

A TALE OF TWO ENTREPRENEURS:
Understanding Differences in the Types
of Entrepreneurship in the Economy

Bill Aulet and Fiona Murray
Martin Trust Center for MIT Entrepreneurship

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Policymakers and pundits who use entrepreneurship as a “catch-all” phase to capture a single economic activity make an important mistake. There are two distinct types of entrepreneurship with different economic roles, requiring individually tailored policies to support each.

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Steve decided it was time to follow his dream and set up a pizza restaurant. He would specialize in organic ingredients, a painstakingly designed recipe for the crust, and an overall commitment to the environment. For Steve, the restaurant was an opportunity to work again after a three-year period without full-time employment.

Excited by the possibilities of her recent research results, Karen, a chemical engineering professor, decided it was time to file for patents on her new surface chemistry technology and create a business with a faculty colleague and two graduate students. Their strategic intent was to develop paper-thin solar sheets for a wide range of applications.

These two individuals have something important in common: they are entrepreneurs who have identified a new opportunity and are pursuing that opportunity regardless of the resources they currently have available.¹ There the similarities end.

Why Entrepreneurs Can Be Different from One Another

Steve and Karen differ in their ultimate aspirations. Steve considers success to be a thriving local restaurant, but Karen hopes to serve many customers in global markets. Steve is innovating in his ingredients, the unique composition of his pizza crust, and his recipes, but his pizza is still recognizably a pizza. By contrast, Karen will bring newly conceived features and functionality to customers; if all goes well, the team's paper-thin

¹ H. Stevenson, “A Perspective on Entrepreneurship” (Harvard Business School Working Paper No. 9-384-131, 1983).

solar sheets will transform how soldiers operate in the field, how rural communities charge their cell phones, and how medicine is practiced in remote communities. Karen's team also may innovate in the business model they use, not simply selling sheets but perhaps leasing them, using microfinance or other approaches.

Steve and Karen also differ in the resources they will need and in how they will go about organizing their entrepreneurial activities. While Steve will mostly work alone in a sole proprietorship, Karen already has a founding team and soon will have a board and investors to answer to.

Most important of all, Steve and Karen differ in their potential impact on the economy. While restaurants are certainly risky, Steve has a chance at modest success if he executes his business well. If successful, he likely will create a small number of jobs—mainly for waitstaff and kitchen workers. In contrast, Karen's business is highly risky and chances are that (like so many high-tech entrepreneurial startups) she will fail, creating no jobs at all. On the other hand, if she succeeds, she will create tens to hundreds of jobs for PhDs and master's-level graduates in chemistry, engineering, and business. She also might create manufacturing jobs and sales jobs around the world.

Different Types of Entrepreneurship: IDE versus SME

Karen's activities exemplify a type of entrepreneurship we refer to as innovation-driven entrepreneurship—the creation of “innovation-driven enterprises” (IDEs) that pursue global opportunities based on bringing to customers new innovations that have a clear competitive advantage and high growth *potential*. By innovation, we mean new-to-the-world ideas in the technical, market, or business model domain. The notion of being innovation driven is critical as it emphasizes the entrepreneur's awareness of the need to build competitive advantage, which for an entrepreneur can only be done by taking today's resources and doing something distinctive with them: what Joseph Schumpeter² called “new combinations.” As an aside, we very consciously do not use the term “technology-driven” entrepreneurship because innovation is not limited to technology. Innovation can come in many varieties including technology, process, business model, and more.

Some of the most exciting innovations of our time, such as Google, iTunes, Salesforce.com, Netflix, Zipcar, and many more are, at their core, business model innovations. They are enabled by technology, yes—Zipcar would find it difficult to maintain its large network of cars without keyless-entry technology for its members. But inherently, Zipcar's innovation is treating a rental car as a substitute for owning a car, rather than as temporary transportation for car owners and business travelers visiting far-flung areas. Zipcar doesn't have to understand the intricacies of its technology to be successful, but it has to understand what it means for its customers to “collaboratively consume.” As technology becomes more and more commoditized, there still will be many opportunities for technology-driven innovation in areas like energy storage, power

² J. Schumpeter, *The Theory of Economic Development* (Cambridge, MA: Harvard University Press, 1934).

electronics, wireless communications, and much more, but that is not the sole definition of innovation.

Steve's activities we think of as small business entrepreneurship—the creation of “small and medium enterprises” (SME), serving local markets with traditional, well-understood business ideas and limited competitive advantage. Steve will prosper (or not) depending upon his business acumen, his ability to execute his project, and prevailing local demand, but he does not confront the multifaceted set of technical, market, and business risks faced by Karen and her team that render the execution challenge for IDEs even more imposing.

Although our daily work at the Martin Trust Center for MIT Entrepreneurship puts us in contact with entrepreneurs building IDEs on a daily basis, we do not assume that this is the only type of entrepreneurship that matters. As we have written about elsewhere,³ SMEs are the life blood of many economies. In some countries and regions, such as Andalucía in Spain, they form the majority of employment. Even in the United States, self-employment and SME creation are critical to moving people out of unemployment, particularly during periods of austerity. These jobs are particularly important for individuals with relatively low levels of education and skills, although SMEs also can create (small numbers of) jobs for skilled professionals. A form of self-employment, SMEs give people the opportunity to work independently and use their skills, particularly in times when large, established companies are laying off workers. On the other hand, SMEs are, as their name suggests, small! Many SMEs in the United States and Europe only employ a founder and a spouse, or just a handful of workers (the average European SME has four employees). On average, SMEs provide lower-than-average wages and poor benefits relative to either large established firms or their IDE counterparts.³ Note that “small businesses” are not necessarily job producers. The Kauffman Foundation found that *new* companies, that is, companies that are five years old or less, produced the lion's share—two-thirds—of the 40 million net new jobs seen by the American economy between 1980 and 2005.⁴

Contrast SMEs with the IDEs we advise and nurture in the Massachusetts entrepreneurial ecosystem and beyond. IDEs are focused from the beginning on addressing global markets. Taking a disciplined approach to building their business and using capital efficiently, IDE entrepreneurs might well start out with a focus on a regional (or niche) market, but only as a test bed for broader deployment of their product or service across regions or customer segments. If this initial experiment is successful, the IDEs likely will produce high levels of exports for the region. A critical element that enables expansion into global markets is the possession of (and focus on building) some underlying innovation (e.g. technology, process, business model) and a commitment to ensuring that the innovation is protected so the business will have a competitive advantage as it enters new markets. To build IDEs, entrepreneurs very

³ Bill Aulet and Fiona Murray, “Not All Jobs Are Created Equal,” *The Boston Globe*, October 17, 2012.

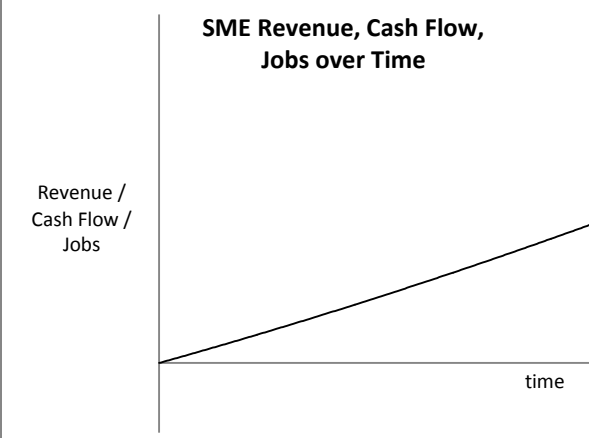
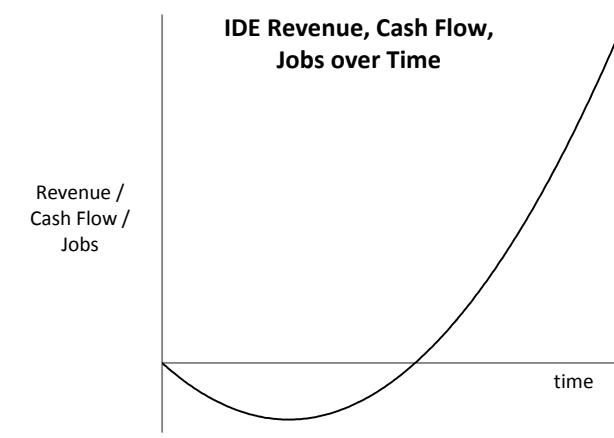
⁴ Dane Stangler and Robert E. Litan, *Where Will the Jobs Come From?* (Kansas City, MO: Ewing Marion Kauffman Foundation, 2009).

likely will require some investment to develop their competitive advantage and access global markets at scale. External capital is a hallmark of IDEs when compared to typical SMEs. External capital can be venture capital, but today's market-savvy IDE entrepreneurs also are using angel funds, strategic partners, and other sources of external capital.

What is the impact of IDE entrepreneurship on jobs compared to SME-oriented job creation? With regard to the entrepreneurial team, IDEs are more likely than SMEs to be founded by a team with a diverse set of skills. IDEs generally (but not necessarily) require individuals with much higher levels of education and training. Biotechnology IDEs usually are founded, led, and staffed by individuals with PhDs in molecular biology, MDs (physicians), and MBAs. And as IDEs grow and succeed, they also create a wealth of auxiliary employment for those with lower skills—laboratory technicians, manufacturing staff, clinical trial managers, hospital workers, and so on. Beyond the jobs they create, as Enrico Moretti has argued in the *New Geography of Jobs*,⁵ IDEs have a job multiplier effect, creating five jobs for every direct IDE job. Indeed, in Massachusetts, the Biotechnology Council has calculated that for every biotechnology job created directly by a biotech-focused IDE, five auxiliary jobs are created.⁶ The same is true for the clean energy cluster that is emerging in Colorado and the digital business cluster in London's Tech City area, which is being transformed by the direct and indirect job creation of digital IDEs. Of course, there are many challenges in job creation through IDE growth. These companies are highly risky—they have a high chance of failure (a high chance of using resources but, at the end of the day, creating no jobs at all). On the other hand, they have a small chance of being an overwhelming success and being the next Google or Genzyme, creating hundreds of exciting high-skilled jobs and many thousands of auxiliary jobs.

⁵ Enrico Moretti, *The New Geography of Jobs* (New York: Houghton Mifflin Harcourt, 2012).

⁶ "President Obama, the 111th Congress, and Biotechnology: Working Together Today to Ensure a Healthy Tomorrow," Massachusetts Biotechnology Council, 2009, http://www.massbio.org/writable/files/Policy/mbc_white_paper_2009.pdf.

SME Entrepreneurship	IDE Entrepreneurship
Focus on addressing local and regional markets only.	Focus on global markets.
Innovation is not necessary to SME establishment and growth, nor is competitive advantage.	The company is based on some sort of innovation (tech, process, business model) and potential competitive advantage.
“Non-tradable jobs”—jobs generally performed locally, e.g. restaurants, dry cleaners, service industry.	“Tradable jobs”—jobs that do not have to be performed locally.
Most often family businesses or businesses with very little external capital.	More diverse ownership base including wide array of external capital providers.
The company typically grows at a linear rate. When you put money into the company, the system (revenue, cash flow, jobs, etc.) will respond quickly in a positive manner.	The company starts by losing money, but if successful will have exponential growth. Requires investment. When you put money into the company, the revenue/cash flow/jobs numbers do not respond quickly.
 The graph shows a linear increase over time. The y-axis is labeled 'Revenue / Cash Flow / Jobs' and the x-axis is labeled 'time'. A straight line starts from the origin and slopes upwards at a constant rate.	 The graph shows an initial period of loss (negative values) followed by exponential growth. The y-axis is labeled 'Revenue / Cash Flow / Jobs' and the x-axis is labeled 'time'. The curve starts below the x-axis, dips to a minimum, and then rises steeply, crossing the x-axis and continuing upwards.

Why the Difference Matters

The distinctions between IDE and SME creation are important for entrepreneurs. Let's take a third entrepreneur who founded a business at the same time as Karen and Steve: Joe, an immigrant engineer with more than thirty years of technical experience, who lost his job in a large industrial company and decided to start his own company. He joined forces with another former colleague and together they developed a small technical consulting business. Joe's business could be built with the aim of establishing either an SME or an IDE, but the two paths are completely different. Joe has a much better chance of succeeding if he and his partner define their goals and then build the business accordingly.

If he wants to build an SME, Joe can focus on using his technical skills as a consultant on a project-by-project basis. He might hire others but only for particular projects. If he has any product ideas, he will probably try and license them to large companies—even his former employer. To succeed, he should focus on minimizing his overhead and ensuring a steady stream of small contracts that minimize the fluctuations in commitments, and limit the degree to which he has to use up limited capital or make long-term employment agreements to service his clients.

On the other hand, Joe could try to build an IDE. This would require him to really understand the *unique* technical skills he brings to the table. Perhaps he could build a strong database of projects throughout his industry, drawing on his own knowledge and public documents, using this as the basis for high-value-adding consulting around the country and abroad. If he were to do this, Joe would have to build up a team of individuals with similarly high-level skills, but in diverse areas. While he is out building the client base, his team would have to be able to execute on each project, building expertise as they go to ensure that with each new project, their marginal costs were declining and the unique customer value added was increasing. Joe may well have taken on loss-leader projects at the start to ensure that he could build a unique position in the industry. Alternatively, Joe could develop a *unique* new product design that meets the needs of a large or expanding market, file for patents, and lease some lab space to initiate proof-of-concept experiments. His capital expenditures (and risks) would be higher and he probably would need some initial capital (from an angel investor perhaps). He would have to build a team that included other highly skilled professions as well as technicians. His capital expenditure on manufacturing and distribution would depend on his choice of strategy with regard to large corporate partners, but he would be focusing his attention on how to build competitive advantage and create an effective strategy.

These are two very different views of Joe's future. Again, neither is inherently better for Joe—it really depends on what he wants, his tolerance for risk, his personal situation, and his vision for the business he wants in the future. The critical factor is clarity of purpose and the appropriate pursuit of that purpose and the opportunity. Moreover, there is nothing to stop Joe from changing his mind and making a mid-course correction. We do not believe that SME businesses have no chance of becoming IDEs,

but that such a shift requires a clear-sighted analysis of current (and future) competitive advantage and plausible regional and global market opportunities, and a match between the current team and employees and the needs of the future IDE business.

The IDE-SME Difference Matters for Family Businesses Too!

One particular tension that can arise in succession planning in multigenerational family businesses is the difference in vision from one generation to the next. Perhaps the first generation was satisfied with an SME that provided for the family and successfully ensured a high standard of living for the next generation and extended family. However, the new generation might have global ambitions to create an IDE that would at once require taking on more risk, more external capital, and new employees. Framed this way, succession across generations can seem less personal and more strategic (and perhaps more manageable).

Why Governments Must Care about the IDE-SME Distinction

For governments looking to create jobs by promoting entrepreneurship, clarity on the different types of entrepreneurship is necessary but often lacking, not least because governments fundamentally are not entrepreneurial organizations, and often are staffed by people who lack entrepreneurial experience of either the IDE or SME type. As a result, policies frequently “lump” both sorts of entrepreneurs together, even though their needs are substantially different. From training programs and tax incentives to business accelerators and mentoring activities, entrepreneurial support programs must be designed differently for IDE-building entrepreneurs than for SME entrepreneurs.

We have seen that around the world, various organizations’ enthusiastic efforts to support entrepreneurship fail to achieve the results they desire, precisely because they try to address SME *and* IDE entrepreneurship through a singular organization. It is better for an individual organization to choose one focus and perform well, rather than choose both SME and IDE, leaving the organization unfocused and unsuccessful. There need to be two separate support structures for these two types (SME and IDE) that have different support personnel and different programs.

Even more important, organizations that intend to support either IDE or SME need different metrics for success and should be judged over a different timeframe. SME programs are regional in their focus and, if well-executed, can provide for a short-term payback, but are unlikely to have a dramatic impact on large-scale job creation. Investment in supporting SMEs also is attractive because it can be geographically targeted, so a politician can more easily directly support his geographically assigned constituents. In contrast, an organization addressing IDE entrepreneurship must have the flexibility to address long-term strategies for economic growth, which can be slower to produce desirable results and often requires a range of stakeholders engaged in IDE acceleration beyond just entrepreneurs—large corporate partners, universities, and risk capital providers also must come to the table. Yes, IDE entrepreneurship is more challenging, but it offers much greater potential upside in the long term. Take Italy as an example of the shortcomings of a confused strategy, as the *Wall Street Journal*

described in November 2011. In Italy, entrepreneurs stay small, in trusted regional markets, because government policies discourage their aspirations for growth. Italy's economic woes partly are due to the entrepreneurs who do not plan for IDE creation, but instead stay focused on approaches for establishing more traditional SMEs.⁷

Given these differences, organizations that combine SME and IDE entrepreneurship tend to falter. Regardless of their stated intentions, over time they tend to allocate proportionally more resources to SME at the expense of IDE because of the need for immediate and visible results.

If job creation and economic prosperity are the goals for a government, IDE entrepreneurship must be a major element of government strategy and policymaking. IDE generates many more new jobs and more exports than SME. And to ensure that IDE entrepreneurship has the right support structures, separate and equitable organizations will need to be set up, with different programs and mindsets, to support SME and IDE entrepreneurship.

⁷ Stacy Meichtry and Deborah Ball, "Culture Built on Family Firms Tests Italy's Plan for Growth," *The Wall Street Journal*, November 14, 2011.