – The financial crisis of 1997 leads to substantial layoffs from the <i>chaebols</i>, pushing larger numbers of managers and executives into entrepreneurship.</p> <p><b>Israel</b> – A dearth of natural resources leads to a knowledge-based economic development strategy. Government funding contributes to the rise of a high-technology industry, reinvigorated in the 1990s by the influx of scientists and engineers from the former Soviet Union.</p>

**MODELS OF ENTREPRENEURSHIP DEVELOPMENT: REGIONAL EXAMPLES**

<b>Local Hero</b>	<p><b>Minneapolis</b> – Earl Bakken founds Medtronic in 1949. The company develops the first pacemaker, eventually growing to become the largest medical technology company in the world and giving rise to a cluster of smaller firms around it.</p> <p><b>Seattle</b> – In 1975, Bill Gates founds Microsoft in Albuquerque, New Mexico, where his first and only client is located. In 1979 he moves the company to the Seattle area, creating the most important anchor firm in the region since William Boeing ventured away from the family lumber business and into airplane design in 1916.</p> <p><b>Bangalore</b> – In 1966, and at the death of his father, Azim Premji takes over Wipro, a decades-old family company that began by producing vegetable oil. In the 1990s Premji turns the company into a maker of hardware and then into a provider of IT services. In 1981, N.R. Narayana Murthy and six colleagues found Infosys. Together, Wipro and Infosys help create one of the most dynamic IT and business outsourcing clusters in the world.</p>
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Within each model, the human, financial, and intellectual assets required for entrepreneurship will come from different sources and require a different type of support. In the event-driven model, for instance, where large numbers of people are displaced from their customary occupation and into entrepreneurship, incubators may play an important role. Aside from providing potentially unwilling

Entrepreneurship requires four basic things: money, ideas, business acumen, and motivation.

entrepreneurs with basic resources like office space and equipment, they create a community of like-minded people around them. On the other hand, incubators hardly matter in the anchor-firm model, because the parent company has in a sense already fulfilled that role. What does matter is to provide people

with stronger entrepreneurial incentives and motivations. Not only is the spur of necessity missing for people employed by a large firm, but the culture within the firm is not likely to encourage striking out on one's own.



KEY ROLES FOR POLICYMAKERS IN ENTREPRENEURSHIP DEVELOPMENT	
MODEL	KEY ROLE OF POLICYMAKERS
<b>Classic</b>	<p>Ensure that R&amp;D turns into commercial innovation by establishing adequate technology-transfer processes.</p> <p>Create incentives for academics to venture into business. This often requires engagement, outreach and negotiation with research institutions, which tend to reward teaching and publishing over the pursuit of commercial opportunities.</p> <p>Provide training in basic business skills to researchers who may be lacking in management experience, or make the necessary advisory services available.</p>
<b>Anchor Firm</b>	<p>Find and recruit anchor firms. These should not just be large companies, but companies that show a willingness to work with small firms and to let their employees pursue spin-off possibilities.</p> <p>Create incentives for spin-offs and collaboration between anchor firms and entrepreneurs.</p>
<b>Event-Driven</b>	<p>Anticipate the event as early as possible, identifying the kinds of skills that it will release into the market and the types of assistance that will be required to start new ventures.</p> <p>Provide incentives, teach business skills, and offer other kinds of support to ease the transition into entrepreneurship.</p>
<b>Local Hero</b>	<p>Find and encourage local entrepreneurs by building networks.</p> <p>Set up business contests around challenges and opportunities of importance to the region. Provide initial funding for the most promising projects.</p>

In essence, entrepreneurship requires four basic things: money, ideas, business acumen, and motivation.<sup>28</sup> The Monitor Entrepreneurship Benchmarking Survey measures the availability and quality of each of these factors in significant detail, identifying the critical gaps in a particular environment. It does not, however, necessarily reveal specific ways to fill these gaps. That requires an analysis of the local industrial structure and of the companies, institutions, and organizations that could act, directly or indirectly, as platforms for entrepreneurship. The four models provide a basic understanding of this structure, which can be complemented with more de-

tailed cluster analysis. The task of policymakers then becomes to identify, link, and redirect already existing resources, rather than to conjure them out of thin air. This is what the U.S. government did when it allowed pension funds to invest a percentage of their assets in venture capital, or when it passed the Bayh-Dole Act in 1980 to spur the commercialization of federally-funded research. The money was already there, as were the ideas, but neither was being channeled into entrepreneurship.

The following table summarizes where ideas, funds, business acumen, and motivations come from in each of the models, and what role policymakers may have to play in order to address the most probable challenges.

MODEL	IDEAS	BUSINESS ACUMEN	FINANCING	MOTIVATION
<b>Classic</b>	Developed at universities and in government research facilities	Policy priority	Provided by angel, seed, and venture capital	Policy priority
<b>Anchor Firm</b>	Developed within the anchor firm	Developed within the anchor firm	Often supplied by the anchor firm, which acts as a first customer	Policy priority
<b>Event-Driven</b>	Often developed within the companies and institutions where people worked before the event	Present in some cases, but often a policy concern	Policy priority	Provided by the event
<b>Local Hero</b>	Developed by the entrepreneur	Often present in the entrepreneur, but in some cases may benefit from support services	Policy priority	Self-motivated

- In the classic model, ideas come from university or government research, and funds (once the system gets going) from angel, seed, and venture capital. Business acumen and motivations are more of a problem in this model, at least until enough successful examples of entrepreneurship convince researchers and universities

of the value of venturing into business, while at the same time attracting the managers and business service providers necessary to run the companies.

- In the anchor firm model, ideas and business acumen are developed within the company itself. These are crucial advantages: the idea has often already been market tested (as its utility first becomes apparent in the course of doing business) and the entrepreneurs are business people with operational experience. Starting capital will also frequently come from the anchor firm, which is likely to be the first client of the new venture. The major problem in this model is motivation, as the entrepreneur-to-be must give up security, healthcare, and other benefits of a job in exchange for the inevitable risks of starting a new business.

The task of policymakers then becomes to identify, link, and redirect already existing resources, rather than to conjure them out of thin air.

- The event-driven model can be in some ways the most challenging model, as neither ideas, nor business acumen, nor financing is a given. In many cases, however, event-driven entrepreneurs have developed ideas and acquired management skills at the companies or institutions they are forced to leave. Most importantly, the event itself provides what may be the most critical of all the factors leading to entrepreneurship, which is a powerful motivation.
- In the local hero model, the entrepreneur provides the idea and the motivation. Business skills are not necessarily a given, as entrepreneurs do not always make good managers once a company settles into steady growth. Nevertheless, creativity and drive often make up for lack of management experience. Financing is perhaps the key area to be addressed, as high-potential entrepreneurs too often have to rely on family and friends for startup funds.

# Conclusions & Recommendations



**SUCCESSFUL ENTREPRENEURSHIP** arises from many factors, including financing, innovative ideas, management skills, and the right set of social, economic, and personal motivations. In any given environment, some of these factors will be available while others will be lacking. The key challenge for policymakers wishing to promote entrepreneurship is to find which ones are missing and how they can be supplied. This, of course, is in itself a complex, entrepreneurial endeavor requiring imagination, will, and negotiation among competing interests. It requires, above all, the ability to identify the binding constraints in the environment so as to develop a feasible plan of action.

Any effective strategy for the promotion of entrepreneurship must begin with an assessment of the strengths and weaknesses in the environment. Perhaps there is a financing gap for startups. Perhaps the labor or health insurance laws make it prohibitive for new businesses to hire the people they need. Perhaps entrepreneurial skills and values are not being fostered, or entrepreneurs are deprived of advice due to the absence of networks, business associations, and professional service firms willing to work with new companies. There is no way to know in the abstract which measures are most likely to work for a particular environment.

The Monitor Entrepreneurship Benchmarking Survey was developed as a tool allowing policymakers to find out directly from entrepreneurs themselves and those who work closely with them what entrepreneurs need. So far, results from the Survey suggest a few areas in which further policy efforts are universally desirable across all countries:

#### FROM SEEDLING POTS TO HOTHOUSES

Nourishing a few promising plants can result in diverse and lush environments, as with seedlings, so with entrepreneurs.

- Foster a more entrepreneurial mindset in the population, for instance through campaigns that increase the social legitimacy of entrepreneurs or by teaching entrepreneurial skills and dispositions at all educational levels.
- Ensure that the real or perceived costs of bankruptcy do not overly dissuade potential entrepreneurs. This should be part of a broader effort to create an attractive structure of risks and rewards. On the rewards side, non-confiscatory tax policies are also important if entrepreneurs are to profit from their efforts, as are high-reward exit strategies like buy-outs and IPOs.
- In attempting to shape the entrepreneurial environment through policy measures, coordinate the roles of various levels of government to make sure responsibilities are adequately distributed and efforts are well aligned.

Beyond these general recommendations, the necessary policy measures will vary by country and region (see Appendix for selected examples).

Identifying the key weaknesses in an entrepreneurial environment is half the battle. Addressing those weaknesses, however, requires a different type of analysis that is based on the particular economic and industrial structure where entrepreneurs will be operating. Existing industrial clusters function as engines of entrepreneurship by spinning off new businesses or becoming their clients. Clusters contain not just companies, but other organizations – like universities, investment funds, industry associations, and professional networks – which can act as sources of funding, ideas, and advice.

It is important to map all the key agents both in the cluster as a whole and within important organizations, as their needs and interests will vary. A university, for instance,

contains a number of different constituencies that can determine the effectiveness with which research is commercialized. Similarly, it is critical to understand the needs and interests of large companies in the area, which may perceive entrepreneurial ventures as a competitive threat rather than a source of new opportunities. This has been an important impediment to entrepreneurship in a number of countries within Europe, Asia, and Latin America, as well as in some regions of the United States.

Depending on a region's industrial structure and economic circumstances, a different model of entrepreneurship development is likely to apply:

- If there are good universities or research institutes in the area, the classic model is a possibility.
- If not, anchor firms are more likely to generate the ideas, money, and talent necessary for entrepreneurship.
- Always, but especially in the absence of strong academic or corporate environments, efforts should be in place to identify and support successful local entrepreneurs as “heroes” who can help create clusters.
- When economic or industrial events push a sector of the population into entrepreneurship, assistance should be provided in the form of incubators, connections, and business training.

Policymakers should also look to forge creative ties between universities, large companies and successful local entrepreneurs, in effect combining two or more of the models in a mutually reinforcing way.

Entrepreneurship, along with innovation and the capacity to develop strategic human resources, will determine which economies prosper in the twenty-first century

and which fall behind. Helping create the right environment for entrepreneurship should thus be a priority at all levels of government.

### **PROMOTING ENTREPRENEURSHIP: WHAT TO DO ON MONDAY MORNING**

Policymakers with responsibility for promoting entrepreneurship in their region can create a locally meaningful strategy by following four basic steps.

- Determine which of the four models of entrepreneurship development is most appropriate for local circumstances (pp. 55-65). This will help identify in broad terms the assets that are likely to be missing from the region.
- Identify industry clusters that can serve as platforms for entrepreneurship, making a realistic assessment of the corporate, academic, and public institutions that can generate new businesses or furnish them with support (pp. 22-25).
- Conduct a quick survey of entrepreneurs, and those who work closely with them, for first-hand insight into the key resources that are needed in the local entrepreneurial environment (pp. 35-41).
- Having identified the right model, and learned from entrepreneurs what they lack, choose a focused set of policy measures to intervene in critical areas (pp. 42-43).



# Appendix

## SELECTED PROFILES OF ENTREPRENEURIAL ENVIRONMENTS

China ..... 72

India..... 74

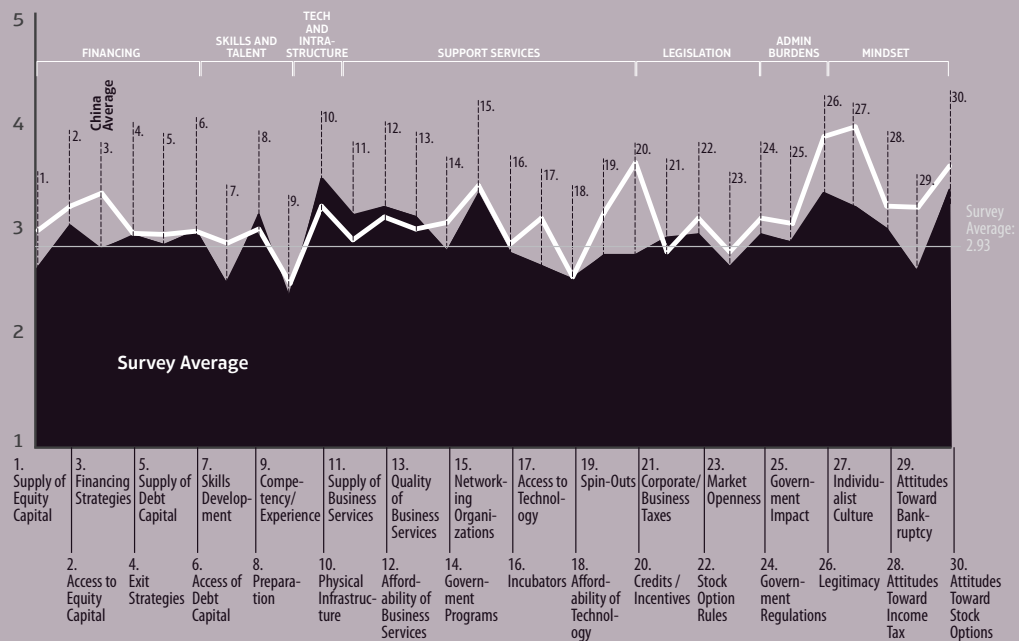
The Middle East and North Africa..... 76

Russia..... 78

The United States ..... 80

## Selected Profiles CHINA

The Chinese entrepreneurial environment, in comparison with other countries in the Monitor Entrepreneurship Benchmarking Survey.



China showed remarkably strong results in the Monitor Entrepreneurship Benchmarking Survey, ranking uniformly as one of the top countries in most policy areas. While the highly positive results may stem in part from widespread optimism after years of torrid economic growth, it seems clear that the entrepreneurial environment in China is growing stronger. Respondents suggest that Chinese entrepreneurs are a vibrant engine of growth, sometimes overshadowed by the better publicized success of large state-owned and foreign-invested enterprises.

In a number of areas, China's average responses actually exceeded other country means and placed it among the top two benchmarked nations. Among these areas are supply of equity capital, skills development, access to technologies, and attitudes towards income taxes, bankruptcy, and stock options. Indeed, a general belief in the possibilities of entrepreneurship seems to be growing prevalent among the Chinese population. China came in second in the Mindset component of the Entrepreneurship Benchmarking Survey, closely behind the United States.

This tallies well with other Monitor studies, including a general-population survey on attitudes and beliefs in China, where fifty-six percent of respondents said they think the Chinese economy will be driven by entrepreneurship rather than large private companies, and a striking 75% expressed interest in launching a new business as an entrepreneur. While it has long been known that the expatriate Chinese are an entrepreneurial force throughout the world, there is now early evidence that a similar spirit of individual enterprise is spreading back home. This suggests that if China's recent growth has been primarily due to foreign investment and state-owned industry, it is likely to acquire a much more entrepreneurial tenor going forward.

## KEY CHALLENGES

Results from the Monitor Entrepreneurship Benchmarking Survey reveal three specific areas that will merit continued attention if China is to produce greater numbers of entrepreneurs.

### Financing

Finding capital at the earliest stage of business formation remains a challenge for many Chinese entrepreneurs. State-owned banks are loath to give loans to companies before they prove their viability, which usually requires three years of operations. Friends and family thus remain the main source of seed capital for new ventures, which places severe limits on growth. In a step that should begin to address this problem, the Chinese government is setting up a seed fund for technology ventures. For later stages of financing, a greater variety of sources will remain necessary in the form of venture capital or bank loans to small and medium sized enterprises.

### Angel Investors

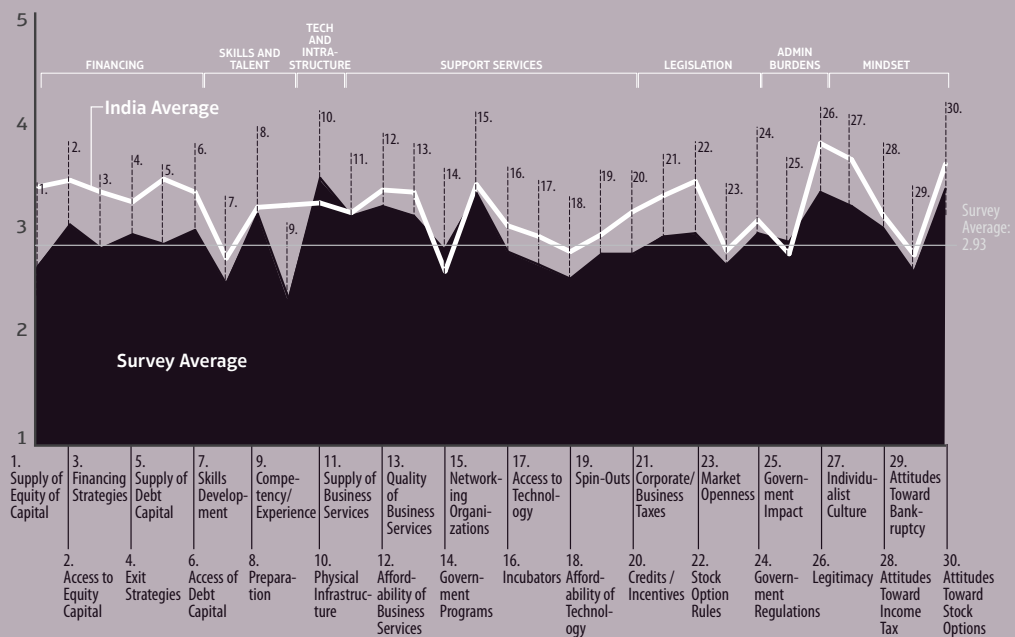
China needs more angel investors, not just because they are willing to fund businesses in their earliest stages but because they often provide the expertise and connections that make the difference between success and failure. While Chinese entrepreneurs have recourse to friends and family for funding, they have few sources of advice. This could be addressed in part by creating more well-organized business angel networks.

### Spin-offs

Corporate spin-offs could be especially important as China tries to move away from an economy dominated by state-owned giants into a more efficient, agile, and competitive system of production. While spin-offs (*fenchai*) are not as rare as in the past, they remain underused and prevent entrepreneurial ventures from breaking out of larger institutions that stifle them. Changing this will require changing minds, as some managers of state-owned companies perceive spin-offs as an admission of failure rather than a strategically sound decision.

## Selected Profiles INDIA

The Indian entrepreneurial environment, in comparison with other countries in the Monitor Entrepreneurship Benchmarking Survey.



Entrepreneurship has taken great strides in India since the economic liberalization of 1991, and strong optimism is evident in responses to the Monitor Entrepreneurship Benchmarking Survey. India scored highly in most Survey components, coming first in Financing and third in Motivations.

According to respondents, one of the main strengths of the Indian entrepreneurial environment is that there are sufficient levels of financing in the form of debt and equity capital. While seed and venture capital are not always felt to be widely available, responses remain highly positive regarding sources of early-stage funding. Respondents also displayed confidence in the competence and experience of Indian entrepreneurs, with 44% agreeing that “Many people know how to manage new firms” and 54% agreeing that “Many people have the skills to lead rapidly growing firms.” That is more than twice the percentage who agreed for any other country in the Survey.

Another important finding is that entrepreneurship enjoys strong cultural and social legitimacy among Indians. More than two-thirds of respondents agree that Indians think of entrepreneurship as a valid way to become wealthy, a desirable career choice, and an activity commanding greater status and respect than being the manager of a medium-sized company. Only China and the United States showed comparable results.

## KEY CHALLENGES

The Survey shows that Indian entrepreneurs continue to face a series of important challenges. Foremost among them are:

### Administrative Burdens

Only a third of respondents think that the length of time required to start a new business in India is acceptable, while 62% believe an excessive number of licenses and permits are required. Regional governments should facilitate the startup process, taking advantage of technology to reduce the effort, cost, and time of setting up a business.

### Government Assistance

In comparison with other countries, India lacks sufficient government programs to support new and growing firms. Only Russia has a lower score in this area, and dissatisfaction among Indian respondents is general: 75% say the programs that do exist are hard to access, and 78% complain that they are not available through a single agency. Regional governments need to mount an organized effort to provide adequate, high-quality assistance to local industry clusters.

### Infrastructure

Inadequate physical infrastructure remains one of the largest systemic impediments to Indian entrepreneurship. Many small firms in a variety of regions are unable to access national markets, let alone the rest of the world. The transportation, communications, and power infrastructure are insufficient. The good news for Indian entrepreneurs is that this creates opportunities as well as challenges, as seen in recent efforts by entrepreneurial companies to extend the reach of cell phone coverage into rural areas.

### Training and Education

By creating elite institutes of technology and management, India has been able to regularly produce an advance guard of entrepreneurs that is second to none. Elite schools however do not address the need for a larger pool of well-trained managers as Indian companies grow to global scale. Part of the solution lies in creating more high-quality vocational and executive education programs for current managers.

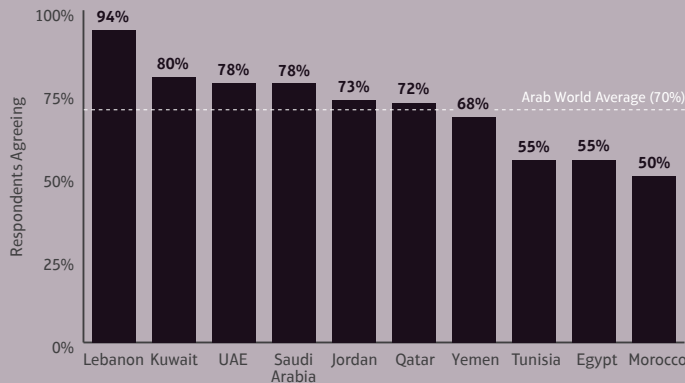
### Attitudes to Bankruptcy

Fear of bankruptcy is a global deterrent to entrepreneurship, but Survey results suggest it is especially problematic in India. Half of respondents felt that the specter of bankruptcy prevents people from starting firms, compared with only 30% in China. In addition, two-thirds of Indian respondents agree that starting a business and failing is a disgrace, versus about a quarter in the United States and China. These attitudes are not without justification: three-fourths of Indian respondents agree that bankruptcy has excessively negative financial consequences, as opposed to 40% in the US and 48% in China.

## Selected Profiles THE MIDDLE EAST AND NORTH AFRICA

Preliminary results from the Monitor Entrepreneurship Benchmarking Survey for the Middle East and North Africa are generally encouraging. Arab entrepreneurs view their environment in a positive light, even if the realities they encounter do not always compare as positively with those in the leading global centers of entrepreneurship. While challenges remain, some of the opinions expressed reflect the natural optimism of entrepreneurs as a group, and this positive energy is of crucial hope to the future of entrepreneurship in the region. One of the most encouraging signs is that according to survey respondents, most people in the Middle East perceive entrepreneurship as a desirable career choice.

### People Consider Entrepreneurship a Desirable Career Choice



As might be expected, performance in different areas of entrepreneurship like financing, legislation, skills, and motivations, varies across the Arab region. Some countries, such as Tunisia, exhibit great strength across all areas, while other countries perform exceptionally well in one key respect. This is the case with Lebanon, for instance, with regard to entrepreneurial motivations and mindset.

Surprisingly, the region's entrepreneurs do not encounter significant challenges either in overcoming government bureaucracy or in the availability of capital to grow their companies. These areas, although important to the success of small businesses, do not seem to prevent new entrepreneurs from entering the market. Infrastructure, in general, is also felt to be of sufficient quality to support new and growing firms, although there is a shortage of specialized facilities for research and development.

Just as importantly, respondents to the Monitor Entrepreneurship Benchmarking Survey express substantial confidence regarding the local pool of entrepreneurs and managers in the region.

While such results are encouraging, challenges remain. Three factors in particular seem substantially to plague the region's entrepreneurs

### KEY CHALLENGES

#### Fear of failure

Respondents say that despite the legitimacy of entrepreneurship as a career path in the Middle East, many people become risk averse and are hobbled by fear of failure when facing the uncertainties of starting a new business. The possibility of losing face on a personal and familial level, as well as the threat of personal financial ruin, remain significant and potentially insurmountable hurdles to entrepreneurship. In Jordan, for instance, where 73% of people agree that entrepreneurship is a desirable career choice, only 27% agree that risk-taking is seen positively. Tunisia, conversely, which scores relatively low on the desirability of entrepreneurship as a career, scores very highly on cultural attitudes towards risk, with almost 64% of respondents agreeing that risk-taking for success is encouraged. Ensuring a positive mindset around entrepreneurship may be the most critical activity to stimulating entrepreneurial growth in the region. Among other things, this may require increasing positive media coverage of entrepreneurs: just 31% of respondents in Morocco and 31% in Yemen considered current media coverage sufficient, in comparison with 86% in the United States and South Korea.

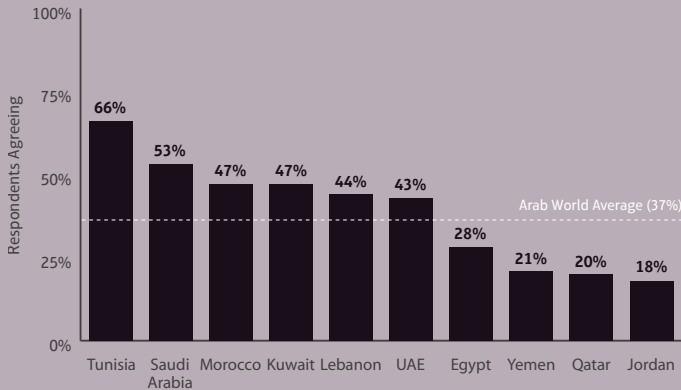
#### Difficulty in accessing seed capital for new enterprises

Entrepreneurs in the region report acceptable levels of debt and equity capital. Nevertheless, financing for the smallest of new firms and for women entrepreneurs remains an important challenge.

#### Lack of the sufficient skills and training necessary for running a business

Respondents in most countries pointed to a dearth of qualified managers to run new businesses, with only 18% of respondents in Jordan, 28% in Egypt, and 43% in the United Arab Emirates agreeing that many people have the ability to manage new firms.

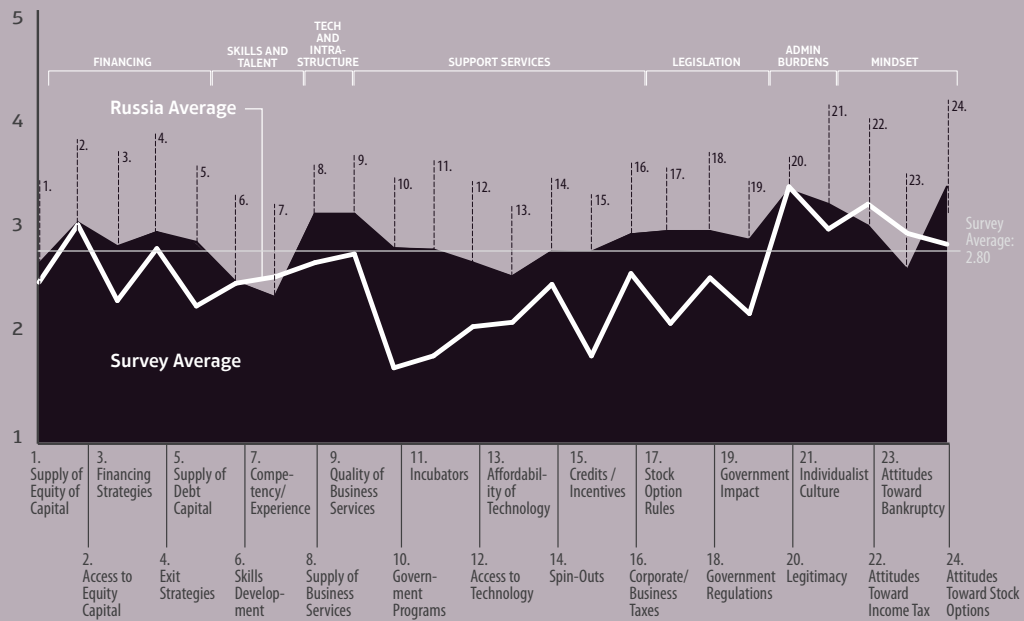
Many People Have the Ability to Manage New Firms



For the Arab world, improving the fundamentals of entrepreneurship – through activities like enhancing the education system and creating a positive impact around the topic – will be a critical strategy to ensure the region’s entrepreneurial success over time.

## Selected Profiles **RUSSIA**

The Russian entrepreneurial environment, in comparison with other countries in the Monitor Entrepreneurship Benchmarking Survey.<sup>29</sup>



The Monitor Entrepreneurship Benchmarking Survey reveals a highly challenging environment for Russian entrepreneurs. The country had the lowest aggregate score of all surveyed countries, and was last in four of the seven key policy areas.

Two bright spots emerge in the Russian entrepreneurial environment:

### Mindset

The entrepreneurial mindset appears to be strong in Russia. Sixty-two percent of respondents said that “most people consider becoming an entrepreneur a desirable career choice,” which places Russia fourth in the Survey after China, India, and the United States. Respondents also report competitive attitudes towards risk-taking, with 24% agreeing that “people encourage risk-taking in one’s career.” That is not as high as the 44% of respondents in the United States or the 67% in China, but far above the majority of European countries. Finally, Russians seem better disposed culturally to face failure and recover from it:



less than a quarter of respondents say that “to start a business and fail is considered a disgrace,” which ties Russia with the United States as the country where entrepreneurial failure carries the lowest stigma.

### **Financing**

Russia’s entrepreneurs report having relatively good access to equity capital, and in particular seed financing. Fifty-four percent of respondents agreed that “most entrepreneurs personally know one or more private individual investors, i.e. ‘angels.’” Only India and China registered a higher score. The role of stock markets in financing startups is weaker, with only 7% of respondents saying they function well for growing firms to raise capital.

## **KEY CHALLENGES**

Although attitudes and motivations are among the most important causes of entrepreneurship, the Survey also reveals a number of serious challenges to the creation of new businesses in Russia. Foremost among them:

### **Government Programs**

Only 5% of Russian respondents think that “there are sufficient numbers of government programs to support new and growing firms,” the lowest score of all surveyed countries and well below a figure of 37% in the United States and 68% in Finland. Regarding the programs that are available, only 5% said they were of high-quality or easily accessible. Respondents also indicated the absence of a single centralized agency to provide such programs, and pointed to an almost complete lack of incubators.

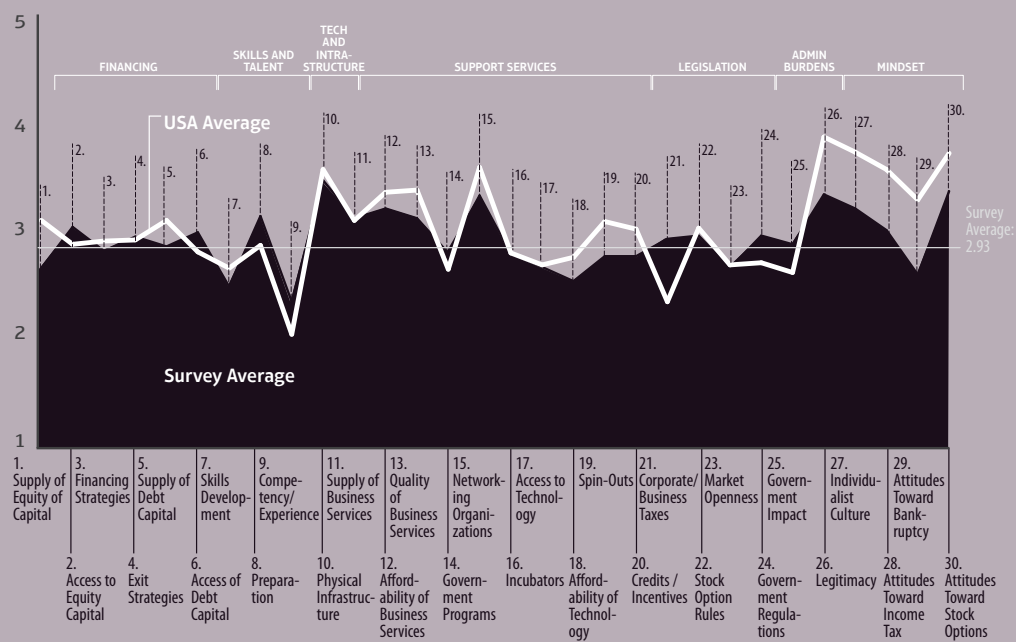
### **Incentives for the commercialization of technology**

Russian entrepreneurs indicated that the government does not currently provide the right type of credits or incentives to commercialize research and development, with only 4% saying such incentives have been developed. As a result, new companies face significant challenges in accessing technology developed at universities or government research centers.

Based on these and other results from the Monitor Entrepreneurship Benchmarking Survey, the policy measures that are likely to have the greatest impact on Russian entrepreneurs are those involving government services and incentives for innovation. These would include a one-stop agency offering high-quality services for startups, and incentives for business and academia to collaborate in commercializing basic R&D.

## Selected Profiles THE UNITED STATES

The U.S. entrepreneurial environment, in comparison with other countries in the Monitor Entrepreneurship Benchmarking Survey.



Results from the Monitor Entrepreneurship Benchmarking Survey confirm the strength of the U.S. entrepreneurial environment, by many measures the strongest and most dynamic in the world. The United States did especially well in the Mindset and Motivations component, coming in first overall, as well as in key measures like the legitimacy of entrepreneurship as a career; the degree of individualism in the culture; the willingness to take risks; and the capacity to recover from failure. Nearly three quarters of respondents, for instance, agree with the statements that “the creation of new firms is considered an appropriate way to become wealthy” and that “most people consider becoming an entrepreneur a desirable career choice,” with only India and China showing comparable results.

Another strength of the U.S. environment, according to respondents, is that strong support for entrepreneurs exists in the form of high-quality, accessible business services, as well as through abundant business membership organizations and informal networks. Over half of those surveyed agreed that there are many informal networks (e.g., groups of angel investors or entrepreneurs) to support new and growing firms.

### KEY CHALLENGES

Two important areas of concern emerge from Survey results. One pertains to the development of entrepreneurial skills in the population, especially during the formative years of childhood and adolescence. Only 10% of American respondents agree that “primary and secondary education devotes enough time to teaching entrepreneurship and new firm creation.” While this is an area of weakness in most countries, it seems especially important in the case of the United States given that so many other positive factors are already in place.

Finally, U.S. respondents painted a somewhat negative picture of the corporate tax situation for new companies. Only 19% think that business taxes have a similar impact on both new and well-established firms, which is the lowest score among all countries and compares unfavorably with an aggregate mean of 41%. Similarly, only 20% think that business tax policy does not interfere with the ability to launch new firms successfully, against a Survey mean of 40%.

## Suggestions for Further Reading

The argument for entrepreneurship as the basic driver of growth and competitiveness in free economies goes back to the pioneering work of Joseph Schumpeter. His *Theory of Economic Development* (1911), and *Capitalism, Socialism, and Democracy* (1942) remain required reading for anyone interested in how entrepreneurial acts of “creative destruction” move economies forward.

In recent years, a number of important studies have expanded, deepened, altered, and submitted proof for the basic arguments in favor of entrepreneurship. William Baumol, Robert Litan, and Carl Schramm make a case for “entrepreneurial capitalism” in *Good Capitalism, Bad Capitalism, and the Economics of Growth and Prosperity* (2007). Schramm is also author of *The Entrepreneurial Imperative* (2006) and president of the Ewing Marion Kauffman Foundation ([www.kauffman.org](http://www.kauffman.org)), which fosters entrepreneurship through research, education, and public policy initiatives.

AnnaLee Saxenian has explored the regional aspects of entrepreneurship in two important works. One is *Regional Advantage: Culture and Competition in Silicon Valley and Route 128* (1994). The other is *The New Argonauts: Regional Advantage in a Global Economy*, which looks at the rise of entrepreneurial clusters in India, Taiwan, China, and Israel through the return of scientists and engineers trained in Silicon Valley. The latter is an important contribution to the study of what role entrepreneurship can play in the developing world. Another recent book exploring this subject is Tarun Khanna’s *Billions of Entrepreneurs: How China and India are Reshaping Their Futures, and Yours* (2007).

David Audretsch, Max Keilbach, and Erick Lehmann explore the macroeconomic benefits of entrepreneurship in *Entrepreneurship and Economic Growth* (2006). In *The Entrepreneurial Society* (2007), Audretsch extends his argument for entrepreneurship as the proper response to a knowledge-based, globalized economy in which lifelong employment is no longer the norm.

Zoltan Acs has written several influential studies of entrepreneurship and the policies that promote it, including *Entrepreneurship, Geography, and American Economic Growth* with Catherine Armington (2006). Most recently he is co-editor with Roger R. Stough of *Public Policy in an Entrepreneurial Economy: Creating the Conditions for Business Growth* (2008). Also worth reading are the essays in *The Emergence of Entrepreneurship Policy*, edited by David Hart (2003).

## Endnotes

- 1 This report is based on research by Pedro Arboleda, Kurt Dassel, and C. Jeffrey Grogan at Monitor and was written with support from colleagues Guillermo Bleichmar, Paolo De Marino, Davis Dyer, Daniel Farkas, and Drostsen Fisher.
- 2 The original Entrepreneurship Benchmarking Survey was developed jointly by the Danish Agency for Business and Housing; the Danish Ministry of Economic and Business Affairs; FORA (the Danish Center for Economic and Business Research); Advanced Research Technologies; and Monitor Group. See the “Dynamic Benchmarking of Entrepreneurship Performance and Policy in Select Countries Entrepreneurship Survey Initiative Discussion Paper” (2004) for more details.  
  
The 22 countries are grouped in two sets with some differences reflecting variations in sample size and composition. For these reasons, in this report the two sets are not directly compared. The first set (12 countries) consists of Austria, China, Denmark, Finland, India, Norway, Russia, Singapore, South Korea, Sweden, the United Kingdom, and the United States. The second set (10 countries) are all in the Middle East and North Africa: Egypt, Jordan, Kuwait, Lebanon, Morocco, Qatar, Saudi Arabia, Tunisia, the United Arab Emirates, and Yemen. Survey samples in the MENA countries were not constructed to be statistically representative of their respective populations and therefore the survey results for them are only directional in nature.
- 3 Joseph Schumpeter, *Capitalism, Socialism, and Democracy* (paperback edn., New York: Harper & Row, 1975; orig. 1942), p. 84.
- 4 See in particular the work of Acs, Audretsch, Baumol, Litan, Saxenian, and Schramm, as indicated in the Suggestions for Further Reading.
- 5 For an in-depth account of how the Silicon Valley system functions, as well as how unique and difficult to emulate it is, see AnnaLee Saxenian, *Regional Advantage: Culture and Competition in Silicon Valley and Route 128* (Harvard University Press, 1994).
- 6 In recent years there have been important developments in the application of entrepreneurial thinking to the social sector. Social entrepreneurship shares certain characteristics but is by no means identical with commercial entrepreneurship, and requires separate consideration. A forthcoming report based on Monitor’s active involvement in social entrepreneurship will address its challenges, opportunities, and future prospects.
- 7 See, for example, David Audretsch, *Entrepreneurship and Economic Growth* (Oxford University Press, 2006) and Baumol et al, *Good Capitalism, Bad Capitalism*, Chapters 1-3.
- 8 Established firms must increase productivity to survive and thrive, and thus have an imperative to reduce employment per unit of output over time. According to the U.S. Small Business Administration, “small firms... have generated 60 to 80 percent of net new jobs annually over the last decade.” (<http://www.sba.gov/advo/stats/sbfaq.pdf>, updated August 2007) See also David Birch, *Job Creation in America: How Our Smallest Companies Put the Most People to Work*, Free Press, 1987.
- 9 The Triangle of Competitiveness has its origins in a model of the microeconomic factors of productivity developed by the Organization for Economic Cooperation and Development. Analyzing the higher levels of prosperity in some of its member countries, the OECD attributed them to four key microeconomic factors: innovation, entrepreneurship, human capital, and information and communications technology (ICT). The Triangle of Competitiveness places these factors in a different conceptual arrangement that communicates more clearly their comparative importance as well as their interrelatedness. Entrepreneurship, innovation, and specialized human assets form the vertices of the Triangle, with ICT serving as an enabling platform for their development.
- 10 For a full and nuanced introduction to the relationship between entrepreneurship and innovation, see Mark Casson, Bernard Yeung, Anuradha Basu, and Nigel Wadeson, eds., *The Oxford Handbook of Entrepreneurship* (Oxford University Press, 2008), Part II: Innovation, pp.281-331. See also Peter Drucker, *Innovation and Entrepreneurship* (HarperCollins, 1985).
- 11 William Baumol has shown how market incentives make small, entrepreneurial ventures better suited to produce one-off, breakthrough innovations. Other studies suggest they may also be playing a larger role in generating the kind of gradual, cumulative innovations that may not radically transform industries but are nevertheless crucial to business progress. Large companies recognize this and are exploring “open innovation” models where they license new products and services from smaller companies, or purchase them outright, instead of expanding internal R&D capabilities. See William Baumol. “Entrepreneurship, Innovation and Growth: The David-Goliath Symbiosis,” *Journal of Entrepreneurial Finance and Business Ventures*, Vol. 7, Issue 2, pp.1-10. William Baumol. “Small Firms: Why Market-Driven Innovation Can’t Get Along Without Them,” in *The Small Business Economy: A Report to the President* (Office of Advocacy of the Small Business Administration, 2005). See also Henry William Chesbrough, *Open Innovation: The new imperative for creating and profiting from technology* (Harvard Business School Press, 2003).

- 12 “Entrepreneurs invest no more in innovations than their counterparts [but] the quality of their innovations may be higher and these innovations seemed to be produced more efficiently, i.e., entrepreneurs produce more patents per employee and they are cited more often.” Rolf Sternberg and Sander Wennekers, “Determinants and Effects of New Business Creation Using Global Entrepreneurship Monitor Data,” *Small Business Economics* (2005, vol. 24: 193-203). C. Mirjam Van Praag and Peter H. Versloot, “What is the Value of Entrepreneurship?” *Small Business Economics* (2007, no. 29: 351–382), p. 365.
- 13 Michael Porter, *The Competitive Advantage of Nations* (Free Press: 1990). Michael E. Porter, Monitor Group and Council on Competitiveness, *Clusters of Innovation: Regional Foundations of U.S. Competitiveness*, October 2001. See also the annual Global Competitiveness Reports of the World Economic Forum.
- 14 An important exception is the work of Carl J. Schramm. See *The Entrepreneurial Imperative* (New York: Collins, 2007) and “Building Entrepreneurial Economies,” *Foreign Affairs*, Vol. 83, Issue 4 (July-August 2004), pp.104-115.
- 15 Thomas L. Friedman, *The Lexus and the Olive Tree* (Farrar, Straus and Giroux, 1999), Chapter 12.
- 16 European Commission, *Green Paper: Entrepreneurship in Europe* (2003), and *Report on the Implementation of the Entrepreneurship Action Plan* (2006).
- 17 The term “region” can be a source of confusion, as it can be used to stand for both sub-national and supra-national geographic areas. In this report, a “region” will always refer to the former: New England, greater New York, or “the north of Italy” count as regions, whereas “Western Europe” and “the Middle East” do not.
- 18 Porter et al, *Clusters of Innovation*
- 19 As demonstrated by a stream of research ranging from Jane Jacobs, *Cities and the Wealth of Nations* (Vintage Books, 1984), to Richard Florida, *Cities and the Creative Class* (Routledge, 2005).
- 20 For a detailed analysis of innovation and entrepreneurship in the San Diego region see Michael E. Porter, Council on Competitiveness, and Monitor Group, *Clusters of Innovation Initiative: San Diego*, May 2001. Other publications in the same series present findings for Atlanta, Pittsburgh, Raleigh-Durham, and Wichita. For a discussion of the important role played by the CONNECT program linking scientists, companies, and policymakers, see David Audretsch, *The Entrepreneurial Society* (Oxford University Press, 2006), pp.159-161.
- 21 See above, n. 2.
- 22 See above, n. 2.
- 23 Two overarching measures of entrepreneurship performance were used: firm startups and startup growth. These were compiled using available third-party data including the Total Entrepreneurial Activity (TEA) Survey of the Global Entrepreneurship Monitor, as well as Eurostat, Compendia, and other sources. In the United States, where detailed information is available by state, performance was calculated by multiplying “entrepreneurial attempts” (measured by establishment churn) by entrepreneurial success (measured by establishment growth and venture capital investments).
- 24 See above, n. 2.
- 25 Entrepreneurial performance was calculated as indicated in note 23 above. Using the performance index as the dependent variable, 120 simple regressions were run for each survey question (the independent variable), and 31 simple regressions were run for each Survey component. The chart displays Survey components according to their R-square value, which measure how successful the fit is in explaining the variation of the data, and adjusts it based on the residual degrees of freedom. The adjusted R-square can take any value less than or equal to 1, with a value closer to 1 indicating a better fit. In the chart, “High impact” stands for R-square values of 0.50 to 1.00; “Moderate impact” stands for values of 0.30 to 0.49; “Low impact” stands for values of 0.10 to 0.29; and “No impact” stands for values of -1.00 to 0.09.
- 26 See John Armour and Douglas Cumming, “Bankruptcy Law and Entrepreneurship,” Law Working Paper No.105/2008, European Corporate Governance Institute, February 2008.
- 27 See Jung, Ku-Hyun, “An Upsurge of Entrepreneurship in Korea and its Possible Reasons,” presented at the Expert Workshop on Entrepreneurship in Asia: Creating Competitive Advantage in the Global Economy, held in Hong Kong, 8-11 July 2002.
- 28 Except for a few components pertaining to the regulatory environment, taxes, and infrastructure, most of the areas covered in the Survey fall into one of these four categories. The availability of money to fund new ventures is captured in the Financing component; the availability of ideas and business acumen is captured in Skills and Talent and Support Services; with Motivations measuring the fourth basic factor.
- 29 The Russian survey for the Monitor Entrepreneurship Survey had a smaller number of questions. This accounts for the difference between the Russian graph and those for other countries.

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