The Entrepreneurship Ecosystem Strategy as a New Paradigm for Economic Policy: Principles for Cultivating Entrepreneurship[1]

Daniel Isenberg, Ph.D.
Professor of Management Practice, Babson Global
Executive Director, the Babson Entrepreneurship Ecosystem Project
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I would like to propose a challenging and, I believe, extremely important thesis, namely, that we know enough about how entrepreneurship develops in the world to deliberately create the conditions so that there will be measurably more of it, and do so in a relatively short period of time, that is, years and not decades. Furthermore, we know enough about how to accomplish this XPRIZE-like challenge so that entrepreneurship will be relatively self-sustaining, self-generating. Finally, achieving this will generate tremendous amounts of economic and social benefit. To present this thesis I draw on decades of experience around the world, as well as my own as an entrepreneur, academic, venture capitalist, angel investor, government advisor (including playing a small role advising the White House's StartUp America). I also lived in Israel for 22 years and participated in the miraculous entrepreneurial transformation of that society.

To accomplish this ambitious objective, public leaders, by which I mean elected, professional, and private sector, need to operate according to several interrelated principles, a few of which I will specify below, along with their implications for policy. Collectively, supported by a growing body of professional practice and specific methodologies we have been developing at Babson, they comprise what I call the "**entrepreneurship ecosystem strategy**" for economic development. I believe the entrepreneurship ecosystem strategy represents a novel and cost-effective strategy for stimulating economic prosperity. I believe that it either replaces, or at least is a necessary complement, or even **pre-condition** to, cluster strategies, innovation systems, knowledge based economies, and national competitiveness policies.

The entrepreneurship ecosystem strategy is evolving to address some of the policy mistakes resulting from the way these strategies are conceived and executed, including:

- Allocation of too low a public priority to entrepreneurship
- Lack of clarity of entrepreneurship policy objectives
- Inadvertent weakening of aspirational entrepreneurship
- Unintended repulsion of providers of entrepreneurial finance
- Perverse consequences piecemeal programs, such as education causing brain drain

The ideas are evolving in the context of results-oriented projects that Babson is conducting in various regions around the world, and they are still growing "a full set of teeth." So I hope my comments will generate discussion, debate, but more importantly, action-learning, because the stakes are high. By the way, I am not referring specifically to what Ireland should or should not do because I do not know enough about what Ireland is doing as a nation or society: my initial impression is that entrepreneurship programs here are advanced and apologize if I preach a little bit to the choir.

[1] Based on an invited presentation at the Institute of International and European Affairs, May 12, 2011, Dublin Ireland.

Principle. **Distinguish among self-employment, SMEs, and entrepreneurship, and focus on the latter, in which case** most of the former two will take care of themselves.

Before getting to the "how" of entrepreneurship creation, we have to start with the question, "what and why," because we cannot get to the "how" if we are unclear about the "what" and the "why." This is partly a semantic issue, but I believe that the term entrepreneur (at least, in English) with all of its derivatives runs the risk of being broadened out of meaning.[2] I am referring very narrowly and classically to the entrepreneur as a person who is continually pursuing economic value through growth and as a result is always dissatisfied with the status quo. Entrepreneurship is aspirational and risk-taking, and, as I shall argue, intrinsically contrarian. Self-employment *per se*, is not entrepreneurship: self-employment-plus-aspiration, usually is; aspiration, not business ownership *per se,* is the continental divide between the entrepreneur and the non-entrepreneur.

In fact, in some ways self-employment and entrepreneurship are diametrically opposed. My immigrant grandfather dropped out of grade school and eventually had his own wall paper store in Philadelphia in the first half of the 20th century but he did not aspire to be the Wal (Paper) Mart. He wanted to make enough money to put my father and aunt through school so that they could get good jobs. Four generations later my son has started his first of a chain of night clubs in Israel, opening this month, and he is employing about 150 people. My grandfather was self-employed, and my son is an entrepreneur.

Risk is intrinsic to entrepreneurship because entrepreneur engages in an activity which will only generate value, if at all, later. Investing in designing a new music player or mobile payment service will not pay off immediately, and even if it eventually does pay off, we can never have perfect foresight about how much. The reason that entrepreneurs make those risky investments is because they actually perceive their risks to be lower than others' due to their perception that they possess some asset (e.g. intellectual property or real estate) or information (e.g. that the Persians like silver implements and there are silver ore deposits in Iberia), or assessment (e.g. that the geological formation underneath the Eastern Mediterranean suggests the presence of large amounts of gas) or idea (e.g. that larger numbers of people will buy smaller amounts of music for $1 if it is easy for them to do so) or ability (e.g. I can inspire, excite, and organize people). Entrepreneurs, in the broadest economic sense, buy inputs low, transform them through risk, and sell them high.

This perception that you know or have something that others don't know or have, implies the **intrinsically contrarian nature of entrepreneurship**, because the perception of opportunity is based on the belief that other potential entrepreneurs either don't see what you see, and/or view exactly the same situation differently, and/or in fact, until it is too late, perceive your assets or ideas or assessments as relatively worthless, impossible, or stupid.

I will give one simple example of Sandi Cesko of Slovenia who created the largest television shopping channel in 20 Central and Eastern European countries (it took him 20 years), starting at a time when conventional wisdom had it that no consumers in that region would trust anything sold over television. No one would invest so he boot strapped it. No one would sell him prime time TV slots so he bought the scrap time. The Western shopping channels had a business model based on outsourcing media, customer service, delivery, payment, and Sandi in-sourced everything. Today Studio Moderna is the

[2] By the way, we do not have a native English word for entrepreneur, as there is in French, Russian, Spanish, Japanese, Chinese, Hebrew, German, and Arabic.

leading multi-channel retailer in 20 CEE markets growing organically 30% throughout the recession, with I would estimate on the order of half a billion EURO in revenues.

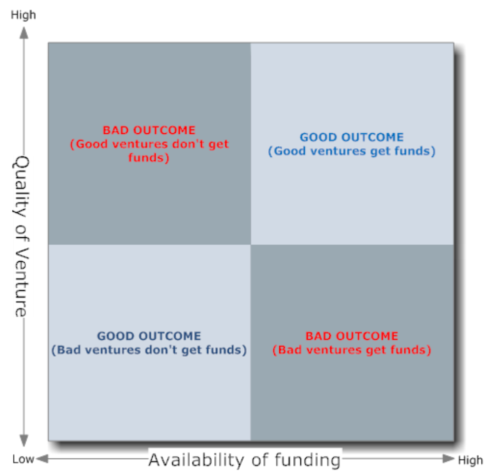
Policy implications. One policy implication is that entrepreneurship needs different policies and environments, as well as a different government "home," than self-employment and, arguably, SMEs. Treating business ownership as the common denominator for entrepreneurship policy makes about as much sense as treating gun ownership as the regulatory common denominator for gun ownership. Of course, regulation is needed, but we don't lump together police, hunters, competitive marksmen, soldiers, and criminals, all of whom own guns. Policy for these individuals resides in internal security, defense, culture and sport, and justice ministries. We should also separate the self-employed and the entrepreneur, one belonging, for example, in the Ministry of Labor and/or Welfare, the other in the Ministry of Economic Development.

But as I look at the world of economic policy, I see near-universal policy confusion among self-employment, small business ownership, and entrepreneurship. Governments have SME programs, banks have SME teams, chambers of commerce have SME departments. We have small business administrations and micro-finance. Not only are these activities more different than not, but many entrepreneurs actually dislike being lumped together with the "SMEs;" they view being small or medium as an uncomfortable transitional state that is often perceived of as a stigma that connotes a static presence as a small, second-tier supplier. Their aspiration is to sell, partner with, compete with, and outsmart the large incumbents.

From the preceding analysis it will not be surprising that empirically there is remarkably little transfer from micro-to-macro enterprise. 1000 micro-enterprises do not evolve to 100 SMEs which in turn evolve into 10 high growth businesses. Yet I believe that this is an implicit and even unconscious assumption of many public leaders and policy makers. I am, of course, not saying that micro-enterprises or SMEs are without value; I **am** saying that they are not, in-an-of themselves, entrepreneurship; I **am** saying that the terms subtly suggest that entrepreneurs lower their aspirations; I **am** saying that if you have to choose where to spend limited resources, spend them developing aspirational entrepreneurship, and the SMEs and others will be some of the spillovers along the way.

From a policy perspective, whereas all entrepreneur<u>s</u> are created equal, not all entrepreneur<u>ship</u> is created equal. Effective policy has at its heart an interest in democratizing entry, but also fostering an enlightened Darwinistic approach to resource allocation. People should be allowed to test their wits, but if we protect them from the markets, either product or financial, we weaken the entrepreneurial "gene-pool," as it were, as well as those markets. Entrepreneurship is an equal opportunity employer because it is based on merit, but to be sustainable, that opportunity must go hand-in-hand with the opportunity to fail. From a societal perspective, entrepreneurial failure is crucial because it redeploys people, money, and other resources.

Ironically, there are strong political pressures for policy makers to do the exact opposite of what is required. What you want is a system in which deserving ventures get resources, and **no less important**, in which non-deserving ventures are denied them. In the figure below, policy makers frequently focus on the upper right hand quadrant, and ignore the necessary lower left hand quadrant. Furthermore, it is not unusual to see the opposite, that because of misplaced agendas, resources are denied to the deserving ("they are elites;" "they don't need the help") and given to the undeserving ("we need to distribute public goods equitably").



This morning I read about one of Ireland's entrepreneurs, Jerry Kennelly, founder of Stockbyte and now Tweak, who said. "We've probably got the greatest entrepreneur support system in the world. We throw more money at it than probably any other country. But perhaps it's too much and maybe we should be getting people to do more themselves…the state has to create the right atmosphere…but there is a little too much spoon feeding… People have to get up off their arses and get it going themselves."[3] This implies a toughening process that is inherent in the Darwinistic approach.

A third policy implication is that sector-based approaches are, ironically, in certain respects antithetical to entrepreneurship. Note that the operative word in entrepreneurship is contrarian, and not innovative. There are numerous examples of entrepreneurship that is not innovative, such as generic drugs. This is important for policy because **it is the role of the entrepreneur to continually demonstrate that conventional wisdom is wrong**, that the market is wrong in a sense. Furthermore, anyone who can define *a priori* where opportunities lie can be shown to be wrong. One of the unrecognized problems of sectoral cluster strategies is that picking sectors for preferable attention by a top-down analysis of comparative advantage, actually **dulls** the entrepreneurial spirit and **depletes** the region's reserves of this precious resource. In other words, cluster strategies can be detrimental.

One of the underpinnings of Israel's successful cultivation of broad-based entrepreneuship is that government has been explicitly sector agnostic for four decades. A top down analysis of Iceland's comparative advantages are geothermal energy, natural beauty, and fish. Yet the successful ventures are in generic pharmaceuticals (Actavis), online gaming (CCP), and medical prosthetics (Ossur). You don't need to tell entrepreneurs where the opportunities are—their job is to sniff them out and the very process of trying, failing, regrouping, sharpens and enhances entrepreneurship. You dull that sense of smell if you do it for them. I think it is possible that the top-down way in which Chile spawned the very successful salmon industry led to prosperity in the medium run but at the expense of entrepreneurship, and it is one of the reasons they are struggling to move up the value chain into biotechnology based on entrepreneurial initiative. Singapore's top-down approach in creating the half-billion dollar Biopolis did not generate the expected entrepreneurial entry. Government is indeed critical in many ways, but in creating the framework conditions: there is a big difference between building a highway system and telling people where to drive.

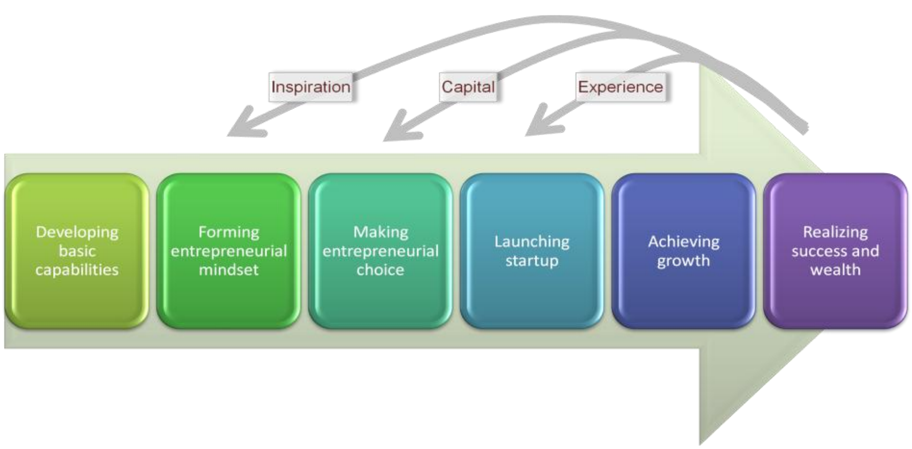
[3] Jerry Kennelly, *Business Plus*, April 2011, p. 23

Principle. **Allocate an extremely high public priority to entrepreneurship**.

That may appear obvious, but whereas it is by now commonplace for public leaders to espouse their support for entrepreneurship, when it comes to execution, many of them don't know how to get much past lip service, and when they do, they get it wrong in significant ways, partly because they have never personally witnessed or experienced its broad benefits, which economists call "spillovers." So it is important for public leaders to understand the "why" of entrepreneurship, because they do transcend the obvious.

The disproportionate and consistent contribution of young growing ventures to job creation in the US and Europe is well-documented. But in a functioning tax regime, profit and its distribution generate significant tax revenues, and this is a major contribution, both in terms of the government revenues, but also in terms of the impact on entrepreneurship. My personal observation is that a tough and well-organized tax collection mechanism is a great boon for entrepreneurship. The notion that you can have much large scale, self-sustaining entrepreneurship where there is a large informal economy is a misconception, I believe. In that respect, threatening to shut down self-employment of some kinds, ironically, helps create better conditions for entrepreneurship.

The most significant spillovers stem from the fact that most successful entrepreneurs like to create more entrepreneurship. Entrepreneurship, it turns out, when successful becomes like a hobby or sport which entrepreneurs pursue for a mix of motives, often for the challenge or the adrenaline rush long after their material needs are taken care of many times over. It becomes a positive addiction, one in which the venture junkie likes to get others hooked as well. So entrepreneurship "addicts" become angel investors, or advisors, or venture capitalists, or board members, and likely a combination, feeding back their experience and wealth to generate more entrepreneurship. They become public speakers or guest lecturers inspiring other to follow in their footsteps. They lobby the government for reform. In sufficient quantities, these activities leave a region indelibly imprinted.



Successful entrepreneurship thus has broad spillover effects on the entrepreneurship ecosystem, strengthening all of its domains. Human capital is upgraded through training and experience, success stories inspire new generations and make society more tolerant of risk and failure and wealth creation, and entrepreneurial ventures become successful and become venture-friendly customers. There are many instances of successful entrepreneurs taking on positions of public leadership, such as Sebastien Pinera, Chile's president, Michael Bloomberg, mayor of New York, Nir Barkat, mayor of Jerusalem, or Scott Case's leadership of StartUp America. Mo Ibrahim has turned some of his wealth from selling

CelTel in Sub Saharan Africa to create the $5 million Ibrahim Prize for excellence in African leadership. Even greater numbers of entrepreneurs become influential informal advisors to public leaders. Successful entrepreneurship stimulates the development of formal capital markets and thus is a force for better regulation and governance. Successful entrepreneurship sometimes creates clusters that in turn tend to make regions more competitive. Successful entrepreneurship can even impact political-economic systems, as in Israel's transition from a socialist to capitalist environment in the 1990s.

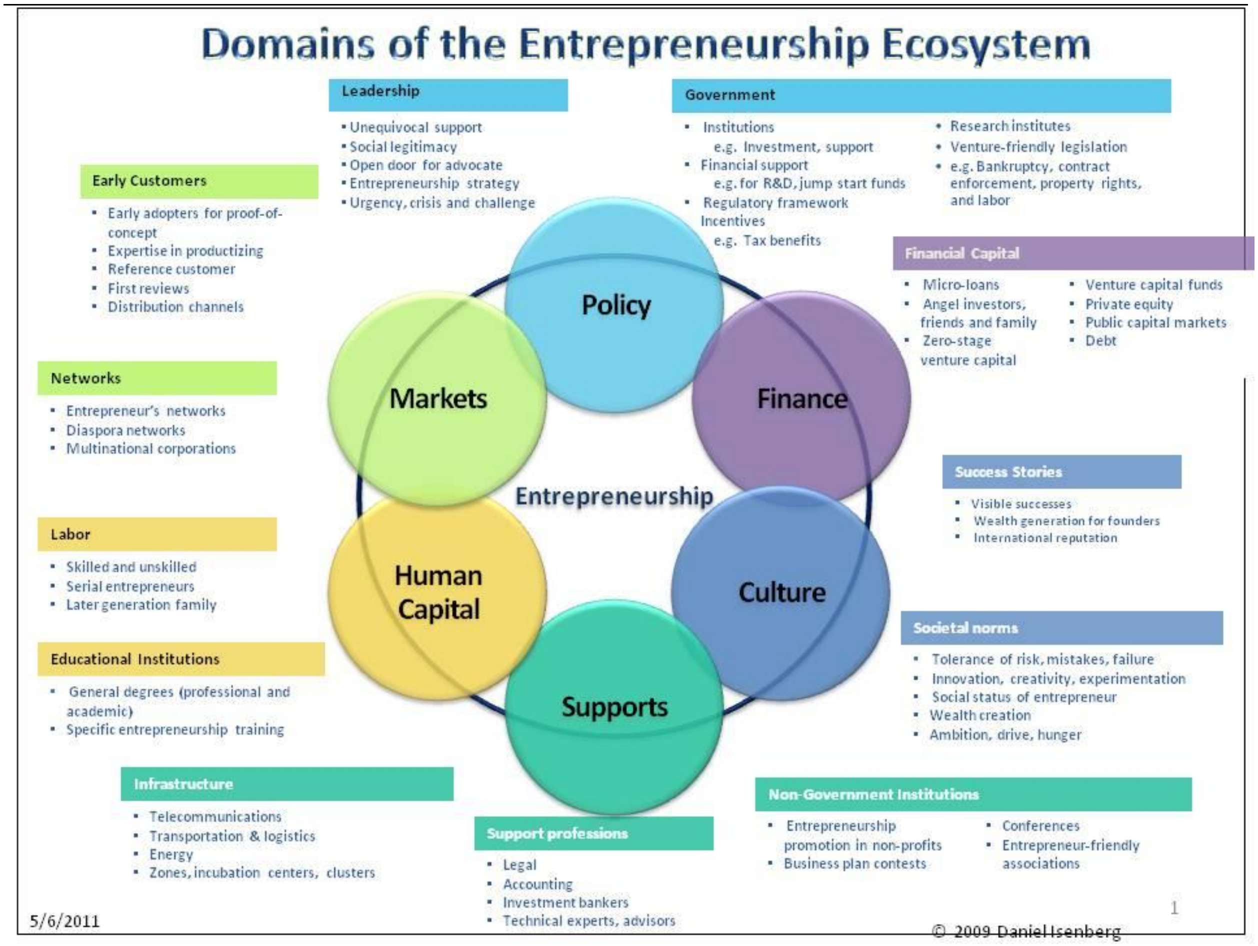
There are also spillovers in terms of quality of life, social innovativeness, and philanthropy. One has only to look at the Giving Pledge program established with the support of Bill Gates and Warren Buffet to see how successful entrepreneurs give back: There you will find testimonies of dozens of very wealthy entrepreneurs who explain why they are donating a significant portion of their wealth to philanthropies and social enterprise.

Policy implications. My observation is that public support for entrepreneurship is often an order of magnitude too low because public leaders don't fully understand the benefits or spillovers; add to that the confusion between business ownership per se and entrepreneurship, it is no wonder that funding for entrepreneurship gets diluted. In addition, there is a near-universal lack of understanding of how to use the funds, so that, for example when funds are allocated, they are simply given away rather than used as a stimulus to create a self-sustaining ecosystem. As a rule of thumb, I believe that a municipality should be allocating anywhere from .5% to 1.0% of its operating budget (not capital) to entrepreneurship development. A billion dollar municipal budget, for example, should allocate $5 million per year for the operating cash to support high potential entrepreneurship. BarcelonaActiva spends about $14 million annually. StartUp Chile costs $50 million for a 3-5 year period. Medellin spends $17 million annually.

It is an interesting exercise to Google the name of a head of state, in conjunction the word "entrepreneur." Obama and entrepreneur gets 10.6 million hits. Russia's Putin gets around 2 million. Israel's Netanyahu gets 360,000. Rwanda's Kagame gets 90,000. Ireland's McAleese gets 82,000. Lip service is not enough, of course, but public messaging *is* one of the necessary pre-conditions for creating more entrepreneurship. Public leaders need to explicitly communicate entrepreneurship as a high social priority, and they need to learn how to communicate that priority within the government and to the public.

Principle. **Intervene holistically with a comprehensive ecosystem perspective**.

At the heart of the entrepreneurship ecosystem strategy, not surprisingly, is a view of what factors comprise the entrepreneurship ecosystem and how it evolves. The need for an ecosystem strategy stems from the observation that when we see societies in which entrepreneurship occurs with any regularity or is self-sustaining, we see a unique, complex environment or ecosystem has evolved. This entrepreneurship ecosystem consists of a dozen or so elements (which we consolidate into six domains for convenience sake; see the diagram) that, although they are idiosyncratic because they interact in very complex ways, are always present if entrepreneurship is self-sustaining. So although the combinations are always unique, in order for there to be self-sustaining entrepreneurship, you need conducive policy, markets, capital, human skills, culture, and supports.



This diagram is beneficial in part because it reflects the world as it impinges on the entrepreneur's perceptions, and this how it impacts the entrepreneur's decisions and success. Second, for that reason, it includes some very important elements that are usually omitted such as early customers and Diaspora networks. As obvious as that might appear to us now, extremely few policies are devoted to training and incentivizing new markets and new customers. Entrepreneurs need early customers to talk to in order to define products and levels of service and serve as references, not to mention that money from a profitable customer is the sweetest form of finance for the entrepreneur.

Third, our diagram of the ecosystem lacks causal paths; there are no arrows indicating what causes what. This is related to what Harvard economist Ricardo Hausmann calls "high bandwidth" nature of policy, namely that effective policy has to deal with a large number of variables interacting in highly complex and specific ways. For example, in general you might argue that, say, education and culture are causal over the long run (maybe 30 years or so), but in reality, what we conceive of as outcomes are also powerful causes. For example, the existence of one tangible, local visible success can be a powerful root cause, and in most societies in which there is a step change in the level of entrepreneurship, you will find one or two successes that ignited the imagination of a generation of entrepreneurs. In Israel it occurred in the 1970s and early 1980s with two NASDAQ listings of Elscint (1972) and Scitex (1980). In Taiwan it was Acer Computer. In Ireland it was with Iona Technologies and Elan Medical. I call this the **law of small numbers**, and it is so powerful that even brute forcing a few successes, or celebrating those that have occurred randomly, must be a central part of any ecosystem development program.

Policy implications. One of the implications of the entrepreneurship ecosystem strategy is that societies have no choice but to "cultivate their own." You cannot become Silicon Valley and should not even try; Silicon Valley could not even become itself today if it wanted to. Nor should you emulate Silicon Valley, despite the fact that there are 79 "siliconia" around the world. Growing your own requires time, effort and resources, as well as experimentation and learning until the right unique configurations evolve. Leaders cannot copy anyone else's model because no one can replicate someone else's ecosystem. One of my friends from Korea asked how Korea could copy the Israeli model: I told him, tongue-in-cheek of course, for starters, get China, Japan and Taiwan to declare war on you simultaneously.

Another implication of the entrepreneurship ecosystem strategy is that there is no policy silver bullet. Streamlining the permitting process or passing progressive bankruptcy laws are ultimately necessary, but insufficient. Research has shown that these changes have at best a positive but very small impact. Introducing entrepreneurship education is certainly important, but by itself it can backfire when the fired up graduates move elsewhere to find a more conducive environment. Making capital available is a waste of time if there is insufficient deal flow, and indeed, we have observed that in well-intentioned policies in various countries. Providing support to entrepreneurs in the form of space or capital or loans is meaningless unless more mature companies are willing to engage start ups as potential suppliers. All of these are at best mildly effective if carried out in isolation.

In fact, piecemeal approaches may lead to "perverse consequences." Educating students, for example, in the absence of access to capital and a conducive legal environment will motivate students to leave: this is exactly what happens in Puerto Rico, which has one of the top 10 engineering schools in the US: some Puerto Ricans refer sarcastically to UPR Mayaguez as Puerto Rico's best exporter. Attracting or providing venture capital without a deal flow or exit possibilities, actually retards the development of private equity by driving it away. Providing incubators without worrying about how to make capital available (which is different from giving capital away) actually drains huge resources from where they might be better applied. So policy makers and public leaders ignore the complexity of the ecosystem at their peril and any entrepreneurship development policy, one with the mission to deliberately make measurable change in a short time, must address many factors in parallel, and in non-formulaic ways.

Let me illustrate the problem with a situation that I have encountered numerous times, so often, in fact, that I am tempted to name it the **"Fallacy of Market Failure Inevitability**." From the entrepreneurial "supply side," there are large numbers of talented people eager, in principle, to try out interesting ideas in the marketplace, but who don't have the resources. When you dig deeper, they invariably complain that they need seed financing (or human resources, or customers) and no one is willing to finance them. The private investors are nervous, the few venture capitalists won't give them the time of day or make "rapacious" demands, getting small government grants or loans takes forever ("too little, too late, too bureaucratic"), and the SME teams in the banks won't lend to them because they can't provide sufficient collateral.

From the demand side, what you hear from potential providers of finance is that the deal flow is poor in quality and quantity, the entrepreneurs don't understand what VC's demand in normal deal terms, the entrepreneurs don't understand that banks care about securing their loans and are not interested in the venture's innovative business model or upside potential, and the non-institutional private investors do not know how to evaluate a business model or the terms of a deal.

All of these things are more commonplace than not. You could say, well, let's educate the entrepreneurs so that they know how to raise money. But if that is all you do, you create great incentives for the entrepreneurs to pick up and leave to where they can get the resources and environment to succeed.

Some government officials observe this state of affairs and wave the banner, if they have taken an economics course, "market failure," or if they have been to some venture capital seminars, they cry, "valley of death for venture financing." So what do they do? Provide funding to bridge the gap, up to 100,000s of dollars in some cases, depending on the program. And they count up the numbers of ventures they have "helped" or the amounts of money they have "invested," and claim progress.

The only problem is that you may have inadvertently distorted the equity markets by not allowing for any sustainable pricing mechanism to kick in. The result is that the private equity investors are driven further downstream. Very few programs, Israel's Office of the Chief Scientist among them, utilize the leverage of smart-matching government funding to simultaneously draw in private equity in such a way as to establish a "market," which is essential for sustained involvement by the providers of finance. Without that "market", there can be little improvement of the deal flow quality because there is no natural selection mechanism and the market does not distinguish between the deserving and the undeserving. So often, government funding to address early stage venture "market failure" can actually make matters worse, unless it is part of the cultivation of an entire ecosystem.

Of course, I am oversimplifying, but the only way to solve this problem is holistically and specifically, by impacting the entire ecosystem and stimulating virtuous circles among all elements.

Principle. **Set a target of one new high potential venture entering the system every year, for about every 50,000 to 150,000 people.**

Spillovers are positive feedback, and all engineers know that a system with positive feedback sometimes hits a tipping point in which it becomes self-generating or self-sustaining, at least relatively so. In fact, if you look at regions that have become extraordinarily entrepreneurial, such as Taiwan, Israel, and Iceland, as well as specific regions such as Boston and Silicon Valley, and now New York City, Chile in the 1990s and from what I have read, Ireland in the 1980s and 1990s, you observe entrepreneurship start to catch on, to take off. People start talking about it, it becomes socially acceptable, the institutions begin to form, and government recognizes that something positive is happening and sometimes listens to the newly influential entrepreneurs and initiates reforms. The ecosystem is strengthened, which generates more entrepreneurs, which strengthens the ecosystem. Success breeds success.

I find it interesting that in the business world, setting clear, challenging, measurable objectives is as normal as in the policy sector it is unusual. I recently met with the head of a newly launched, very large entrepreneurship development program, who was looking for advice on how to be successful; but when I asked him, what is your target, he had never thought about it. And to paraphrase the Cheshire Cat in Alice in Wonderland, if you don't know where you are going, any road will lead you there. You need to know which way is True North if you want to navigate. So not only do you need to define the type of entrepreneurship, you need to define how much of it you need.

For the past year we have been developing a rule of thumb: if a reasonably compact and populous region annually generates one high potential venture for every 50,000 to 150,000 inhabitants, you reach a tipping point. For relatively sparse populations (e.g. Ireland) one per 50,000 is enough, and for very dense ones, Buenos Aires for example, you might be able to get away with one per 150,000 people. Of course these are not systematically derived heuristics, but I have used them in many settings and they seem to be both useful and not far off. If you adopt an entrepreneurship ecosystem strategy, the question how much entrepreneurship is enough, is natural, because you want to know what it takes to create a tipping point of sustainability. However, implicit in the state of the art entrepreneurship policy is simply a belief that "the more, the merrier." That is one additional reason why policy makers' focus is naturally drawn to micro entrepreneurship—you can generate lots of it, and it is often politically sexier to create 1,000 micro-enterprises or small businesses than 10 high-growth, entrepreneurial ventures.

Policy implications. There are at least two flies to that policy ointment: We have reason to believe that 1000 micro-enterprises employing one person do not morph naturally into 10 high growth ventures employing 100 people each. On the other hand, there is also reason to believe that the effort and process of getting to 10 high growth ventures spins off a lot of other kinds of businesses, such as smaller suppliers who naturally sprout up around growing ventures. Succcessful entrepreneurship draws in professional support services such as venture-friendly lawyers, accountants, consultants, investment bankers, caterers, facilities managers, etc. In other words, if you focus on getting to one high potential venture a year for every 100,000 residents, the mix of small and small-but-growing will tend to sort itself out.

A second policy implication of having a measurable target is that you have to try hard to achieve this ambitious target, but since a lot will fail along the way, you need an environment that does not over-penalize failure. Note the use of the word, "over-penalize." Failures are a necessary evil, but just because they are necessary, let's not pretend that they are wonderful. To get there, lots have to try, many will fail. But the failure, especially if failure is quick, does not mean that all is lost. The "factor inputs" to entrepreneurial ventures are recycled. Many of the failed entrepreneurs, having tasted the fruit of independence and the drug of entrepreneurship, try again, or "hang around" engaged in related activities, in the meanwhile freeing up capital and other resources to be recycled back into high potential ventures. In fact if you look at entrepreneurial societies, you see that in fact they tend to have high venture failure rates. The policy objective should not be to have a high venture survival rate, but to have high potential ventures survive, and low potential ventures to fail, the sooner the better.

Principle. **Focus on very specific, concentrated geographies**.

As we look around the world, entrepreneurship tends to be geographically concentrated in specific regions, cities, neighborhoods, and even buildings. Even in regions not particularly known for their entrepreneurship, it is still possible to find hotbeds of entrepreneurship, what I call "watering holes" (the use of the term cluster in this context is a misuse of the cluster concept I believe). Puerto Rico, a small 100x35 mile island, has two very small areas known for the disproportionate concentration of entrepreneurs, Mayaguez and Caguas. Research in Germany has shown that even adjacent states can have completely different levels of entrepreneurial activity. The highest geographical concentration of entrepreneurs in the world is not in Silicon Valley or Tel Aviv or Cambridge England, but in Cambridge Massachusetts, in one building, on 8 of the floors of the Cambridge Innovation Center, which, by the way, is a for-profit <u>non</u>-incubator venture by the way that houses 350 start ups in Kendall Square.

Why is this true? Because resources tend to be concentrated locally and attract each other: human, capital, information, and markets tend to gravitate to one another. In addition, the demonstration effects are more potent when they are proximal, and the spillovers (which I will refer to later) are stronger as well.

Policy implications. Yet most governments, researchers, and policy makers continue by and large to treat the nation as the unit of analysis, and believe, for political purposes, that resources should be evenly distributed, more or less. Undeniably, nations can formulate policy to impact regional regulation, infrastructure, and the availability of certain resources. But if we need to make a measurable impact in a reasonable time frame, and arguably at all, the greatest effort has to be concentrated in a small footprint region, such as a city or even neighborhood. Experiments such as BarcelonActiva are illustrations of this. Buenos Aires is becoming an island of entrepreneurship because of concentrated and sustained effort supported by a broad based coalition of public and private entities and has, among many other things, passed an entrepreneurship day law. Chicago is now on the map following Groupon's visibility. Hsinchu Science City in Taiwan is another excellent example. Cape Town now has its own Entrepreneurship Week in recognition of the fact.

Furthermore there is an inherent tension in geographically concentrating public resources, and thereby denying to others by virtue of their geography. But to resolve this tension by dispersing resources "equitably" is self-defeating, as Canada and others have seen. Entrepreneurship, to be self-sustaining, requires an ecosystem, and an ecosystem requires proximity so the different domains can evolve together and become mutually reinforcing. Entrepreneurship education can support capital formation, and capital formation can support government reform. By the way, this is different from saying that there should, as a matter of policy, be incubators or innovation centers or clusters or science parks. These are particular support structures that can easily be white elephants, are certainly not necessary, and when they do work, do so only when (a) there is first entrepreneurship, and (b) they are part of an entire ecosystem. Opposite from "Field of Dreams," If you build it, they may or may not come. But if they come, then build it. **Pave the footpath walked by entrepreneurs, who by their nature, always cut across the grass**. And by that time, there is likely enough opportunity there for the private sector to drive the geography, rather than government. Israel is a perfect example where "clusters" were no more than real estate projects call high tech parks. No mentors, no seminars, no support services. Just a place to hang out, and one they paid for. So, yes, it is good for entrepreneurs to have a place where resources are concentrated, but it is far from necessary and highly overrated, and I know of no empirical evidence that a dollar is better spent on an incubating infrastructure or directly on the ventures. I suspect the latter is the case. But because we have not given policy makers a compass which points to True North, they navigate by landmarks. True North is more or less 1/100,000 high potential ventures (of any sector) entering the system every year. True North is enhancing the entire ecosystem for entrepreneurship.

Principle. Establish an organization with a "sell-by" date to impact the ecosystem.

If you believe as I do that an entire ecosystem must exist in order for entrepreneurship to be sustainable – sustainability that ultimately exists without much central control is inherent in the concept of ecosystem—**and** have the positive impacts that it can have, then it logically follows that somebody should be responsible for seeing that the ecosystem evolves, **and then exits**. Since few leaders have an entrepreneurship ecosystem perspective, it should not be surprising that there are extremely few examples of such responsible people or entities. In fact, it is worse: Government has the mandate to intervene holistically, but not the competence. Government officials are not selected for their understanding of entrepreneurship or their ability to be entrepreneurs; those with entrepreneurial tendencies tend to select themselves out. That is as it should be. The private sectors (which are not just one entity, but a potpourri of species of entities) may have the competence but not the mandate, perspective, or motivation—their activities are focused on profit generation, hopefully responsibly and socially aware because it is in their interests, as they should be.

Policy implications. So let's get a little more practical. One of the implications of the entrepreneurship ecosystem perspective is that you need to invent a new organization that has the mandate, competence and motivation to enhance the entrepreneurship ecosystem in order to achieve a self-sustaining amount of entrepreneurship. I think we collectively know enough how to "spec" this organization, and let me offer an initial specification:

- It has the public mandate, the perspective, the training, and the resources, to impact all elements of the entrepreneurship ecosystem.
- It is independent, not owned by any ministry, university, or organization.
- It is accountable for reaching the tipping point.
- It is temporary—it has a sell-by date, a life span, a disband notice, no more than five years.
- It knows how to experiment, learn, re-orient, scale, and spinoff programs.

Leaders need to create a brand new team of what I call "entrepreneurship enablers." They should not be "owned" by the government, by a university, or by an incubator or support organization, but by representatives of all. They should be a S.W.A.T. team empowered to succeed and resourced with everything needed to do so, and with effective professional supervision. That is what we do at the Babson Entrepreneurship Ecosystem Project.

In addition to adopting an entrepreneurship ecosystem perspective and strategy, the innovative aspect of this organization is the fact that it is self-liquidating in concept and in practice. I know of very few public entities that have true "sell-by" dates. Yozma is one of the few government initiatives I have seen that was structured with the goal of impacting the venture-financing elements of the ecosystem and used its self-liquidating feature in order to succeed at it. A $100 million fund-of-funds, to simplify a bit, Yozma in 1993 began to co-invest in new venture capital funds as part of a three-legged stool consisting of an experienced foreign VC fund manager, a local fund manager vetted by the foreigner, both of whom put up 60% of the capital. Yozma put up 40% of the capital, and gave the other two partners an option to buy out the government at a 7% interest rate. Within 3 years 10 funds were created. Within 5 years, 8 of them exercised their option, Yozma auctioned off the remaining assets, Yozma was gone and the government was out, with a $50 million gain, to boot. But more importantly, by 1998 it left behind $200 million in new funds under management, over two dozen experienced Israeli fund managers, and committed foreign venture capitalists.

Now, Yozma did not exist in a vacuum, and it is difficult to tease apart what was luck in timing, what was wisdom in concept, and what was skill in execution. There were certainly elements of all three. But the important impact was in contributing significantly to a self-sustaining virtuous circle.

The irony is that although there are few deliberate entrepreneurship ecosystem approaches, we collectively know a lot about how to impact individual domains of the entrepreneurship ecosystem. We know how to educate entrepreneurs; we know the types and amounts of capital and capital markets that are effective, and their delivery mechanisms; we know how to impact the culture of entrepreneurship; we know a lot about the regulatory frameworks and governance structures; we know how to get large companies to interact with small innovative suppliers and how to actually create new markets of opportunity (e.g. Obama's health care initiative or environmental regulations); we know how to create special economic zones, business plan contests. But no one, or precious few, has put them all together, primarily because no one has elucidated the ecosystem strategy.

Summary and Conclusion

To summarize: Entrepreneurship is about profit-seeking ambition, and when successful, uniquely enriches the overall economy and society. Because of the spillovers, the task of the policy maker and public leader is to create a virtuous cycle of entrepreneurship. The shortest path to creating this virtuous cycle is to directly create, enhance, cultivate, evolve—a geographically concentrated ecosystem that is conducive to entrepreneurship and its success. To do so you need an independent team with the training, power, mandate, capacity, and resources to sufficiently and holistically impact the ecosystem, and then disband.

This is, I believe, a powerful statement from an economic policy perspective: the shortest path to growth is not through national innovation systems, it is not through national competitiveness, it is not through creating a knowledge-based economy, it is not through the creation of economic clusters, and it is not through foreign direct investment. At certain times these economic development strategies certainly play a role, but either (a) a pre-condition to these strategies' success is entrepreneurship; (b) they are a complement to entrepreneurship; (c) if implemented without an ecosystem perspective, they can be detrimental to entrepreneurship. Without entrepreneurs – economic actors – these strategies may lose a lot of their value. The shortest path is through the deliberate and informed cultivation of an entrepreneurship ecosystem.

Is this foolproof? No. There is tremendous uncertainty, and in every specific locale, responsible, informed experimentation and learning are required, but that is a part of the entrepreneurial process, isn't it? Is the entrepreneurship ecosystem strategy based on sound principles? Yes, the proposals are based on all the latest research and the widest review of practice. Can they do harm? I don't believe so. The only possible harm is the opportunity cost, and we know that leaders spend much more on programs that have less chance of success. And <u>the alternative of doing nothing at all, or doing things that we know don't work, is unacceptable</u>.

Entrepreneurship is no panacea for society's ills, but it has enough spillovers and is causal enough that it should be a public priority on par with education, security, welfare, energy, and health as a basic social good. I believe that if we gather all the dispersed wisdom (research, theory, and practice) in the world, we have sufficient practical knowhow about how entrepreneurship develops in societies to know what kinds we need, to know how much is enough, and to intentionally and strategically create enough of it in a given region that it will become self-sustaining. Let me be clear: entrepreneurship can naturally develop in societies; witness Ireland, Iceland, Israel, Chile and China. But we already know enough to achieve better results, faster, and cheaper than by leaving it to chance. And I am claiming that the investment is so low, and the potential benefit is so high, that we should immediately create dozens or hundreds of projects to test this out.

I want to come back to a colleague's framing of the problem, that the future of civilization as we know it depends, at least somewhat, on the spread of entrepreneurship. I do believe that entrepreneurship – sustainable, aspirational, and on a massive scale—will determine whether we live in a junk heap or not in 2050. I do believe that entrepreneurship is an idea whose time has come to all regions of the world, and to paraphrase Victor Hugo, no army is as strong as an idea whose time has come.