



# 2016 United States Report

**GLOBAL ENTREPRENEURSHIP MONITOR**  
National Entrepreneurial Assessment for the United States of America



Donna J. Kelley, Abdul Ali, Candida Brush, Andrew Corbett, Phillip Kim and Mahdi Majbouri





# Global Entrepreneurship Monitor United States Report 2016



Babson College  
Babson Park, MA





# Global Entrepreneurship Monitor

## United States Report 2016



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Although GEM data were used in the preparation of this report, their interpretation and use are the sole responsibility of the authors.

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# Executive Summary

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In 2016, more than 25 million Americans were estimated to be starting or running a new business, based on the Global Entrepreneurship Monitor's Total Entrepreneurial Activity (TEA) rate of 13%. These entrepreneurs include men and women of all ages and ethnicities starting businesses that impact the United States in a variety of ways. They are supported by a society that believes in the power of entrepreneurship, including potential, current and past entrepreneurs and those who have a willingness to invest in them, buy from them, supply them, advise them with products or services and engage with them in multiple other ways.

The GEM 2016 United States Report provides a comprehensive and detailed account of entrepreneurship in the United States. The report includes global and longitudinal comparisons of entrepreneurship across multiple phases and types of business activity, demographic characteristics of entrepreneurs and the characteristics of and expectations they have for their businesses. A unique feature of this report is a city-level analysis of entrepreneurship in Boston, Detroit and Miami.

A key aim of the United States Global Entrepreneurship Monitor is to provide a broad audience—educators, researchers, policy makers, practitioners—with information and analysis that can enhance understanding, decision making and actions regarding entrepreneurship. Within these pages, readers can extract several insights, many of which are reviewed below. To provoke further reflection and dialogue, the report identifies the implications of some of these insights.

## KEY FINDINGS

### *Attitudes*

- Opportunity perceptions are high and increasing in the United States. Compared to 2009, twice as many Americans saw good opportunities around them for starting a business in 2016 (57% in 2016 vs 28% in 2009). It is this attitude measure that most distinguishes the United States from the average (41%) reported in the other 26 innovation-driven economies.
- Americans remain confident in their entrepreneurial abilities, with 55% reporting they have the capability to start a business versus 43% on average across the other 26 innovation-driven economies. Capability perceptions represent the most stable GEM indicator for the United States, never fluctuating more than three or four percentage points since 2008.
- Fear of failure took an upward turn in 2016, reversing a three-year trend of gradual declines that had followed four years of post-recession increases.

## EXECUTIVE SUMMARY

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### *Activity*

- After experiencing a drop in 2015, TEA rates moved slightly upward in 2016 to 13%, continuing a six-year trend of high and relatively stable levels.
- Opportunity motives are higher in the United States than among its innovation-driven peers (88% vs 78% on average for the 26 other innovation-driven economies).
- Necessity motives dropped to 11% of TEA in 2016, below the low level reported in 2008 before the recession depressed entrepreneurship rates in 2009 and 2010 and necessity accounted for a higher proportion of business starts.
- The majority of entrepreneurs, 64%, are White/Non-Hispanic/Caucasian, reflective of the U.S. population. Black/African Americans and Latino/Hispanic ethnicities, however, also contribute substantially to entrepreneurship in the United States, accounting for 14% and 8% of entrepreneurs, respectively. Results from 2014 to 2016 suggest that entrepreneurship rates are more stable among the White/Non-Hispanic/Caucasian population and less stable among the other two ethnicities, particularly the Black/African American group.
- A two percentage point jump in established business ownership in 2016 reflects previous increases in startup activity, which provided a larger base of potential businesses that could be sustained into maturity.
- Entrepreneurial intentions in the United States are lower than the average of the 26 other innovation-driven economies (12% vs 16%), but nascent activity levels are higher (9% vs 5%). Given the level of stability generally exhibited in these two indicators over the past six years, it's not likely that this result arises from a sudden drop in intentions or a jump in nascent activity. It therefore appears to be a persistent pattern. What it does suggest is that Americans are less likely to express intentions but are inclined to act and perhaps do not face constraints in doing so.
- The United States shows an above-average level of entrepreneurial employee activity (EEA) for its development level, at 7% compared to an average of 5% for the 26 other innovation-driven economies. But the United States is also unique in having high rates of both EEA and TEA, demonstrating that American entrepreneurs are prolific in both independent and organizational contexts and that being entrepreneurial doesn't necessarily mean one must give up working as an employee.

### *Impact*

- Compared to the average for the 26 other innovation-driven economies (33%), the United States has fewer entrepreneurs (22%) competing in the wholesale/retail sector, but U.S. entrepreneurs are twice as likely as the average entrepreneur in innovation-driven economy to compete in the finance sector (8% vs 4%). Other service-based industries account for 40% of TEA in the United States.
- 8% of American entrepreneurs are starting information and communications technology (ICT) businesses. 10% state they are competing in medium- or high-technology sectors, and the same percentage report using new technology to produce or deliver their product or service.
- 37% of all entrepreneurs in the United States are developing and delivering innovative products or services, representing the highest level for this indicator in 15 years and higher than the average level for all other innovation economies (31%).
- 42% of U.S. entrepreneurs and 35% of U.S. established business owners expect to hire six or more employees in the next five years.
- 10.4% of entrepreneurs expect 25% or more of their sales to come from customers living outside the United States, down from 11.6% in 2015.

### Age

- Compared to the 26 other innovation-driven economies assessed by GEM in 2016, where the 25 to 34 year olds had the highest average TEA rate, the TEA rate in the United States peaks in the next oldest age group, the 35 to 44 year olds (17%).
- While the United States generally has a low percentage of entrepreneurs who state they started their businesses out of necessity, a higher proportion of necessity motives drive entrepreneurs over 45 compared to younger age groups.
- Compared to the older population in the United States, those in the younger age groups are more likely to see opportunities, but they are less likely to believe they have the needed capabilities for entrepreneurship, and their fear of failure is high. The older age groups, in contrast, don't see as many opportunities but they express more confidence in their capabilities and they are less afraid of failing.
- The gender gap in TEA rates is widest at mid-career (21% for men; 13% for women) with smaller but still substantial gaps in the age groups before and after mid-career.

### Gender

- The slight overall rise reported in the U.S. TEA rate is due to an increase among women entrepreneurs. In 2016, entrepreneurship rates rose for women by one percentage point to 10% while staying relatively steady for men at 15%. The increase occurs in the nascent phase of TEA (TEA combines both nascent and new activity). This means that more women have entered entrepreneurship in 2016 compared to 2015, while this level remained the same for men.
- Women's perceptions of opportunities and entrepreneurial intentions rose in 2016 (to 54% and 11% respectively), and the gender gap in these indicators narrowed. The gap between women and men in perceived capabilities increased slightly, however, with women exhibiting less confidence than men in their ability to start a business (48% vs 62%). Fear of failure has inched upward for both women (from 33% to 36%) and men (from 27% to 31%).
- Only 3% of women entrepreneurs start information and communications technology businesses, compared to 11% for men. Similarly, only 3% of women entrepreneurs consider their businesses to be in medium or high technology sectors compared to 8% of men, but women entrepreneurs are almost as likely to use new technology in their businesses: 9% compared to 10% for men.
- Compared to men, women start a much higher percentage of businesses in wholesale/retail (26% for women, 17% for men) and health/education/government/social services (21% vs 12%).
- Among entrepreneurs, women are more likely than men to introduce products and services that are new to customers and not generally offered by competitors (40% compared to 35%). They are less likely than men to report that more than 25% of their sales are international (8% vs 14%).

### *Three Cities*

- Total Entrepreneurial Activity is highest in Miami (22%), followed closely by Detroit (20%), while Boston's (12%) falls just below the national average. Necessity motives are higher than the national average in both Miami (19%) and Detroit (17%), while few entrepreneurs in Boston (8%) start based on necessity.
- Miami's established business ownership rate (10%) is above the national average, consistent with high startup activity. Boston's (7%) below average rates likewise can be attributed to lower TEA rates. Detroit's rate (5%), however, runs counter to its high TEA rates, which may be due to a recent jump in TEA that has not yet translated to mature business activity, or to issues around business sustainability.
- Age patterns show high entrepreneurship rates among young people in Detroit, those in mid-career in Miami and people in their late careers in Boston. Boston's entrepreneur demographics are also distinct in reporting the widest gender ratio, where women start businesses at little more than half the rate that men do, and a high proportion of women (36%) have at least some graduate-level education. Detroit stands out for having the highest entrepreneurship levels among the lowest third of the income category, while the highest third of the income earners are most likely to start businesses in Boston and Miami.
- In terms of industry, Miami shows high startup activity in the manufacturing/transportation and finance/real estate sectors, compared to national averages. Boston has higher than average levels in information/communications technology and finance/real estate. Detroit exhibits higher wholesale/retail activity than national levels.
- Both Boston (46%) and Detroit (43%) show higher levels of innovative entrepreneurial activity compared to the national average, with Boston's level at nearly twice that of Miami (24%). Detroit also has a high level of growth-oriented entrepreneurs, with 54% expecting more than five employees over the next five years. Miami (44%) also shows high levels on this indicator while Boston (34%) is just below the national level.
- Compared to national averages, Miami and Boston have more than twice the proportion of entrepreneurs who plan to have more than 25% of their total sales go to international markets. International sales are also prevalent among established business owners in these two cities. While internationalization levels are typically low in the United States, Miami and Boston stand out for their high reliance on international sales.







# Introduction

## The U.S. Economy in 2016

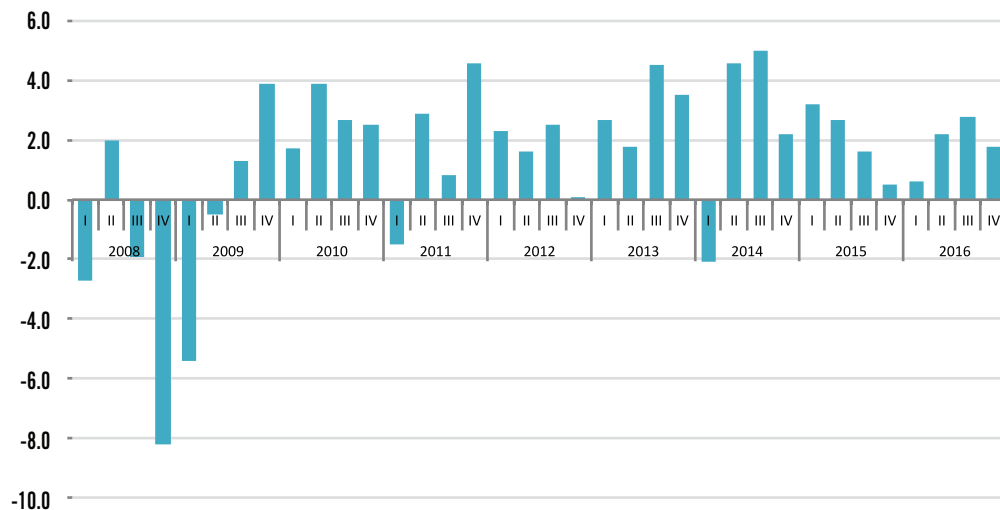
2016 was a year of the unexpected. While Brexit and the U.S. election results, the biggest political and economic events of the year, caught many by surprise, they were not the only events that defied conventional wisdom. Oil prices hit their lowest level in 13 years, falling below \$27 per barrel in February. This sharp and unexpected decline destabilized many other markets, such as the bond markets. Fear of a Chinese economic slowdown and another global recession were high and the stock markets were in decline. Yet after this inauspicious start, stocks rose sharply in February and continued to soar for the rest of the year.

The U.S. economy continued to grow in 2016, slowly in the beginning of the year and at a faster pace in the second and third quarters. The average annual growth rate was a bit less than 2% (See Figure 1). Inflation was low at only 1.6%, and unemployment rate declined to levels experienced prior to the great recession (see Figure 2). All of this signifies moderately healthy growth. While the U.S. economy had performed very well among the developed nations since the great recession, it was affected by the International Monetary Fund's (IMF) report of a lower-than-expected level of global economic growth in 2016, which resulted in a drag on the U.S. economy, particularly its manufacturing base, given that the United States is a major exporter and low global growth reduced demand for U.S. goods and services.

On the employment front, the U.S. economy added 2.3 million jobs from November 2015 through the end of November 2016, resulting in 74 consecutive months of nonfarm employment growth. American businesses created a cumulative 15.6 million jobs since March 2010, a time when private sector jobs had started increasing. In addition to low unemployment, labor force participation rose by 0.14 percentage points from 2015, which meant that some who were previously out of the labor market joined the labor force. This occurred while real wages continued to increase in 2016.

**FIGURE 1**  
Percentage Change  
in Real GDP from  
Previous Quarter  
(seasonally adjusted  
annual rates)

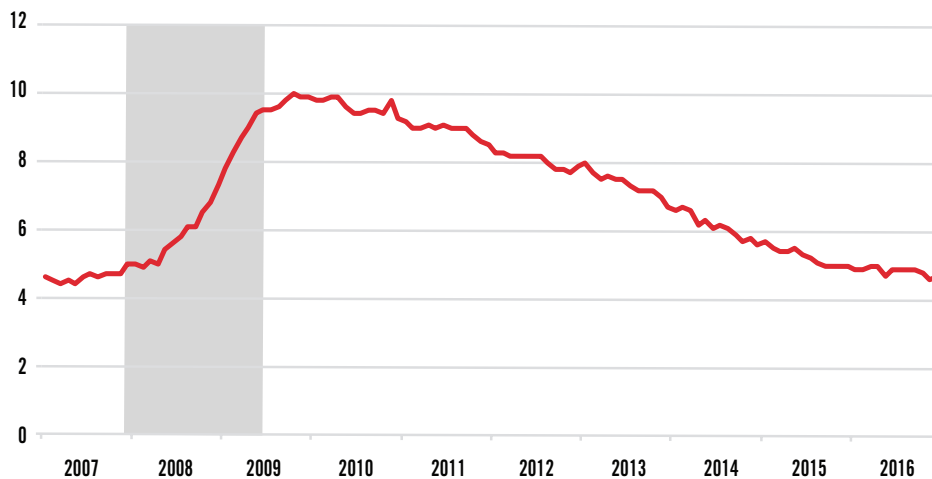
SOURCE OF DATA  
U.S. Bureau of  
Economic Analysis



The U.S. monetary policy is determined by the Federal Reserve and the fiscal policy is designed by Congress and the executive branch of the government. Following is a summary of these policies in 2016.

## THE 2016 MONETARY POLICY

Despite expectations of at least two interest rate hikes during 2016, there were none for almost the entire year. The first and only rate hike of 2016 happened in December, nearly a year after the interest rate was last raised in December of 2015.



**FIGURE 2**  
National  
Unemployment Rate  
(seasonally adjusted,  
in percentage)

SOURCE OF DATA  
U.S. Department of Labor,  
Bureau of Labor Statistics

Note: The gray box shows the recession period. Each tick mark on the horizontal axis shows the beginning of the year.

After the 2007/2008 recession, when the federal funds rate was lowered to virtually zero, the Federal Reserve had to employ an unconventional instrument, named quantitative easing (QE). By implementing this policy, the Federal Reserve bought a large amount of mortgage-backed securities and treasury bonds, thereby increasing money supply every month. In this way, the banks were encouraged to lend more, especially in the mortgage market, which would then have the effect of easing the financial markets and the credit crunch. By the end of November 2016, the large-scale asset purchases of QE increased the Fed's balance statement to \$4.45 trillion – more than five times its size at the end of 2006.

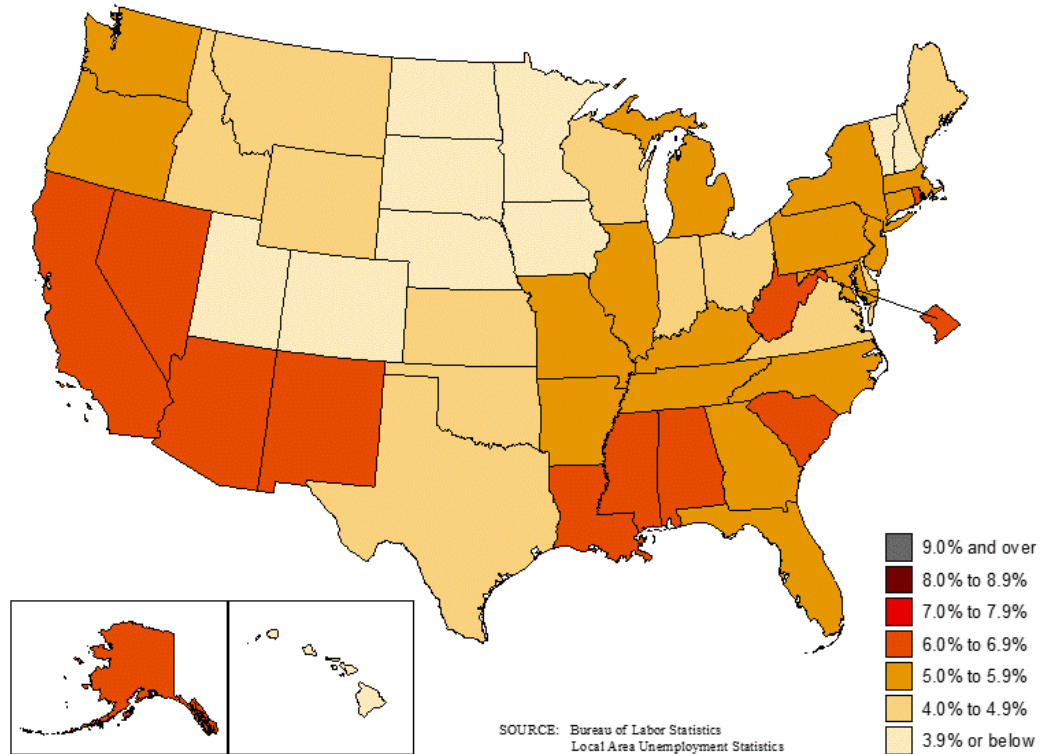
In 2016, with the volatility in the global economy and the aforementioned political surprises, the Federal Reserve had to move cautiously to change policy. Many expected the Federal Reserve to raise interest rates more, but a slow change occurred instead.

## INTRODUCTION

**FIGURE 3**  
**Unemployment**  
**Rates by State,**  
**2016 Annual Averages**

DATA SOURCE

US Department of Labor,  
Bureau of Labor  
Statistics. Accessed on  
September 20, 2017, via:  
[http://www.bls.gov/lau/  
maps/aastrate.gif](http://www.bls.gov/lau/maps/aastrate.gif)



### THE 2016 FISCAL POLICY

The fiscal restraint imposed on the federal budget since 2012 continued. After a decline in the budget deficit in 2015, it rose by a moderate 0.7 percentage points to 3.2% of the nominal GDP in 2016. This is almost equal to the average over the last 40 years. The deficit-to-GDP ratio has been declining from 2012 through 2014 by 1.9 percentage points each year. In 2016, however, there were expenses that needed to be paid, such as the Fixing America's Surface Transportation (FAST) Act was signed into law in December of 2015 to fund maintenance and construction of roads, bridges, and railroads for five years (\$306 billion total). Also, the Protecting Americans from Tax Hikes (PATH) Act was enacted in late 2015 to keep the earned income and child tax credits as well as the tax credit for students of higher education at their elevated 2009 levels. Moreover, PATH offered permanent tax incentives for small business investment as well as investment in research and experimentation. There was also \$1.1 billion assigned for fighting Zika. All of these actions created expenses or lowered revenues and hence raised the budget deficit, albeit by a modest amount.

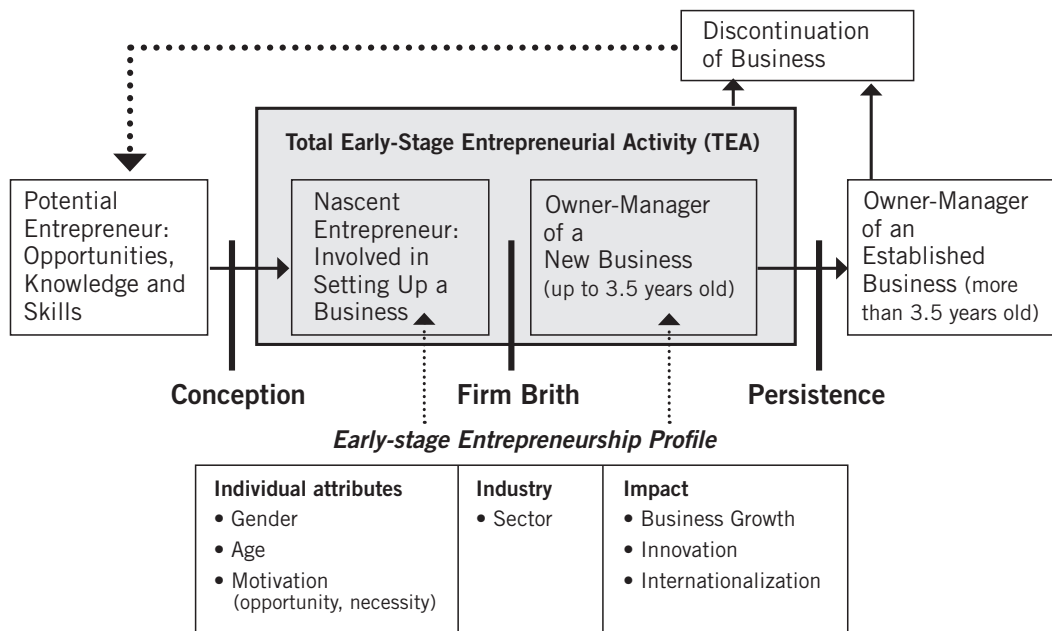
Overall, one can consider 2016 a tumultuous year with uncertainty about the future for U.S. entrepreneurs, though markets reacted positively to many of the surprises and ended the year better than they started it.

### THE GLOBAL ENTREPRENEURSHIP MONITOR

This report provides a detailed assessment of entrepreneurship in the United States, based on the 18th annual survey of the Global Entrepreneurship Monitor. The GEM U.S. team, based at Babson College in Massachusetts, is one of 65 national research teams who conducted an annual adult population survey (APS) in their economy in the summer of 2016. The 2016 GEM Global Report provides national-level comparisons on key entrepreneurship statistics across these economies and groups of economies by both geographic region and development levels. The GEM United States report delves more deeply into entrepreneurship in this country.

GEM's entrepreneurship indicators are illustrated in Figure 4. These include societal attitudes toward entrepreneurship, participation in multiple phases of the entrepreneurship process, and profile and impact indicators. Contained within this figure is a key measure of GEM: total early-stage entrepreneurial activity (TEA), which comprises nascent entrepreneurs in the process of starting a business as well as new business owners.

An entrepreneurial society needs individuals participating at all phases of the process. In order to have entrepreneurs, for instance, a society needs people willing to venture into this activity. Those who become nascent entrepreneurs, if successful, may progress to new business ownership. Those who become established business owners transform their once-fledgling startups to mature operations that provide sustained value for current and new stakeholders. The arrows connecting different phases (intentions, nascent, new, etc.) in Figure 4 are uneven as a reminder that although each phase draws on those graduating from earlier phases, some in each phase might not progress to the next.



**FIGURE 4**  
The GEM Model of Entrepreneurship Attitudes, Phases and Profiles

Two main characteristics provide additional detail on those individuals participating in TEA. First, indicators relating to profile tell us who is participating in entrepreneurship in the U.S., making it possible to discern whether all societal groups are engaging in this activity. Second, GEM recognizes that all entrepreneurs are important, but they can impact their societies to differing degrees. Elements like industry participation, growth ambitions, innovation, and internationalization show the contribution entrepreneurs can make toward job creation and national competitiveness.

Finally, Figure 4 includes societal attitudes, which indicate the extent a society possesses a ready supply of potential entrepreneurs and like-minded stakeholders that can support them and participate in their efforts. As such, societal-level views toward entrepreneurship are key measures of an economy’s entrepreneurial potential and support.

**HOW TO USE THIS REPORT**

Since 1999, GEM has served as a distinctive and valuable source of data on entrepreneurship for a variety of audiences. GEM has provided the basis for innumerable academic studies. Educators around the world use GEM reports and data in their classes. Policy makers draw on GEM data to take the pulse of entrepreneurship in their districts and inform policy discussions and decisions. Accordingly, a key aim of GEM is to inform academics, educators, policy makers and practitioners about the frequency and nature of entrepreneurship in and across economies worldwide. In so doing, GEM endeavors to stimulate better understanding, support, and conditions that allow entrepreneurs to thrive.

# Chapter 1

## Entrepreneurial Attitudes and Activity: Global and Longitudinal Comparisons

### **SOCIETAL ATTITUDES**

Societal attitudes include people's perceptions about opportunities around them and whether they personally think they are capable of starting a business. Among those who see opportunities, GEM measures the percentage of people who would be deterred from starting because of fear of failure. These attitudes provide an indication of how people see both their external environment and themselves relative to entrepreneurship. They represent the extent there are potential entrepreneurs and also the level of societal support for entrepreneurship, particularly when examined with three additional indicators measuring whether people think being an entrepreneur is considered a good career choice, whether entrepreneurship is conferred a high status and whether it is portrayed positively in the media.

As Figure 5 shows, the United States shows higher values than the average of the 26 other innovation-driven economies for all the attitude indicators except fear of failure, which runs in the opposite direction as the other attitudes, and is lower for the United States. The average values, however, temper the variability exhibited across the developed economies. Figure 6 shows longitudinal trends in opportunity and capability perceptions and the extent to which those seeing opportunities would be deterred from starting because of fear of failure.

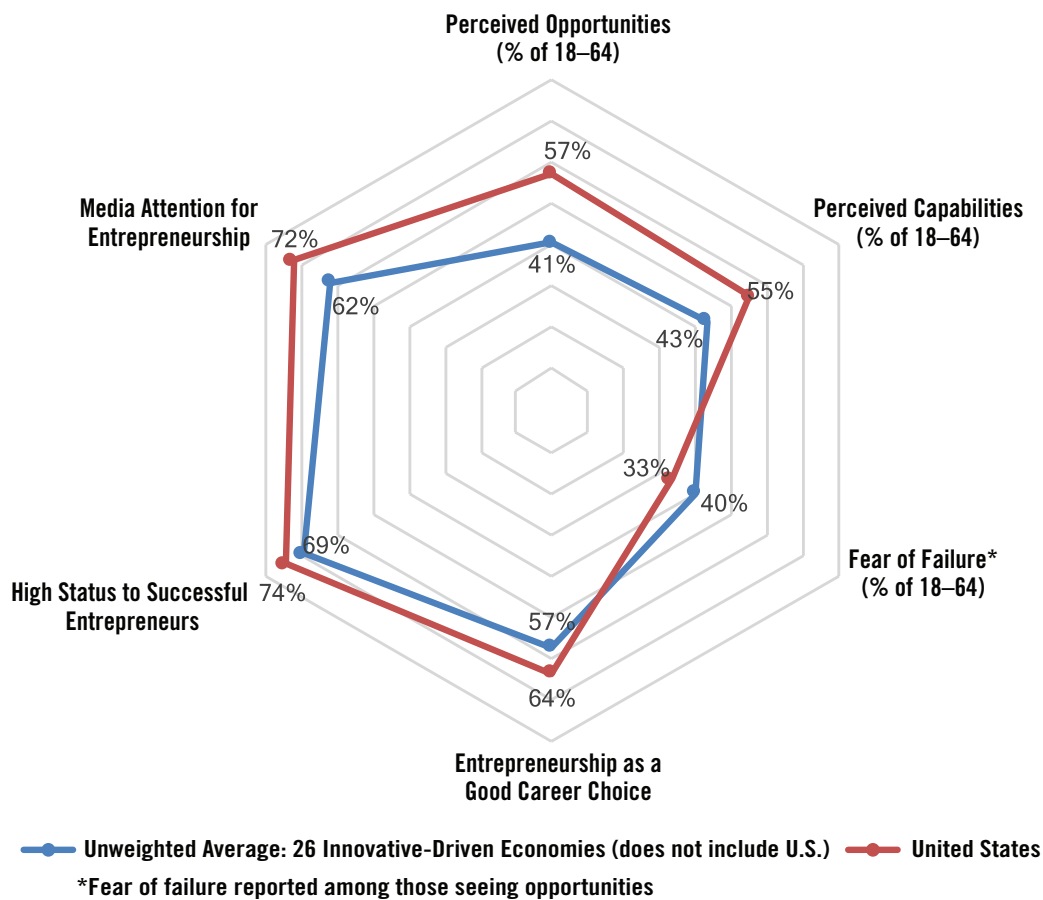
The largest gap between the United States and the innovation-driven economy average can be seen in opportunity perceptions (Figure 5). Only Sweden and Canada show higher values than the United States on this indicator. This high level of opportunity perceptions is a recent attainment in the United States. Values fluctuated around 30% from 2001 through 2009, then started on an upward path that has now resulted in twice as many people seeing opportunities around them in 2016 than they did in 2009.

What could be responsible for this expansion in people seeing opportunities? Media attention is high in the United States, higher than the average for innovation-driven economies. But this indicator is virtually the same as it was in 2008, suggesting that entrepreneurship has always been popular and entrepreneurs have typically been this visible in the media. Additionally, nearly three-fourths of Americans believe that entrepreneurs are conferred high status. At the same time, somewhat fewer people in this country regard entrepreneurship as a good career choice, though the U.S. level is higher than the average among its development level peers. This likely reflects the other career choices people have, which may compete against the lure of starting a business.

The high level of opportunity perceptions could simply reveal that there are more opportunities than there were in the past, particularly since the country emerged from the 2007/2008 recession. Technology enables people to get started more easily and new business models such as Uber and Airbnb allow people to be their own boss. The environment offers part-time pursuits or shorter-term gigs for those willing to engage in them. Americans may notice this abundance of opportunities and they may even be better at recognizing them.

Capability perceptions in the United States are at the highest level in the innovation-driven economy group, matched only by those reported in the U.A.E. This indicator has remained remarkably stable over time, particularly in the past several years. Americans are not only more apt to recognize that there are good opportunities around them for starting a business, but also more confident they could start one.

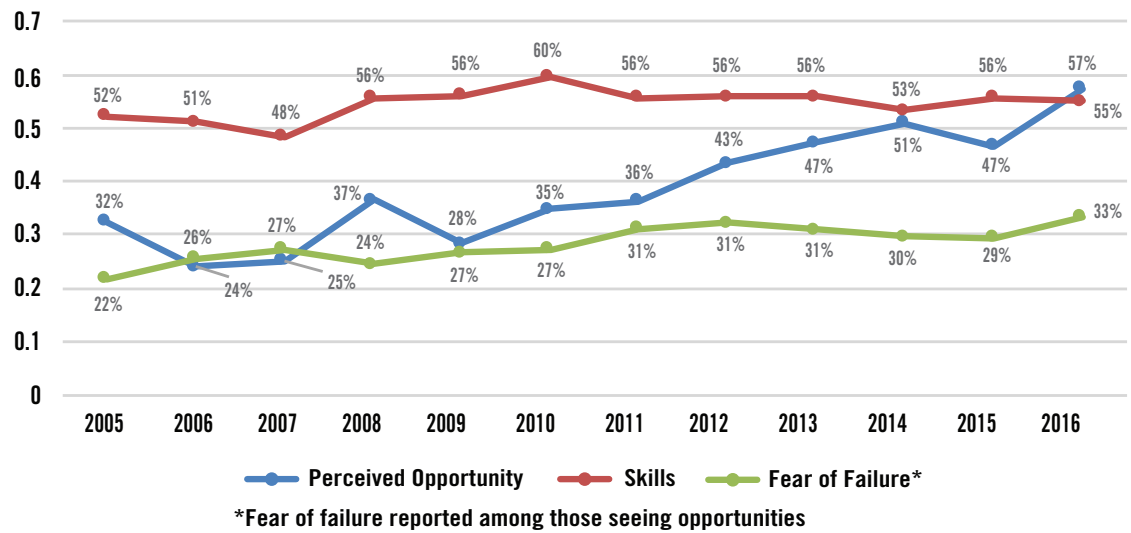
In addition, among those who see opportunities, most would not be deterred by the possibility they may fail. However, fear of failure did show an increase in 2016. After hitting a low in 2008, this indicator exhibited some post-recession cautiousness, creeping upward over the next four years as Americans were increasingly less able to shake off their fear of failing. (See Figure 6). After hitting its highest point in 2012, there seemed to be some recovery over the next three years. But the upward shift on display in 2016 suggests some caution, even while more people than ever believe there are opportunities and remain confident they can pursue them. This higher level may reflect challenges in current or potential economic conditions. On the other hand, it may signal the presence of better career alternatives, which can compete for the attention of those considering entrepreneurship, making this activity seem comparatively risky.



**FIGURE 5**  
Societal Attitudes in the Adult Population (18–64 year olds): United States and the Average for 26 Other Innovation-Driven Economies, GEM 2016

## CHAPTER 1

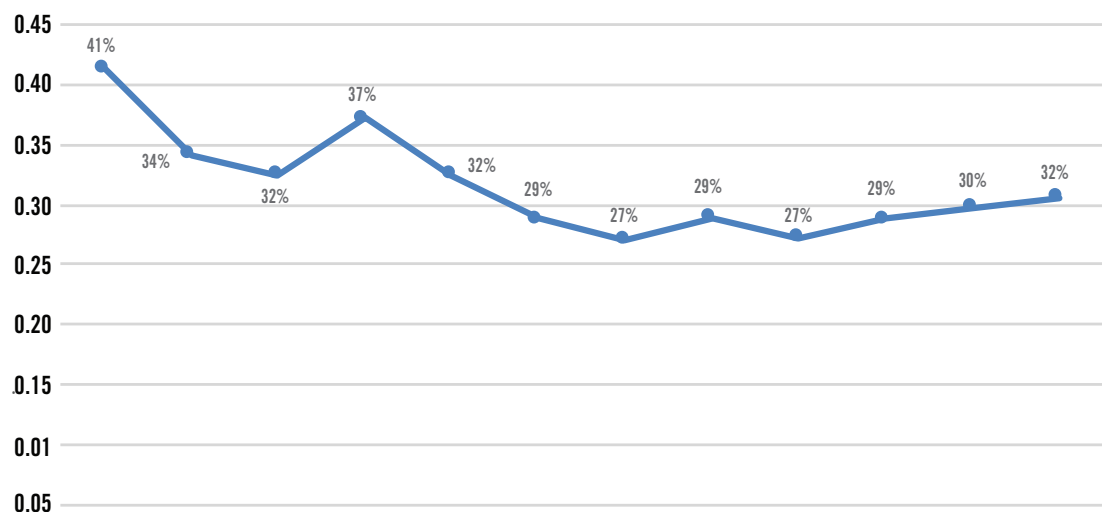
**FIGURE 6**  
Longitudinal Trends  
in Opportunity  
and Capability  
Perceptions and  
Fear of Failure  
in the U.S. Adult  
Population,  
GEM 2005–2016



### ENTREPRENEURIAL AFFILIATIONS

While entrepreneurs who attract media attention can garner admiration from afar, direct relationships with entrepreneurs can provide inspiration and guidance at a personal level to those entering or considering this activity. Affiliations with entrepreneurs have experienced a steady decline since 2009, with some signs of edging upward in the past three years (Figure 7). To the extent these affiliations are a key part of an entrepreneur's value or support network, it could be helpful to encourage contact and mentoring among entrepreneurs and would-be entrepreneurs.

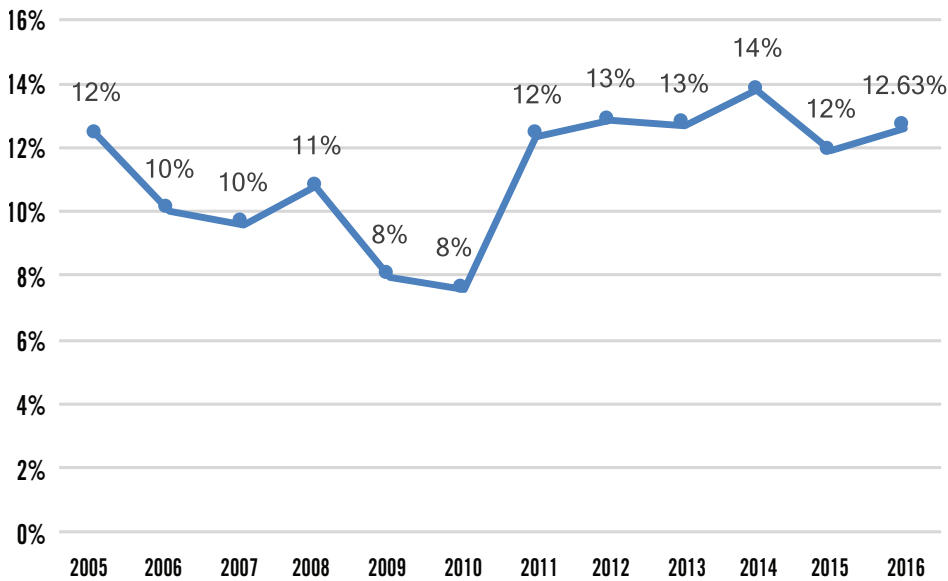
**FIGURE 7**  
Longitudinal Trends  
in Entrepreneurial  
Affiliations in  
the U.S. Adult  
Population,  
GEM 2005–2016



### ENTREPRENEURIAL ACTIVITY AND MOTIVATIONS FOR STARTING

As noted earlier, TEA represents the sum of nascent and new activity; nascent entrepreneurs are those in the process of starting a business, running them less than three months, while new entrepreneurs are running a business between three and 42 months. TEA rates in the United States are above average for the country's development level. Only Canada, Estonia and Australia report higher rates. In 2016, TEA rates edged upward after dipping down two percentage points in 2015 (see Figure 8).

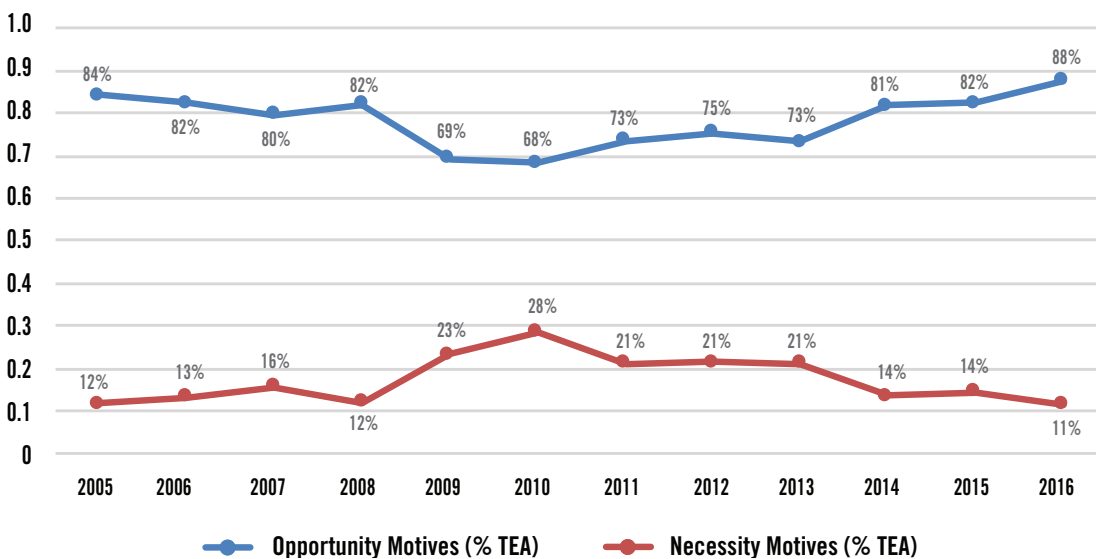




**FIGURE 8**  
Longitudinal Trends in Total Entrepreneurial Activity (TEA) in the U.S. Adult Population, GEM 2005–2016

The majority of entrepreneurs in the United States start their businesses primarily to pursue an opportunity, rather than because they need a source of income and have no better choices for work. Opportunity motives are higher in the United States than among its innovation-driven economy peers (88% vs 78%)—only Sweden reports a higher level (89%).

As Figure 9 shows, necessity motives in 2016 have finally dropped back to the low level reported in 2008, before the recession depressed entrepreneurship rates in 2009 and 2010 when necessity was more often the motivation for starting a business.



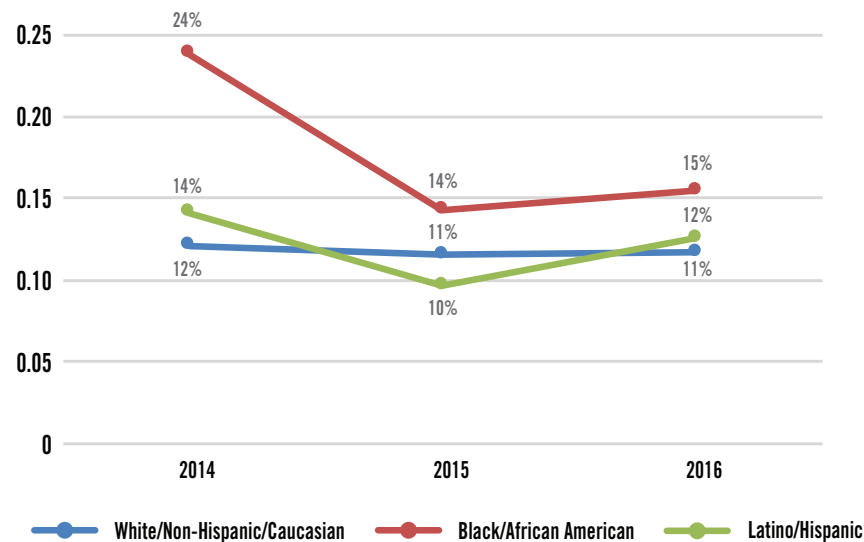
**FIGURE 9**  
Longitudinal Trends in Necessity and Opportunity Motives (as a percentage of TEA) in the U.S. Adult Population, GEM 2005–2016

## CHAPTER 1

In this report, separate chapters cover age and gender demographics of entrepreneurs. However, it is worth noting the level and trends in ethnic participation in entrepreneurship. The majority of entrepreneurs, 64%, are White/Non-Hispanic/Caucasian, reflective of the U.S. population. However, Black/African Americans and Latino/Hispanics contribute substantially to entrepreneurship in the United States, accounting for 14% and 8% of entrepreneurs, respectively.

As Figure 10 illustrates, the White/Non-Hispanic/Caucasian population maintained a constant level of TEA between 2014 and 2016. Conversely, the Black/African American population shows substantial variation across the same three-year time span. The Latino/Hispanic population exhibits a similar variation, though less marked. The fact that these rates moved in the same direction for both ethnicities shows a combined influence on the overall increase in U.S. entrepreneurship in 2014, the drop in 2015, and the upward movement in 2016. This leaves questions about why entrepreneurship among these two ethnicities fluctuates while that of the white population remains unchanged, particularly whether there are environmental conditions or shifts that can help explain this result.

**FIGURE 10**  
Longitudinal Trends  
in TEA Rates  
for Three Ethnic  
Groups in the U.S.  
Adult Population,  
GEM 2014–2016



### BUSINESS PHASES

Entrepreneurship, conceptualized as a process, extends from its earliest stages when people are intending to start through to closing a business. Figure 11 shows five business phases and includes a breakdown of TEA into its separate nascent and new phases. It is important to have people participating at each phase of this process; those with entrepreneurial intentions create a pipeline of potential entrepreneurs, and even those who close a business may leverage their expertise to pursue another opportunity or play other key roles in the entrepreneurial ecosystem, such as investors or mentors.

Not all individuals who express entrepreneurial intentions will act on them, but they exhibit an ambition that is more likely to materialize into startup activity than among those without these intentions. Intentions in the United States dwindled between 7% and 8% for five years, from 2005 through 2010. After a 40% leap in 2011, this indicator then edged upward and remained fairly stable for the next five years.

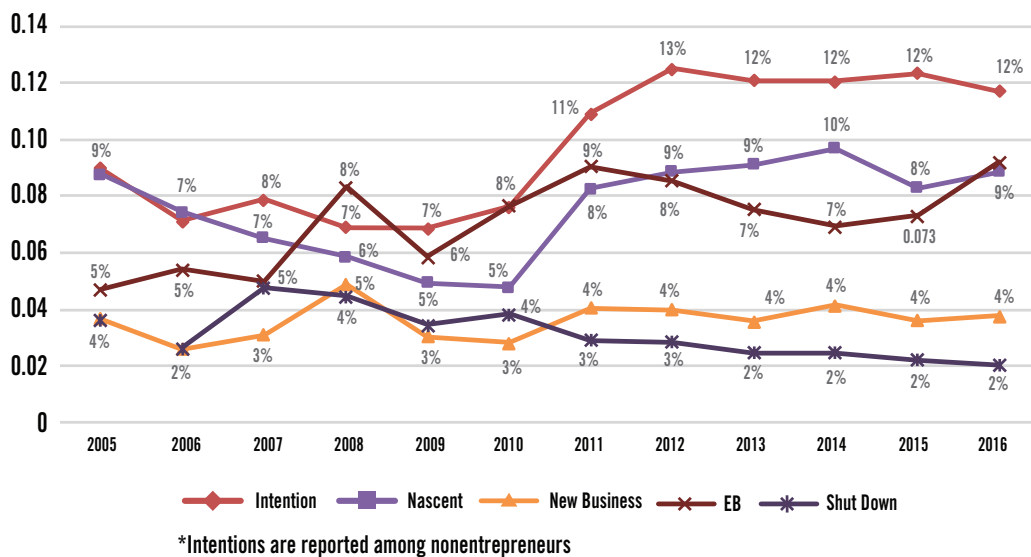
Nascent activity experienced a year-on-year decline from its 2005 level, bottoming out in 2010, then bouncing back in 2011 and edging upward over the next three years. A two percentage point drop in 2015 sent a cautionary note, but 2016's results signaled a partial recovery, at least to its 2011 levels.

New business activity tends to fluctuate at generally between 3 and 4% of the adult population. Small post-recession drops in 2009 and 2010 were followed by an uptick in 2011 which started a trend toward stability over the next five years.

Established business activity hit a high in 2011, but then languished for the next four years—likely a lagged effect from the five-year decline in nascent activity between 2006 and 2010. So while the nascent phase recovered and continued to show some growth, established business activity was still feeling the effects of the past. A two percentage point jump in 2016, though, showed some promise in this indicator—in particular, that more entrepreneurs were able to sustain their prior startup efforts into the mature business phase.

Business closings hit a high in 2007, just before the impact of the recession was felt on the U.S. economy. This indicator exceeded the new business activity level in that year, but since then has followed a near-continuous decline. Paralleling the falloff in nascent activity through 2010, it may be reasoned that, with fewer entrepreneurs starting, there were fewer businesses that could be closed. While this might be seen as positive—greater caution may lead to fewer exits—it also suggests low risk taking, which can mean that some potentially viable ideas never have a chance to be tested.

It is notable that the rate of entrepreneurs closing businesses continued to decline even when nascent activity recovered, opening up an immediate large gap in 2011. This was accompanied by new business activity surpassing closings. So while more startup activity might reasonably be expected to lead to more exits, there seems to be, instead, an element of resilience in the past six years. This may be due to improved business conditions or the persistence and abilities of entrepreneurs.



**FIGURE 11**  
Longitudinal Trends in Entrepreneurial Intentions\* and Nascent, New, Establish Business and Business Closure Activity in the U.S. Adult Population, GEM 2005–2016

Figure 12 compares the United States with the average for the 26 other innovation-driven economies across four phases of business activity. What is most notable about this figure is that the United States has much lower intentions than its development level peers, but much higher nascent activity. In short, fewer people intend to start a business in the United States, but more are actually starting. Given that the longitudinal analysis in Figure 11 does not show dramatic change in either indicator over the most recent six years, it is unlikely this is due to sudden changes, for example, if there was still a lot of nascent activity, but people were suddenly pulling back from thinking about starting in the future.

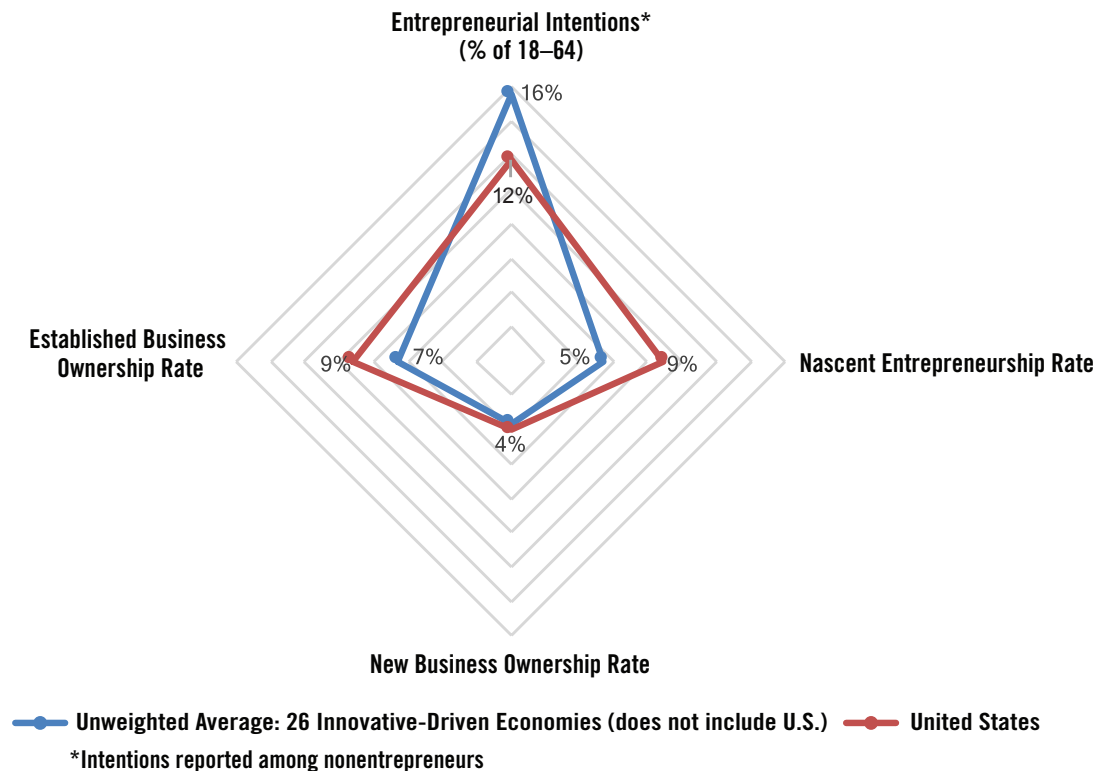
There are nearly three times as many people intending to start than actually starting on average across the innovation-driven economies. This could mean that people perhaps think they want to be an entrepreneur, but don't—or can't—take the steps to make this a reality. It is important to note, though, that some outliers contribute to this result, such as the U.A.E., where few people are starting businesses, but nearly half intend to do so in the next three years. Only the Netherlands exhibits as low a ratio of intention to start as the United States. In this case, it appears that people are less likely to express intentions unless they are really planning to actually start a business, or that they are inclined to act on their intentions and do not face constraints in doing so.

## CHAPTER 1

There is also a sizable gap in established business activity between the United States and the average of the innovation-driven economies. Given that nascent activity is also higher in the United States, it can be reasoned that if there are more businesses being started in the United States relative to its peers, then there is a larger pool that could lead to mature business ownership. Additionally, the longitudinal results in the United States show a two percentage point increase in established business activity in 2016, which contributes to this gap. The increase in nascent activity starting in 2011 has supplied the pipeline leading to more established business ownership.

### ENTREPRENEURIAL EMPLOYEE ACTIVITY

**FIGURE 12**  
Activity Across  
Business Phases in  
the Adult Population  
(18–64 year olds):  
United States and  
the Average for 26  
Other Innovation-  
Driven Economies,  
GEM 2016



Entrepreneurs can enact their ambitions—not only in independent startups, but in other contexts. Some people may prefer work as employees, and this form of work may nonetheless attract entrepreneurial types. Additionally, the organizational environment may enable or even promote this activity. As such, employees may start businesses for the organizations they work for. GEM calls these individuals entrepreneurial employees.

Innovation-driven economies tend to exhibit higher levels of EEA than earlier levels of economic development. This makes sense given the higher rate of employment options in these economies. The United States shows an above-average level of EEA for its development level, at 7% compared to an average of 5% for the 26 other innovation-driven economies. The United States is also unique in having high rates of both EEA and TEA, with only Australia reporting higher levels on both indicators. This demonstrates that American entrepreneurs are prolific in both independent and organizational contexts and that being entrepreneurial doesn't necessarily mean one must give up working as an employee.

# Chapter 2

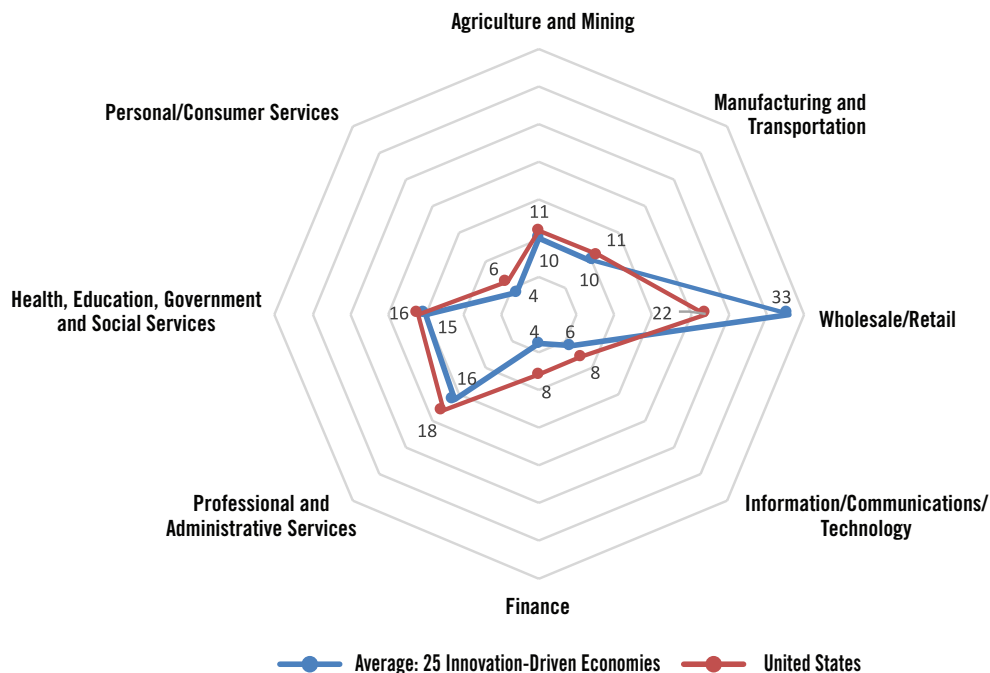
## Impact Characteristics of Entrepreneurship in the United States

### INDUSTRY SECTOR PARTICIPATION

The distribution of entrepreneurship across industry sectors is a key indicator of its impact on society. Some economies focus on pursuing entrepreneurship across all sectors or by championing it in specific industries, for example, where they have natural resources. Highly developed economies, such as the United States, tend to focus on knowledge-intensive industries and service industries. As the developed world shifts toward a creativity economy that combines elements of the information and knowledge economy with today's creative class, we see more and more activity in industries where these opportunities lie.

Figure 13 shows a comparison of industry participation for TEA in the United States and the average of the 26 other innovation-driven economies. As one would expect, the rates across most industries are comparable, as each of these economies are competing at the same level. Wholesale/Retail accounts for the highest proportion of TEA in the United States, most likely because of continued low barriers to entry relative to other industry sectors. It is not surprising, however, that the United States has lower participation in this sector compared to the average for other innovation-driven economies, given that technological advances have shifted a fair amount of business activity from traditional wholesale and entrepreneurial opportunities toward the greater potential offered in knowledge and service spaces.

The other sectors, each of which account for higher proportions of entrepreneurs than the averages for the 26 innovation-driven economies, pick up the gap in wholesale/retail activity in the United States. Compared to this peer group average, U.S. entrepreneurs are twice as likely to compete in the Finance sector. Professional and Administrative Services, and Health Education, Government and Social Services combined with Personal/Consumer Services show that individuals continue to look for service-based opportunities in the United States. Together these three sectors are responsible for 40% of TEA in the United States.



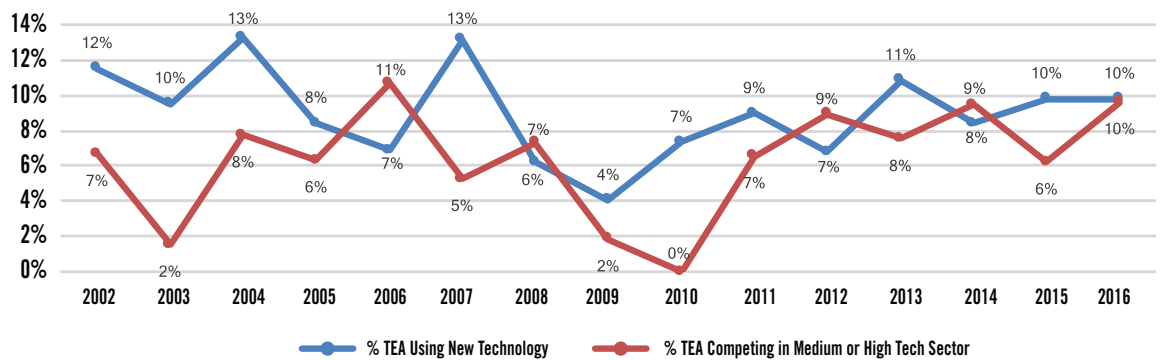
**FIGURE 13**  
Industry Breakdown of Total Entrepreneurial Activity: United States and the Average for 26 Other Innovation-Driven Economies, GEM 2016

TECHNOLOGY AND INNOVATION

Technology is a driver of innovation and entrepreneurship, whether it is used to produce or deliver a firm’s product or service, or whether it represents a sector an entrepreneur decides to compete in. As Figure 14 shows, the percentage of nascent firms using the latest technology in their startups has consistently hovered around 10% for a decade and a half. The only time the rate was significantly lower was around the 2007/2008 economic recession, when the use of new technology dropped to a low of 4%.

One can observe a similar pattern for the percentage of TEA firms that compete with technology as a primary driver of their business. GEM identified few entrepreneurs in the technology sectors in 2009 and none in 2010. By 2016, however, this rate had climbed to 10% and is consistent with the high rate of Information/Communication/Technology (ICT) business activity in the United States compared to the average for the other innovation-driven economies.

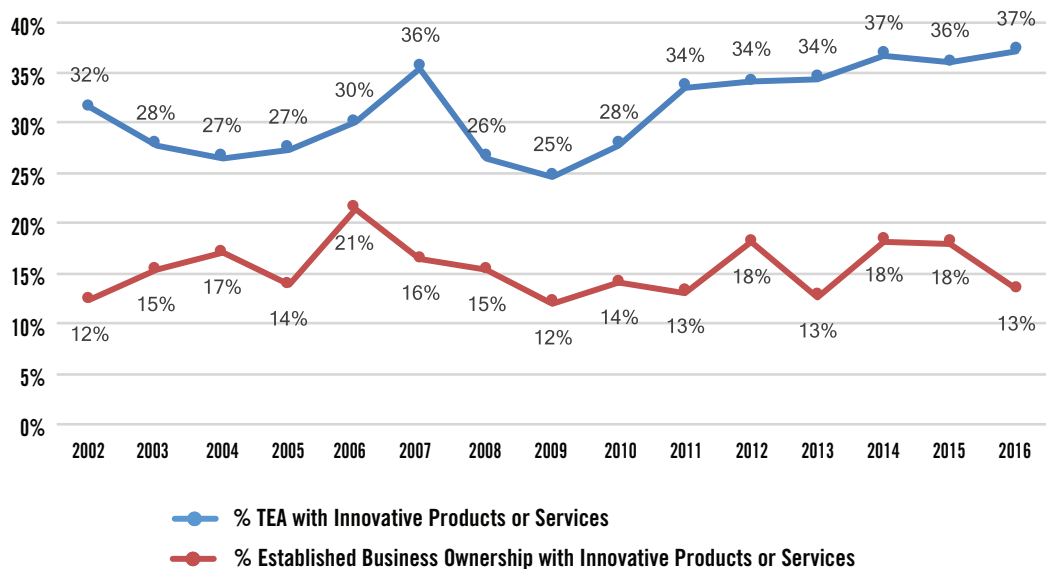
**FIGURE 14**  
Longitudinal Trends in the Use of New Technology and Technology Sector Participation Among Entrepreneurs in the United States, GEM 2005–2016



U.S. firms tend to be leaders in new technology and innovation. The GEM data supports this assertion with 37% of all entrepreneurs in the United States developing and delivering an innovative product or service as their base offering. This compares favorably with an average of 31% for all other innovation economies. As Figure 3 shows, this rate dipped during and just after the recession but jumped up in 2011, inching to an overall high level in 2016.

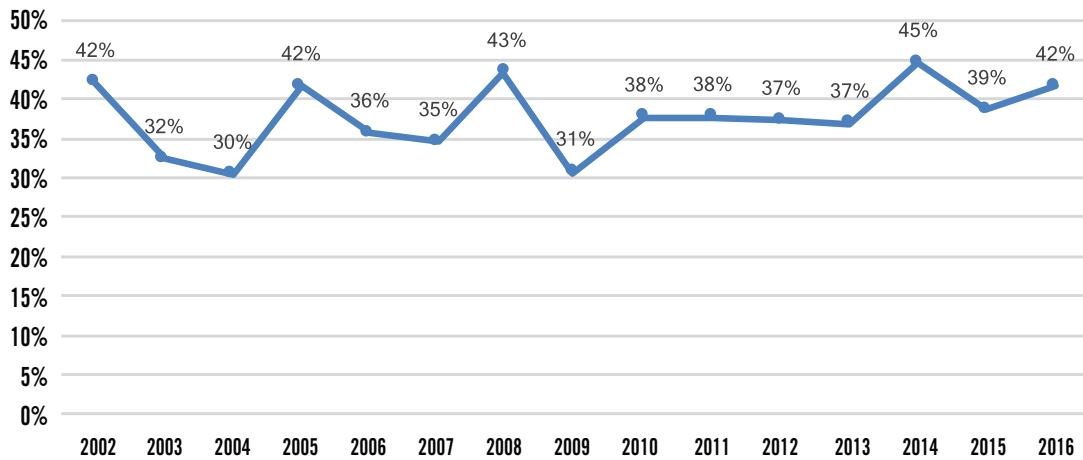
It’s not just early-stage firms that rely on innovative products to drive their firms forward. As Figure 15 shows, established businesses also rely on service and product offerings that are new to customers and not commonly offered by competitors. On average over the past decade and a half, about 15% of all established businesses in the United States relied on totally new or reinvigorated products and services to help propel their businesses.

**FIGURE 15**  
Longitudinal Trends in Innovation Levels Among Entrepreneurs in the United States, GEM 2005–2016



## JOB EXPECTATIONS

Founders with job creation expectations signal their belief that they are developing a high-potential opportunity with their new business and that they can marshal the resources needed and hire employees to help them grow it. Most new businesses around the globe do not create substantial employment but, as Figure 16 shows, U.S. entrepreneurs do not follow this norm. In 2016, more than 40% of all U.S. entrepreneurs expected to employ six or more people in the next five years. Figure 16 also shows consistent job expectations in the United States for the past decade and a half. For most years since 2002, over a third of entrepreneurs expected to create jobs at this rate. During this period, this indicator fluctuated between 30% and 45% with the most recent low occurring after the 2007/2008 economic downturn.



**FIGURE 16**  
Longitudinal Trends  
in Job Growth  
Expectation Levels  
Among Entrepreneurs  
in the United States,  
GEM 2002–2016

## INTERNATIONALIZATION

The dynamic markets within the United States consistently offer nascent entrepreneurs and established business owners avenues to pursue new opportunities. In a market where entrepreneurs and entrepreneurship is celebrated, most founders can find customers willing to try entrepreneurial solutions. With such a large and willing U.S. market, it is not surprising to find that most U.S. entrepreneurs do not pursue international sales channels to a substantial degree. In 2016, only 10.4% of entrepreneurs expected 25% or more of their sales to come from customers living outside the United States. This number is down from 11.6% in 2015. Since 2009, between 10% and 15% of American entrepreneurs expected a quarter or more of their sales from international customers.



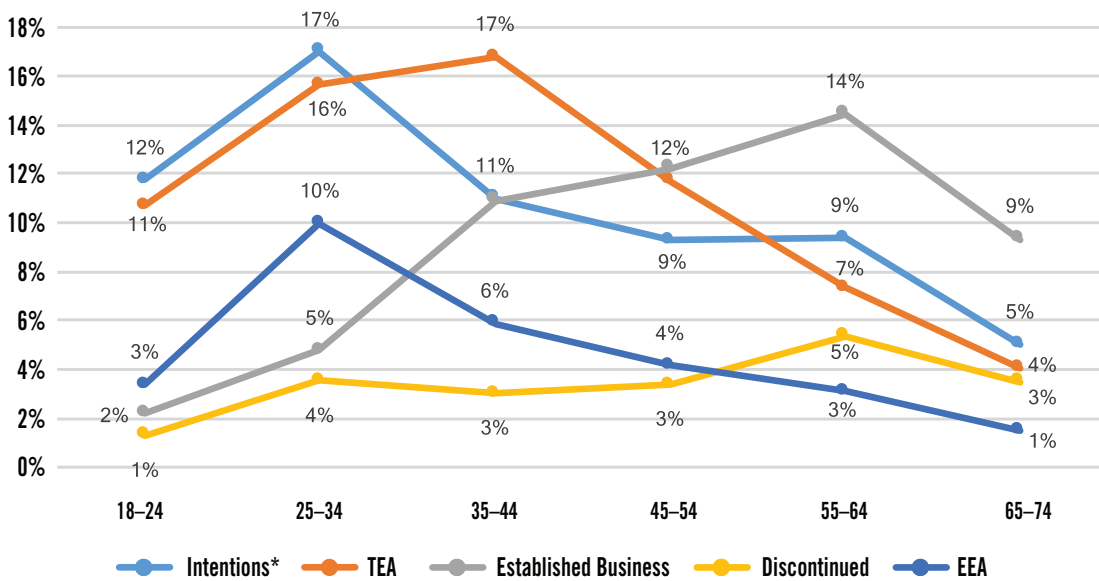
# Chapter 3

## Age

Entrepreneurial activity in the United States in 2016 reveals widespread participation across various age groups (Figure 17). Intentions to engage in entrepreneurial activity among non-entrepreneurs reached a high of 10% among the 25 to 34 year olds and then steadily declined in the older age groups. This trend implies that the younger population considers starting and owning a new venture as a viable career option in the early stages of adult life.

As expected, entrepreneurial intentions mirror early-stage TEA rates in younger and older age groups, but is significantly lower than TEA in the 35 to 44 age groups. It seems that the middle-career population is either accustomed to employment or constrained by family or personal obligations and is not contemplating creating new ventures in the near future. Yet this is the age group that is most likely to start a business.

**FIGURE 17**  
Age Distribution of Phases and Types of Entrepreneurial Activity in the U.S. Adult Population, GEM 2016

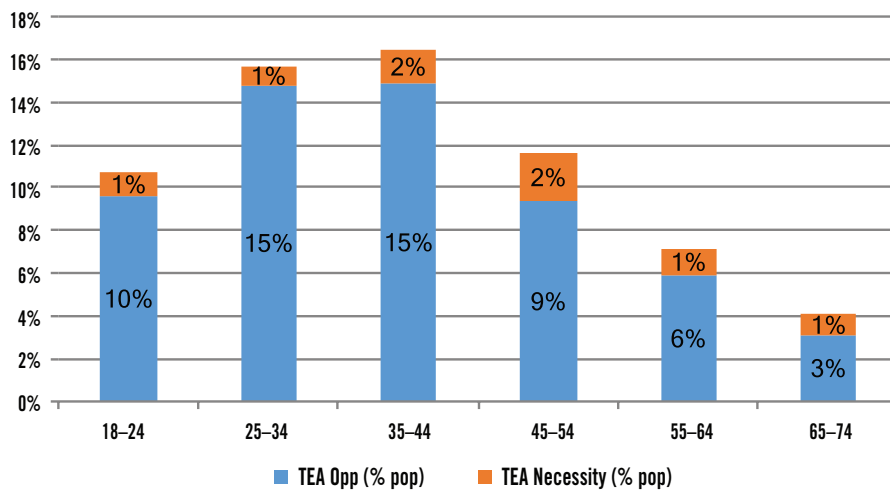


\*Intentions reported among nonentrepreneurs

Compared to the 26 other innovation-driven economies assessed by GEM in 2016, where the 25 to 34 year olds had the highest average TEA rate, the TEA rate in the United States peaks in the next oldest age group, among the 35 to 44 year olds. Given the ageing of the population in the United States and the drop off in entrepreneurship beyond this mid-career age group, policy makers need to promote entrepreneurial activity among older people, thereby maintaining economic dynamism in the country. The silver lining, however, is that established business rates increase with age, peaking among 55 to 64 year olds, reflecting the quality and survivability of businesses undertaken by the mature population.

EEA was lower than the TEA rates across all age groups, peaking among the younger (25 to 34 year) population. This statistic implies that both organizations and startups among this young age group engage in a lot of entrepreneurial activity. For the most part, however, individuals in the United States are more engaged in entrepreneurial activity when they work on their own rather than for employers. As expected, the discontinuation rates of businesses peak in older age groups as business owners retire or face other priorities at that stage of life.

Figure 18 shows the prevalence of opportunity-driven and necessity-driven entrepreneurship by age group. Across all age groups, more entrepreneurs start because they see an opportunity to form a new venture. The low rate of necessity-driven entrepreneurship in the United States, however, is a little different by age group, with the highest relative levels reported among the 45+ age groups. People in the older age groups may find themselves out of a job, perhaps with outdated skills or age bias narrowing their options for work as an employee.



**FIGURE 18**  
Age Distribution of Total Entrepreneurial Activity in the U.S. Adult Population Showing Necessity Motives, GEM 2016

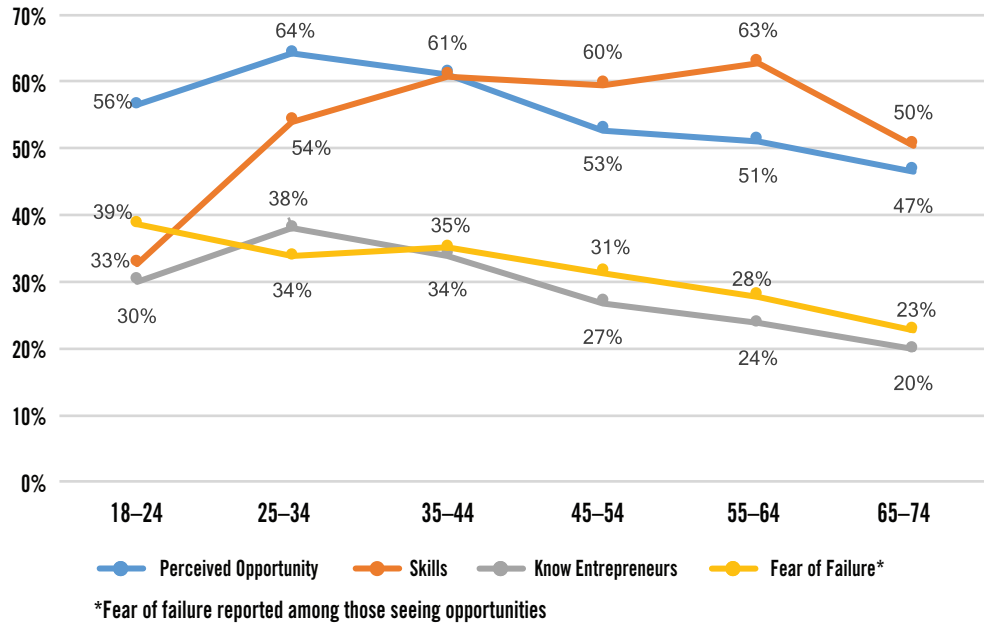
Figure 19 displays perceptions about seeing opportunities, having the necessary skills to start a business and attitudes toward fear of failure. People in younger age groups are more likely to see opportunities for starting a business than to feel they have the requisite skill sets to undertake such endeavors. The picture is exactly opposite for the older age groups. As people grow older, they feel that they have accumulated the knowledge, experience and capability to start a new venture but do not see enough opportunities. Is this disparity because the skills these older people have don't align with the requirements of opportunities emerging from cutting-edge technologies? Are their skills outdated? Policy makers need to develop an effective strategy for retraining older people so they can apply their entrepreneurial capabilities.

Knowing an entrepreneur has been shown to have a positive influence on one's own entrepreneurial ambitions, offering examples, role models, advisors and collaborators to inspire and support these efforts. Here again, we see higher scores among the younger age groups (the 25 to 44 year olds), which report the highest level of intentions and entrepreneurship activity levels. This fact suggests there are greater chances young people will know an entrepreneur when there are many in their peer group. By contrast, the lowest scores on this measure were reported by the oldest age groups. In particular, the 65 to 74 year olds may be less exposed to business activities or less focused on building networks that could help them with future professional activities.

Fear of failure, measured among those seeing opportunities, shows the highest rate among 18 to 24 year olds and lower rates for the 55 and over age groups. It seems that older people perceive they have less to lose or they have a cushion to absorb risk and consequently they are less fearful about the prospect of failing. While younger people have many years ahead of them to make up any losses from business failures, they may also have little appetite for risk because of such factors as debt obligations, high current or future expenses or insufficient earnings as they start out in their careers.

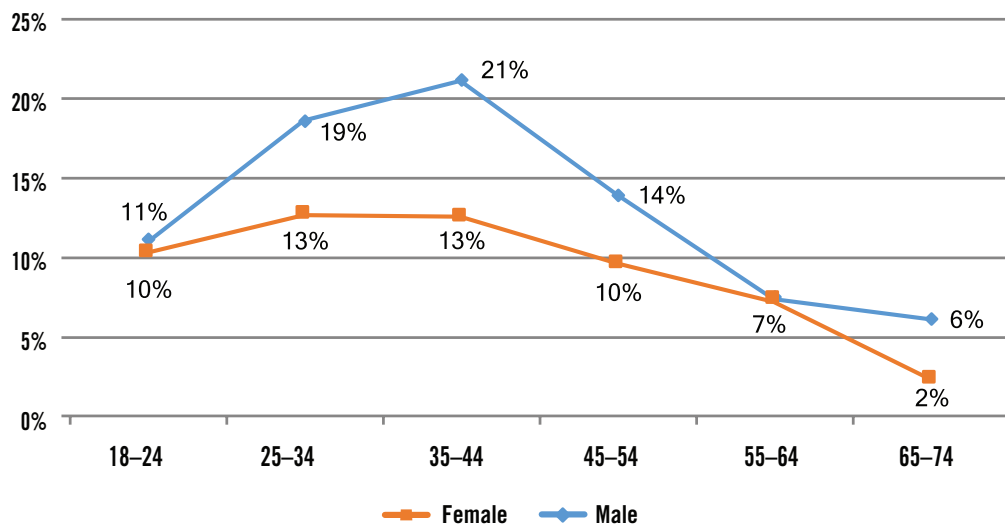
## CHAPTER 3

**FIGURE 19**  
Age Distribution  
of Entrepreneurial  
Attitudes and  
Affiliations in  
the U.S. Adult  
Population,  
GEM 2016



In the majority of the world's countries, women are less likely to be entrepreneurs than men and the United States is no exception—with a few caveats. As Figure 20 shows, women are as likely to start new ventures as their male counterparts in the 18 to 24 age groups. The gender gap widens dramatically in the age groups between 25 and 54 years of age. Some probable explanations for this lower entrepreneurial activity rates among 25 to 54 year-old women include lower participation rates in the workforce during peak childbearing years, greater difficulty in raising funds for startups, less societal support, a lack of role models and fewer networking opportunities for entrepreneurial careers. The gender gap in entrepreneurship rates seems to narrow in the older age groups. To achieve gender parity in entrepreneurial activity, policy makers can continue to address such needs as affordable child care, accessible funding for female-led startups, and promoting conducive social attitudes for women entrepreneurs.

**FIGURE 20**  
Total Entrepreneurial  
Activity Rates for  
Women and Men  
by Age Group in  
the U.S. Adult  
Population,  
GEM 2016



# Chapter 4

## Women's Entrepreneurship

### INTRODUCTION

Women are drivers of the U.S. economy. With their purchasing power, they control an estimated 70% of consumer spending, and roughly 75% identify as the primary shoppers of their households.<sup>1</sup> Women also hold nearly half of America's wealth, estimated to be \$11 trillion by 2020.<sup>2</sup> Of the more than 27 million businesses in the United States, 31% have women as majority owners (more than 51% ownership). These businesses with women as majority owners represent 9.9 million firms generating more than \$1.4 trillion in receipts.<sup>3</sup> Since 2007, the total number of women-owned businesses rose by more than 2 million, an increase of 26.8%. In other words, women have significant economic power in the United States.

At the roots of economic power is business creation. Starting a business is not only a way to pursue a business opportunity or to realize a dream of being your own boss, but also a way to create wealth or to solve a social problem. When women start businesses, they provide an income for their families, employment for their communities and create products and services that deliver value to the world around them.<sup>4</sup> Women in the United States increasingly are realizing the power of entrepreneurship. A better understanding of the participation, attitudes, business characteristics and contributions of women entrepreneurs can shed light on their impact on the U.S. economy.

In 2016, an estimated 163 million women were starting or running new businesses in 74 economies around the world. In addition, an estimated 111 million were running established businesses. These statistics are more impressive when we consider that, from 2015 to 2016 across 51 economies that participated in the GEM survey, women's entrepreneurship rates increased by 10% on average vs 5% for men.

Worldwide, however, men are still more likely to be engaged in the startup process even though there are substantial variations in women's TEA rates across the 74 economies, ranging from 3% in Germany, Jordan, Italy and France to 37% in Senegal. In five of the economies, women participate at equal or higher levels than men. These high-parity economies come from two regions: Asia (Indonesia, Philippines and Vietnam) and Latin America (Mexico and Brazil). None of these economies is at the innovation-driven stage of development, where on average women start businesses at 60% the rate of men.

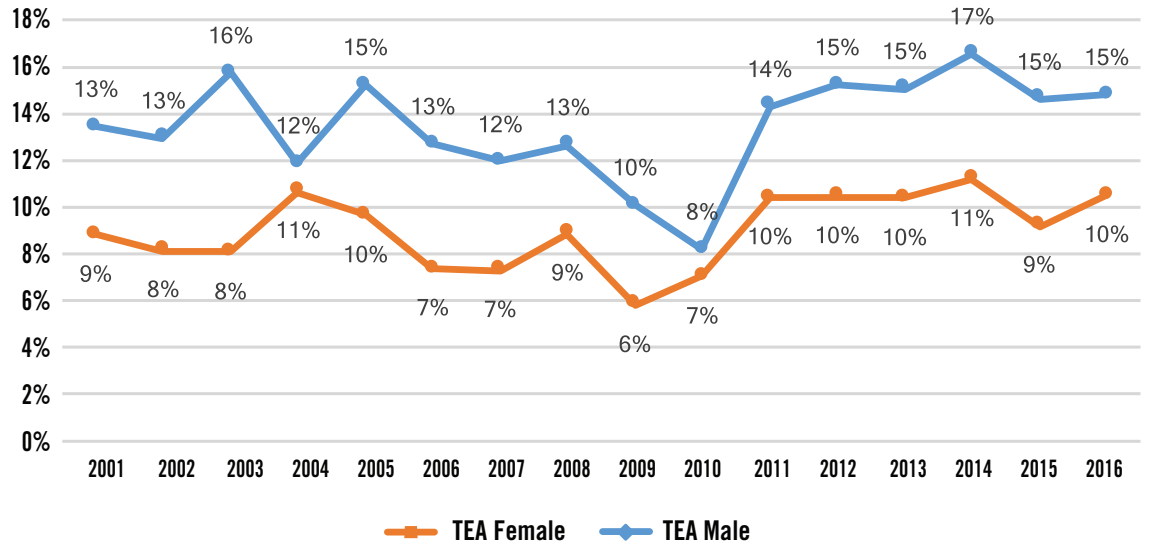
### TEA RATES AND ENTREPRENEURIAL ACTIVITY IN THE UNITED STATES

The United States exhibits a gender gap in startup rates of men and women, where there are about seven women entrepreneurs for every ten men entrepreneurs (See Figure 21). In examining the TEA rates of men and women entrepreneurs since 2001, we see that the gap has remained somewhat the same, about 6 percentage points for the past few years. It was the smallest in 2010 but narrowed a bit in 2016 to 5 percentage points. In 2016, the rate of entrepreneurship rose for women by one percentage point while staying relatively steady for men, indicating that the slight overall rise seen in the U.S. TEA rate is due to an increase among women.

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1. Multiple sources, including Boston Consulting Group, *Women Want More* by Michael J. Silverstein, Kate Sayre, and John Butman (Harper Collins, 2009); The Economist, *Guide to Womenomics and Why She Buys* by Bridget Brennan (Crown Business, 2011); Catalyst.org, *Buying Power: Women in the U.S.*
  2. Tyrie, David. (2011) *What Women Can Teach U.S. About Money*. Spectrem Group.
  3. [https://www.nwbc.gov/sites/default/files/FS\\_Women-Owned\\_Businesses.pdf](https://www.nwbc.gov/sites/default/files/FS_Women-Owned_Businesses.pdf)
  4. Brush, Candida G., and Greene, Patricia G. (2016). *Closing the Gender Gap in Entrepreneurship: A New Perspective on Policies and Practices*. Report commissioned by OECD, Paris, France.

## CHAPTER 4

**FIGURE 21**  
**Longitudinal Trends in**  
**Total Entrepreneurial**  
**Activity for Women**  
**and Men in the U.S.**  
**Adult Population,**  
**GEM 2001–2016**



All stages of business activity (nascent, new business, established and corporate) exhibit similar patterns in terms of gender gaps and entrepreneurship rates. The gap between men and women entrepreneurs is lowest in the nascent portion of TEA at only 2 percentage points (men at 10% and women at 8%). For nascent women, this rate represents an increase from 2015, while remaining unchanged for men. The rate of new business ownership remained stable compared to past years (5% for men and 2.5% for women).

Given that TEA combines the nascent and new business phases, the rise in TEA rates among women therefore is due to this earliest nascent phase, which indicates that more women started businesses in 2016 than in 2015, while this level remained the same for men.

Overall, established business activity increased by two percentage points for both men (to 11%) and women (to 8%). Finally, employee entrepreneurship rates for men and women remained steady over the past three years, at 7% for men and 4% for women.

An analysis of the age of entrepreneurs and startup rates shows that, as in the past, the most likely startup ages for U.S. male and female entrepreneurs are between 25 to 34 and 35 to 44, with the lowest startup rates occurring at ages 55 and over. For men, the highest rate of startup is between the ages of 35 and 44, while for women it is even for those 25 to 34 and 35 to 44. For all entrepreneurs, the 25 to 44 age bracket is the period in life when one has completed an education, has an experience base and often has preliminary seed capital to invest in a new venture idea.

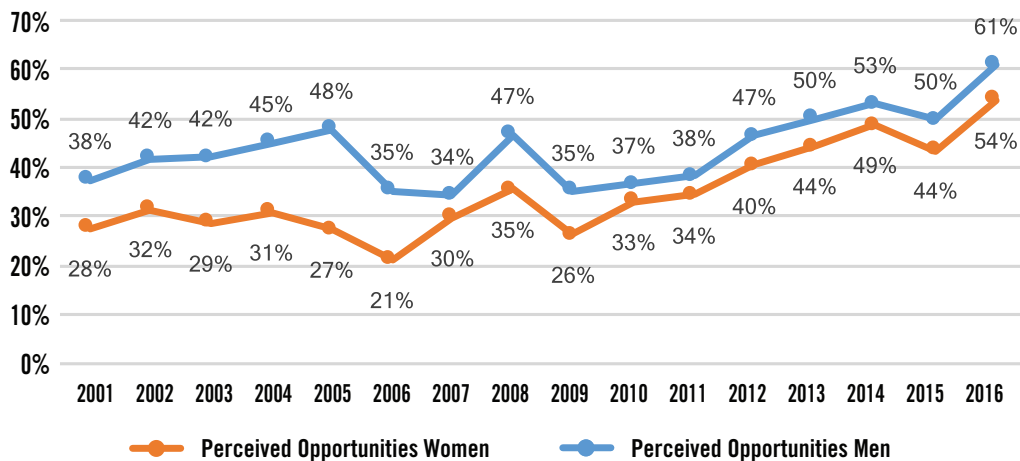
A key to understanding the startup rates is motivation. GEM captures the extent to which entrepreneurs start a business out of necessity or because they perceive an opportunity. As in most industrialized economies, opportunity predominates as the driving force in the United States, with 88% of men and 87% of women being motivated by opportunity.

- Becker, Gary S. (1964). *Human capital: A theoretical and empirical analysis, with special reference to education*. Chicago: University of Chicago Press; Brush, Candida G., Greene, Patricia G., Hart, Myra M., and Haller, Harold S. (2001). From initial idea to unique advantage: The entrepreneurial challenge of constructing a resource base. *Academy of Management Executive*. 15(1), 64–78.
- Krueger, Norris, Reilly, Michael, and Carsrud, Alan. (2000). "Competing models of entrepreneurial intentions." *Journal of Business Venturing*. 15(5–6), 411–432.

## ENTREPRENEURIAL ATTITUDES

A business startup is directly linked to human capital resources, which include education, experience, attitudes, beliefs and perceptions.<sup>5</sup> Even though education provides knowledge and skills and may assist in the accumulation of explicit knowledge that leads to useful skills for an entrepreneur, attitudes and perceptions may influence one's confidence in one's ability to start up a business.<sup>6</sup> In particular, beliefs about the attractiveness of an opportunity, and one's motivations to pursue it, are associated with perceptions of capabilities derived from education.<sup>7</sup>

GEM's attitude measures include perception of opportunities, perceived capabilities to start a business, fear of failure and intentions. Opportunities are generally defined as potential to create economic value through something new or innovative. One can perceive opportunities either through active or passive search, where someone is receptive and alert when encountering a new product/market.<sup>8</sup> In examining perceived opportunities we see two important trends (See Figure 22).



**FIGURE 22**  
Longitudinal Trends  
in Opportunity  
Perceptions for  
Women and Men  
in the U.S. Adult  
Population,  
GEM 2001–2016

First, the rate for women's perceptions of opportunity has more than doubled from 26% in 2009 to 54% in 2016. This is good news since it suggests that more women perceive opportunities and might be motivated to consider starting their own business than in the past. The 10-percentage-point rise in 2016 (54%) over 2015 (44%) is also significant and might in part be related to the growth in programs, accelerators and courses available to support entrepreneurs across the United States.

Second, the gap in perceived opportunities remains small between men and women at seven percentage points. While women are perceiving opportunities to start businesses at close to the same rates as their male counterparts, they are still seeing opportunity at a lower rate. Reasons for this result are still unclear, although it may be related to perceived capabilities.

Capabilities perceptions refer to the belief that one is prepared and has what it takes to start a business. This belief relates to perceived self-efficacy and how one thinks about her competence to control outcomes and processes in a situation, especially where persistence is required.<sup>9</sup> In particular, increases in self-efficacy are related to perceptions of opportunity—the greater the sense of self-efficacy, the more one sees opportunities. Figure 23 reflects the capability perceptions of men and women entrepreneurs in the United States since 2002.

7. Corbett, Andrew. (2007). Learning asymmetries and the discovery of entrepreneurial opportunities. *Journal of Business Venturing*. 22(1), 97–118.

8. Baron, Robert. (2006). Opportunity recognition as pattern recognition: How entrepreneurs 'connect the dots' to identify new business opportunities. *Academy of Management Perspectives*. 20(1), 104–119

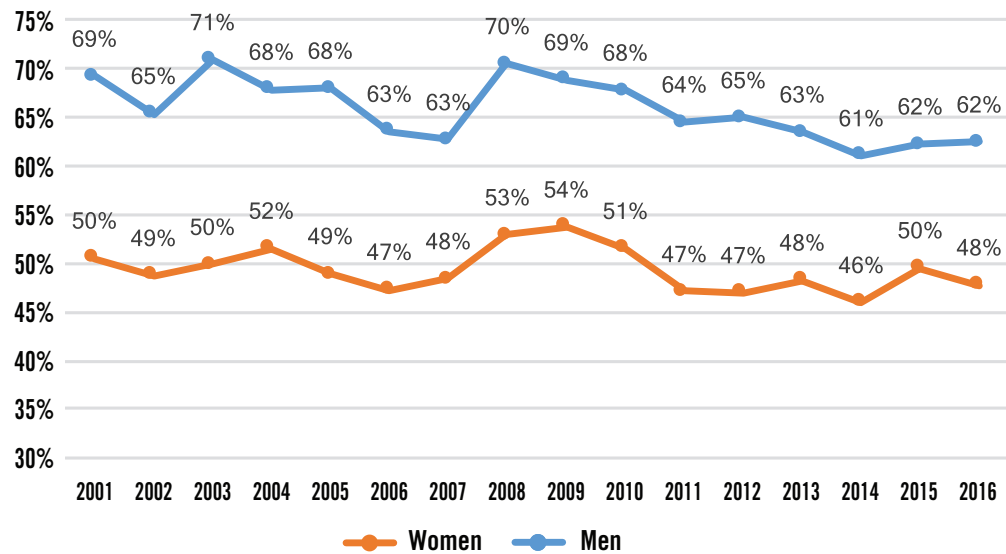
9. Krueger, Norris and Dickson, Peter (1994). How believing in ourselves increases risk taking: Perceived self-efficacy and opportunity recognition. *Decision Sciences*. 25(3), 385–400.

## CHAPTER 4

This analysis shows a distinct gap between men and women in their perceived capabilities to start a business. While the rates have fluctuated slightly over the past 20 years, men perceive that they have the capabilities to run a business steadily at 62–65% while women report between 47–54% for sense of capability. This comparatively low rate of capability perceptions is consistent with other data from innovation economies such as those in Western Europe. Further, the gap in perceptions between men and women is greater with higher levels of economic development.

In the United States, where the population is generally well educated and the acceptance of entrepreneurial activities is widespread, it is a bit surprising that the gap remains so large. One possible explanation is that the media continues to represent the successful entrepreneur as the heroic male figure, for example, Bill Gates, Mark Zuckerberg or Steve Jobs. This media bias may influence the perception of what it takes to be a successful entrepreneur.

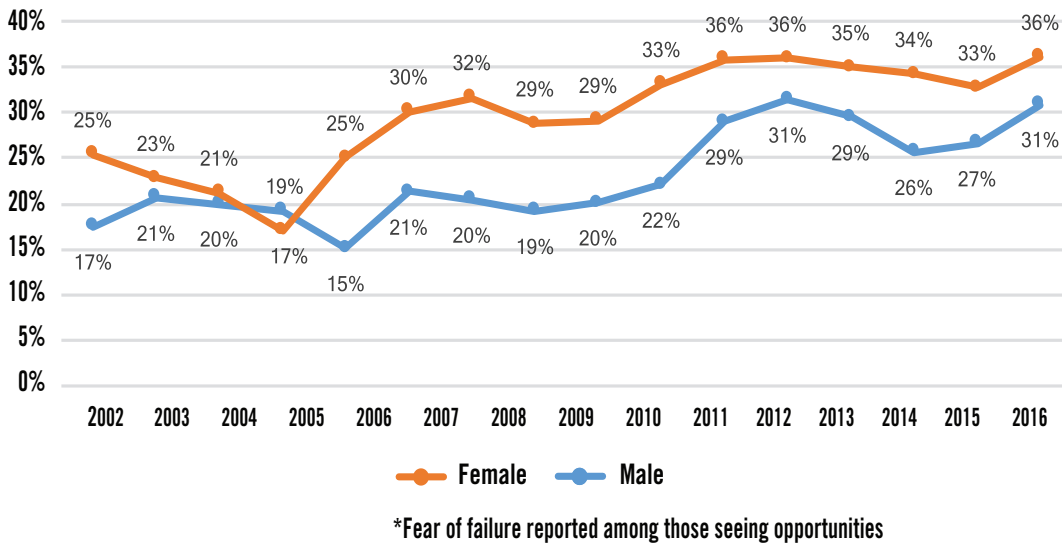
**FIGURE 23**  
Longitudinal Trends  
in Capability  
Perceptions for  
Women and  
Men in the U.S.  
Adult Population,  
GEM 2001–2016



The third attitude relating to business startup is fear of failure. Starting up a business inherently is characterized by risk and uncertainty, which relates to how one defines and orients to experiences in an achievement situation.<sup>10</sup> The data from this survey shows that women still have a greater fear of failure than do men, following a trend consistent over the past several years (See Figure 24). Between 2015 and 2016, we do see a spike in fear of failure for both men (from 27% to 31%) and women (from 33% to 36%). This trend is also consistent with a greater perceived fear of failure for women in other innovation economies. One explanation is that in innovation economies, women perceive they have more to lose by starting a business in a society that offers viable work and family options and where their needs are well taken care of.

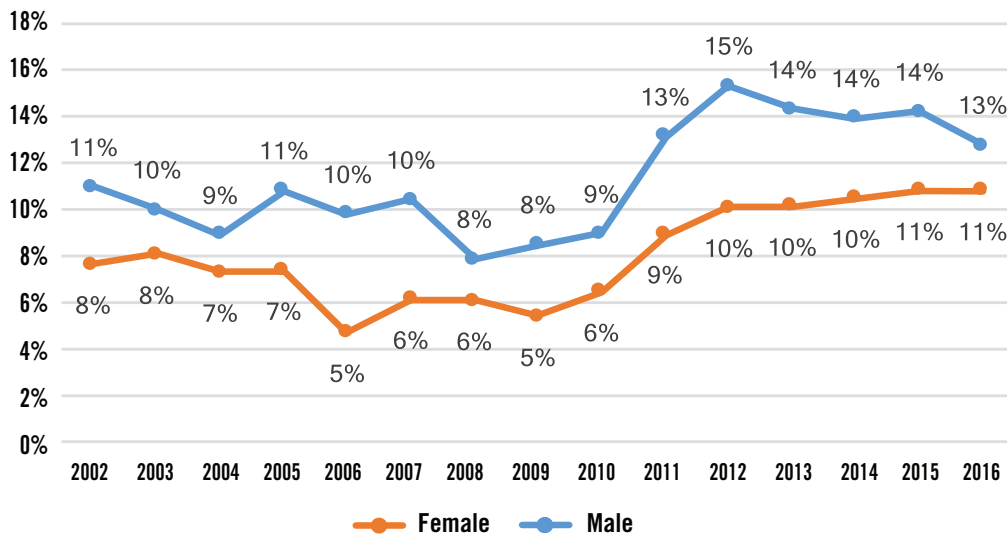
10. Wennberg, Karl, Pathak., Saurav, and Autio, Erko. (2013). How culture moulds the effects of self-efficacy and fear of failure on entrepreneurship. *Entrepreneurship and Regional Development*. 25 (9-10), 756–780.





**FIGURE 24**  
Longitudinal Trends in Fear of Failure\* for Women and Men in the U.S. Adult Population, GEM 2001–2016

Entrepreneurial intentions are defined as planned behavior: in this case, to start a new business. Intentions are a precursor to entrepreneurial action, but not all intentions result in starting up a business.<sup>11</sup> Our analysis of entrepreneurial intentions over time shows that there is a narrowing of the gender gap over the past several years but only because the intentions of men have declined since 2012 from 15% to 13% (See Figure 25). The rate of intentions for women has increased since 2009 from 5% to 11%, where it has remained steady over the past few years.



**FIGURE 25**  
Longitudinal Trends in Entrepreneurial Intentions for Women and Men in the U.S. Adult Population, GEM 2002–2016

Affiliations with entrepreneurs can provide role models and inspire one to consider entrepreneurship. Despite the high visibility of entrepreneurs in the daily press, only a small percentage of both men and women indicate they know an entrepreneur: 34% for men and 27% for women. This small percentage range reflects a decline from 2008 when 47% of men and 41% of women reported knowing an entrepreneur. The gender gap did narrow slightly (by one percentage point) over the last year.

11. Krueger, et al. 2000.

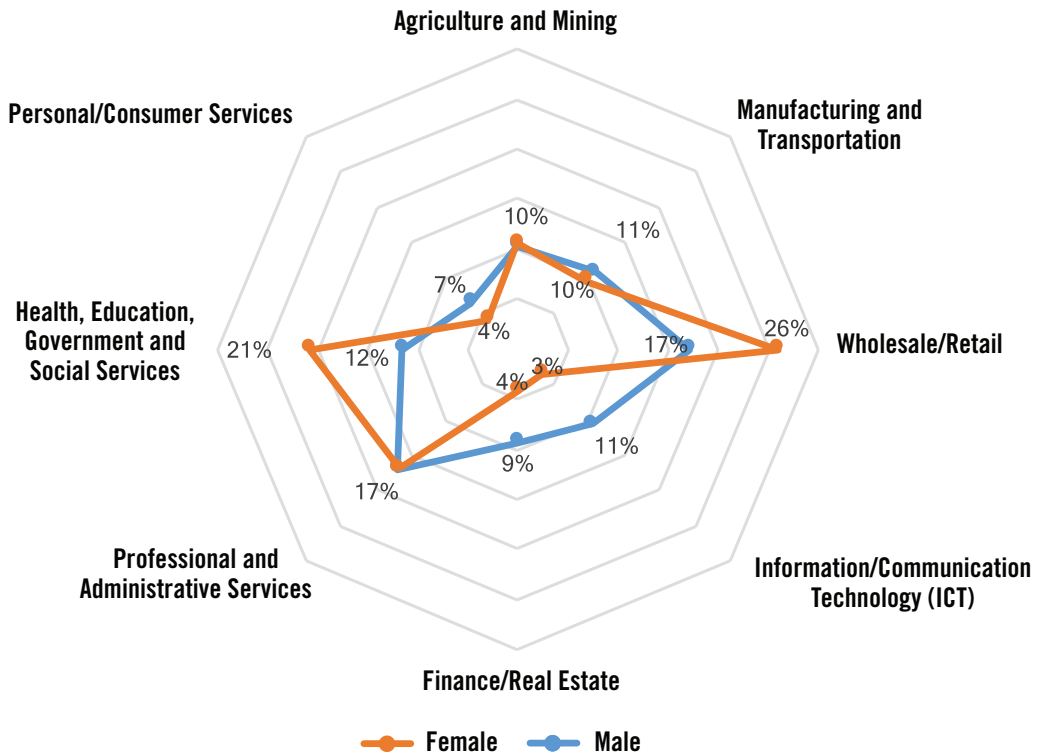
**BUSINESS ACTIVITY AND PERFORMANCE**

Business activity and performance over time was measured in several ways in the GEM survey: by industry participation, use of new technology, innovation, exporting, discontinuance and profit. Consistent with the overall composition of firms by industry in the United States, nascent and new firms are predominantly in the business and consumer services, rather than in agriculture, mining, and manufacturing sectors.

Women start a much higher percentage of businesses in wholesale/retail and health/education/government/social services compared with men. Information/communications technology and finance/real estate are more prevalent among men than women entrepreneurs (See Figure 26). Recent data from the National Women’s Business Council shows that of the businesses owned by women in the United States, the highest number of women-owned firms is other services, followed by health care and social assistance, professional scientific and technical services, administrative support and retail trade.<sup>12</sup>

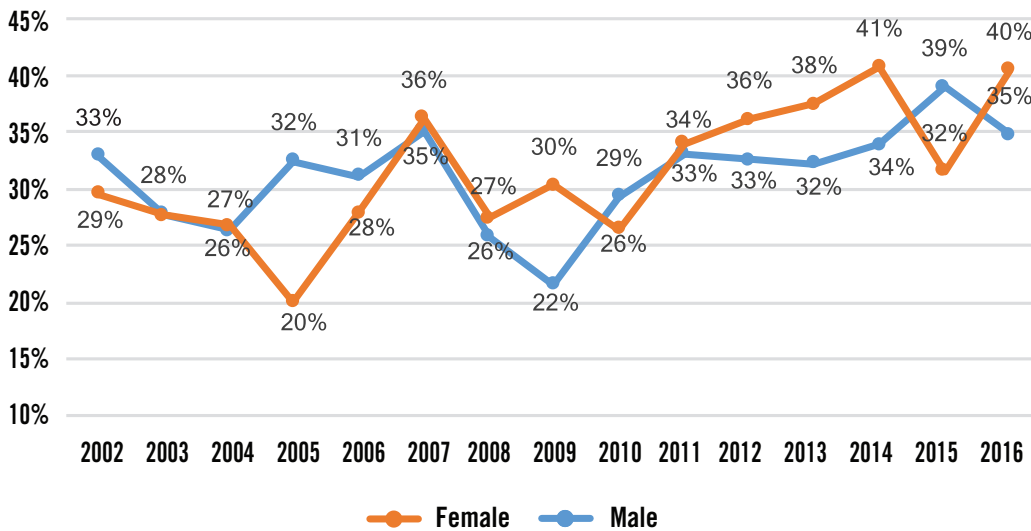
One of the biggest differences in the GEM analysis is that only 3% of women entrepreneurs start information and communications technology businesses compared to 11% for men. Similarly, only 3% of women entrepreneurs consider their businesses to be in the medium- or high-technology sectors compared to 8% of men. Women entrepreneurs, however, are almost as likely to use new technology in their businesses: 9% compared to 10% for men.

**FIGURE 26**  
Industry Breakdown  
for Female  
and Male Total  
Entrepreneurial  
Activity in the  
United States,  
GEM 2016



12. [https://www.nwbc.gov/sites/default/files/FS\\_Women-Owned\\_Businesses.pdf](https://www.nwbc.gov/sites/default/files/FS_Women-Owned_Businesses.pdf)

In addition to industry sector and use of technology, GEM also examined the extent to which women consider their products and services innovative. This is one area where we see a gender gap in the opposite direction, meaning that women entrepreneurs are more likely to innovate than their male counterparts, a trend since 2011, with a slight aberration in 2015. In other words, women entrepreneurs are more likely to introduce products and services that are new to customers and not generally offered by competitors (40% compared to 35%) (See Figure 27).



**FIGURE 27**  
Longitudinal Trends in Percentage of Innovative Activity Among Women and Men Entrepreneurs in the United States, GEM 2002–2016

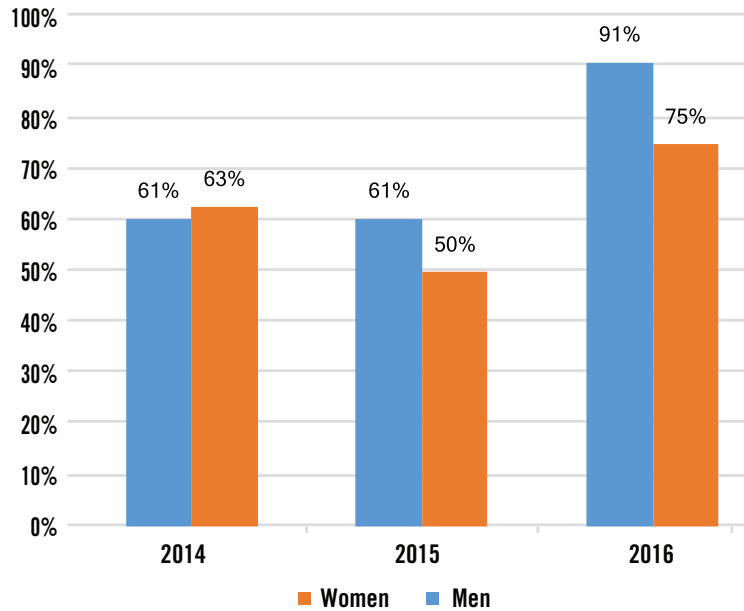
A possible explanation for high innovation levels among women entrepreneurs is their participation in wholesale/retail, where there are low entry barriers and high competition, making it more difficult to gain a protectable competitive advantage. Innovation with new products and services is a practice that can lead to greater sustainability over time in these contexts. Additionally, women entrepreneurs may develop innovative opportunities in the services sectors, for example, in health and education.

Internationalization represents the extent to which entrepreneurs export, whether their businesses receive more than 25% of sales from customers living outside the United States. In 2015, 14% of men entrepreneurs indicated this level of international sales compared to 8% of women. In 2016, the percentage dropped for men to 11% and rose slightly to 9% for women, narrowing the gender gap. The overall small percentage is not surprising given that the United States represents a large and diverse market, and a startup may not need to scale internationally at this stage.

Discontinuance is captured in two measures: whether the business was discontinued in the last 12 months, and whether the entrepreneur stopped leading the business but it continued. Overall, 4% of men and 3% of women have discontinued a business in the past year, with about a third of both genders stating that the businesses continued to operate after their exit. The trend over time is consistently low for both men and women, but women have an overall lower rate of discontinuance than men. This could suggest that women are more likely to sustain their businesses over time, but women also start fewer businesses so there is a smaller base of those that could possibly be discontinued.

The final measure of performance was profitability. For both men and women entrepreneurs, the rate of profitability increased dramatically between 2015 and 2016 by more than 25% (See Figure 28). There is a slight gender gap in that men still report greater profitability than women, but overall the performance measures for all businesses are quite positive.

**FIGURE 28**  
**Profitability of**  
**Men and Women**  
**Entrepreneurs in the**  
**United States,**  
**GEM 2014–2016**



**SUMMARY**

In summary, we see a rise in the TEA rates of women entrepreneurs with a slight narrowing of the gender gap in 2016. The gap between men and women entrepreneurs has decreased among nascent entrepreneurs, and the rate of women’s entrepreneurship has increased for nascent and established business activity. Both men and women are likely to start businesses in their early ages—between 25 and 44—and to be motivated by opportunity rather than necessity.

Women’s perceptions of opportunities and entrepreneurial intentions rose in 2016, and the gender gap narrowed. The gap between men and women in perceived capabilities, however, is increasing slightly with women exhibiting less confidence than men in their ability to start a business. Fear of failure has inched upward for women, still a little less than that for men. Considering there is still a gender gap in the TEA rates of men and women (See Figure 29), it is highly likely that these perceived attitudes are part of the explanation for this difference.

Compared to men, women are less likely to discontinue their businesses. Among entrepreneurs, women are more likely to innovate than men, even though they participate more often in the wholesale/retail sector and are less likely to see their businesses as medium to high technology. Overall, there are more upward trends in closing the gender gap and the outlook for women is positive over the years of this analysis.

# Chapter 5

## Entrepreneurship in Three Cities

### INDUSTRY SECTOR PARTICIPATION

Over the past several years, GEM U.S. has oversampled certain bell-weather states to learn more about entrepreneurship throughout the country. This past year, we switched our focus to cities to learn more about how entrepreneurship is occurring at the local level. We oversampled three cities: Miami, Boston, and Detroit. Each city represents its own unique set of demographic and economic characteristics. Collectively, they provide a window into how entrepreneurship occurs locally in different parts of the United States. This chapter reviews highlights for several indicators for these cities.

To provide some context, Table 1 highlights some key demographic and economic statistics of the three cities.

Miami is the smallest of the three cities sampled this year (453,600 in 2016) but is experiencing strong population growth (13.5% from 2010 to 2016). Household income is just over \$31,000. The city contributes approximately 2.0% (\$318 million) to the national GDP. Florida ranks #6 in the nation for its tax-climate favorability since residents do not to pay state income tax. Unemployment in 2016 was 5.4%.

Boston's population is 673,200 and is also experiencing solid growth (9% from 2010 to 2016)—an indication of its ongoing attractiveness to outsiders moving to the region. Household income is the highest of the three cities (nearly \$56,000). With its high-technology, medical, and academic sectors, the city contributes nearly \$400 million to the national GDP (or 2.4% of the total). The local economy is vibrant, with only 3.4% unemployment.

Detroit has a similar population to Boston (672,800), but continues to decline in numbers (-5.8% from 2010 to 2016). Its household income is the lowest of the three cities (\$25,800), and the city experienced a 6.4% unemployment rate in 2016.

|  | Miami     | Boston    | Detroit   |                                |
|--|-----------|-----------|-----------|--------------------------------|
| <b>2010 Population</b> (thousands)                                 | 399.5     | 617.6     | 713.8     | census.gov                     |
| <b>2016 Population Estimate</b> (thousands)                        | 453.6     | 673.2     | 672.8     | census.gov                     |
| <b>Change in Population</b> (2010-2016)                            | 13.5%     | 9.0%      | -5.8%     |                                |
| <b>Household Annual Income</b> (2015)                              | \$31,051  | \$55,777  | \$25,764  | census.gov                     |
| <b>GDP</b> (in current dollars, millions, 2015)                    | \$317,986 | \$396,549 | \$245,607 | https://www.bea.gov            |
| <b>Share of U.S. GDP</b> (2015)                                    | 2.0%      | 2.4%      | 1.5%      | https://www.bea.gov            |
| <b>State income Tax Rate</b> (2016)                                | -         | 5.1%      | 4.25%     | https://www.taxadmin.org       |
| <b>State Business Tax Climate Score</b><br>(range: 3.36-7.6, 2016) | 6.89      | 5.15      | 5.61      | https://taxfoundation.org      |
| <b>Tax Climate Rank by State</b><br>(out of 50; 1 is best, 2016)   | 4         | 25        | 12        | https://taxfoundation.org/2017 |
| <b>Unemployment Rate</b> (2016 average)                            | 5.4%      | 3.4%      | 6.4%      | https://www.bls.gov            |

**TABLE 1**  
Demographic and  
Economic Statistics  
for Three Cities

ENTREPRENEURIAL ACTIVITY

Total Entrepreneurial Activity in Miami, Boston, and Detroit provide different snapshots of each city’s entrepreneurial climate. Figure 29 shows the TEA percentages for the three cities along with the national average. TEA is highest in Miami (22%) and followed closely by Detroit (20%). Both cities far exceed the national average (12.6%). By contrast, Boston’s TEA (12%) falls just below the national average. In the three cities, entrepreneurial intentions among those who are not in the process of starting or already own a business tracks the TEA rates in a similar manner. Detroit (25%) and Miami (24%) again rank much higher than the national average (12%), while Boston (13%) scores just slightly above it. From this snapshot, Miami and Detroit appear to have vibrant entrepreneurial climates that are generating both interest in starting new businesses as well as fostering early-stage startups in greater relative percentages compared to the national averages.

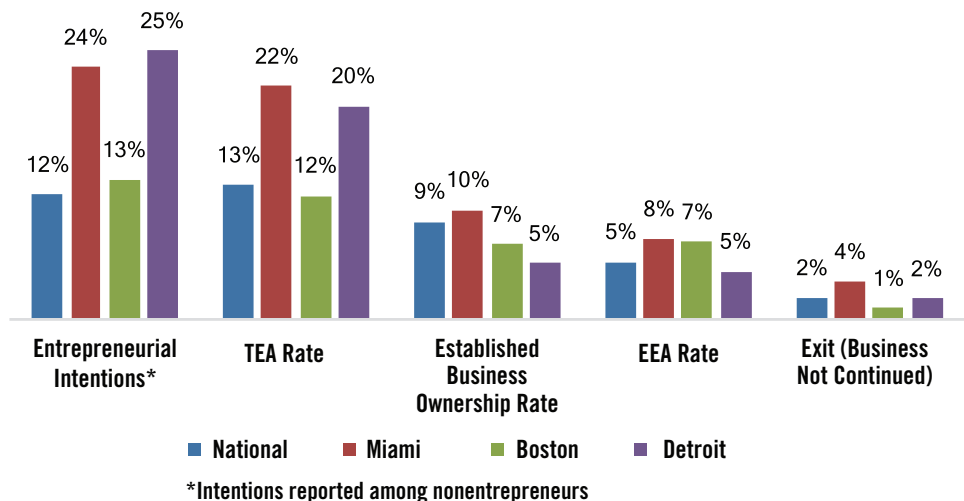
In terms of the established business ownership and EEA, the statistics paint a different picture. Miami remains above the national averages for established business ownership rate (10%) and EEA (8%). This illustrates the prevalence of entrepreneurship across multiple phases (intentions through mature business activity) and types (startup entrepreneurs vs those in organizations). This trend suggests that Miami’s entrepreneurs are able to sustain businesses into maturity and that people can be entrepreneurial as employees as well as starting a new business.

Detroit, however, scores below the national averages (at 5%) for both indicators. It may be that this city is experiencing a recent uptick in entrepreneurship that has not yet translated into mature business activity, or that entrepreneurs have trouble sustaining their businesses. Low EEA rates indicate few opportunities to pursue entrepreneurship in organizations or a low desire or ability to do so.

Boston’s rates are at 7% for both indicators, which is below the national established business ownership rate average and higher than the national EEA average. Low established business activity likely follows low TEA rates; in other words, with fewer people starting businesses, there are fewer people available to transition these businesses to a mature phase. EEA, on the other hand, appears to be an attractive context for people to exercise their entrepreneurial ambitions.

When looking at exit statistics, differences also appear between the three cities. In Miami, 4% of working-age adults have discontinued businesses in the past year, while only 1% exited in Boston. This statistic is consistent with high TEA rates in Miami and low TEA rates in Boston; where there is high entrepreneurial activity, there will naturally be more exits due to the uncertain nature of this pursuit. In Detroit, 2% of business exited, which is on par with the national average (2%).

**FIGURE 29**  
Phases of Business Activity in the Adult Population in the United States and in Three Cities, GEM 2016

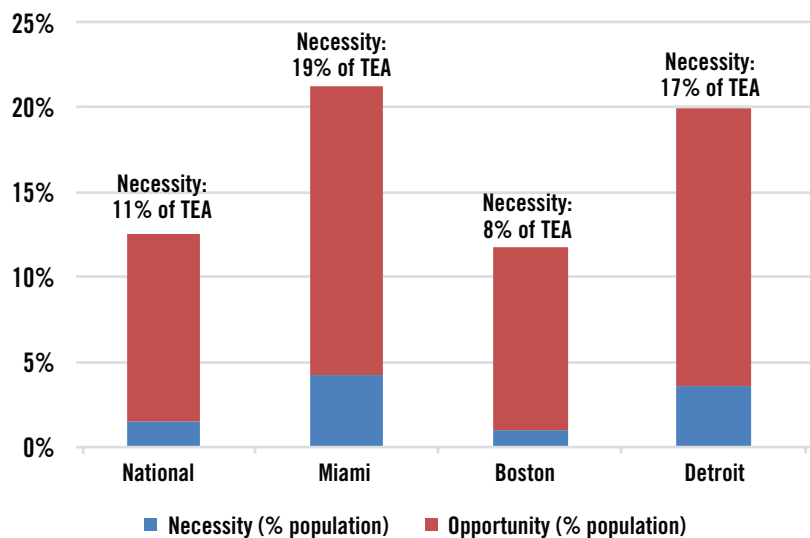




## NECESSITY- AND OPPORTUNITY- DRIVEN ENTREPRENEURSHIP

For both Miami and Detroit, entrepreneurs are pursuing a greater proportion of necessity-driven businesses compared to the national averages (See Figure 30). As the descriptor connotes, opportunity-driven entrepreneurs start ventures based on an opportunity they perceive. Necessity-driven entrepreneurs, on the other hand, engage in entrepreneurial activity out of necessity (few better job prospects, which could be due to regional economic downturns, termination from a job, lack of skills for the needs in the economy, etc.).

Simply stated, necessity-driven entrepreneurs engage in entrepreneurial activity because they have few or no job alternatives. These entrepreneurs are more likely to start lower growth, less sustainable businesses. Opportunity-driven entrepreneurs are more likely to start and grow higher potential businesses, so a prevalence of these entrepreneurs can serve as a leading indicator of future economic attainment. In Miami, 4% of the working-age population are starting necessity-driven businesses, while 17% are considered opportunity-driven. In Detroit, 3.5% of the population are classified as necessity-driven entrepreneurs, while 16% are opportunity-driven. Boston's low necessity rates reflect low unemployment in this city.



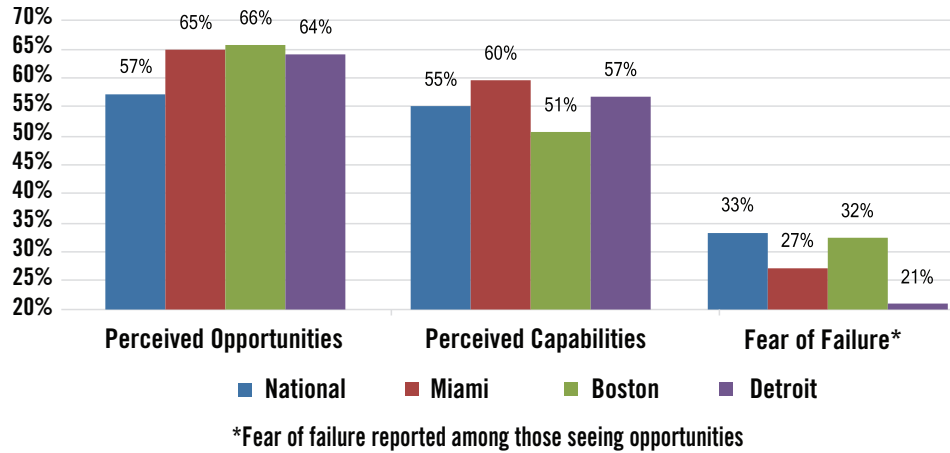
**FIGURE 30**  
Total Entrepreneurial Activity Showing Necessity Motives in the United States and in Three Cities, GEM 2016

## ENTREPRENEURIAL ATTITUDES

For additional perspective on these statistics, we look to Figure 31, about several perception indicators among entrepreneurs. In all three cities, a higher proportion of entrepreneurs perceived opportunities than the national average (57%). In Miami (60%) and Detroit (57%), a higher proportion of entrepreneurs perceived they have the capabilities to launch and run their businesses compared to the national average (55%). Likewise, in Miami (27%) and Detroit (21%), a lower proportion of entrepreneurs were afraid to fail than the national average (33%). Interestingly, people in Boston did not exhibit high perceptions about startup capabilities, and they reported a higher fear of failure than in the other two cities. With higher employment levels, an entrepreneur may forgo good employment opportunities to start a business and may either have a higher potential business in mind that would justify this choice, or may hesitate to take a risk when there are good stable jobs available.

## CHAPTER 5

**FIGURE 31**  
Entrepreneurial Attitudes  
in the Adult Population  
in the United States  
and in Three Cities,  
GEM 2016

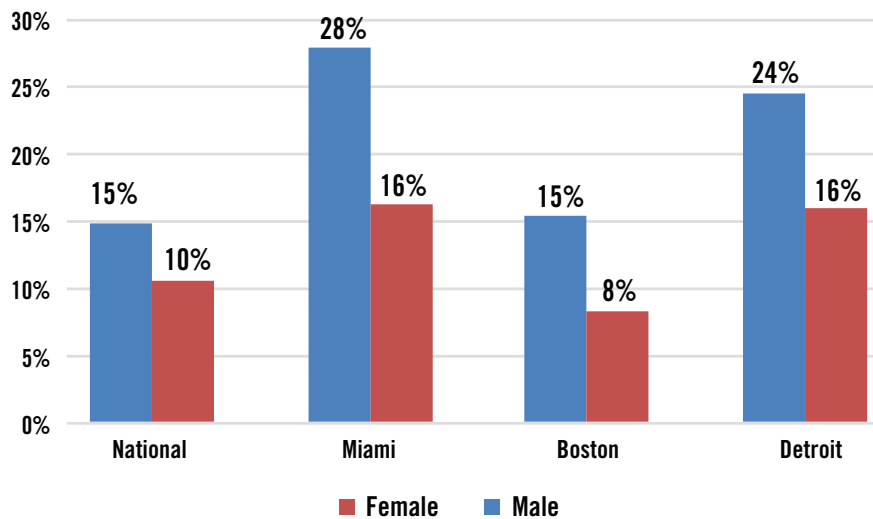


### ENTREPRENEURSHIP RATES BY GENDER

In Figure 32, we examine TEA differences by gender. In Miami and Detroit, the TEA percentage for males (28% and 24%, respectively) and females (both 16%) is much higher than the national average (15% for males, 10% for females), with male activity approaching twice the national level in Miami. In Boston, male TEA rates mirror the national average, while female rates are lower.

Besides the raw percentages, what may be more instructive is the female to male TEA ratio. The national average is 71 (i.e., 71 females to 100 males in the process of starting a new business). All three cities have ratios below the national average: Boston (53), Miami (58), and Detroit (66).

**FIGURE 32**  
Total Entrepreneurial  
Activity Rates in the  
United States and in  
Three Cities by Gender,  
GEM 2016



ENTREPRENEURSHIP RATES BY INCOME

In Figure 33, we show the TEA differences by income. In Miami and Boston, the highest income category (\$100K/year) shows the highest percentage of early-stage entrepreneurs. In Detroit, the highest entrepreneurship rate occurs among the lowest income category (under \$50K/year). In Miami and Detroit, entrepreneurship levels exceed the national averages within all three income categories.

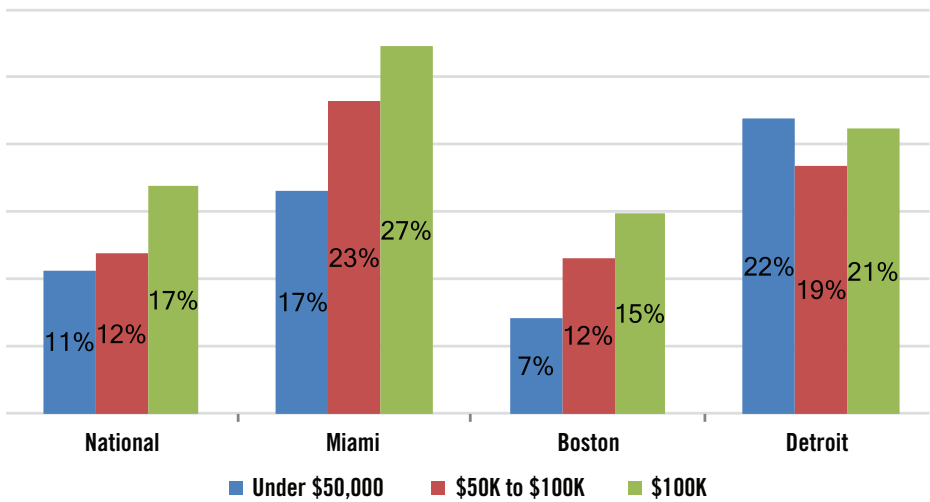


FIGURE 33 Total Entrepreneurial Activity Rates in the United States and in Three Cities by Income Level, GEM 2016

ENTREPRENEURSHIP RATES BY AGE GROUP

In Figure 34, we report TEA differences by age. In Miami, the largest proportion of early-stage entrepreneurs comes from 35 to 54 year olds (28%), which far exceeds the national average for this age group (14%). In Detroit, all three age groups are represented in greater proportion than the national averages, with 22% rates among both the 18 to 34 year old category and the 35 to 54 year old group. Boston has a higher rate of entrepreneurship among the oldest age group compared to the national average, while the younger population starts businesses less often than average.

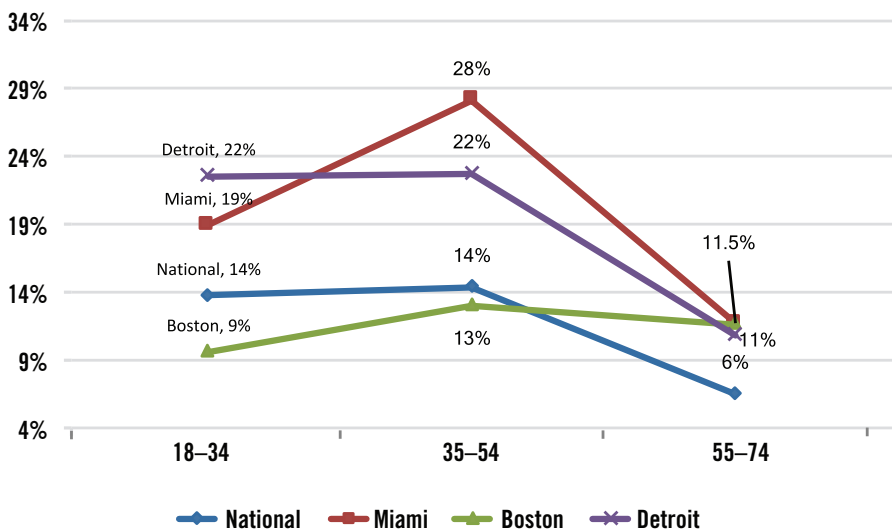


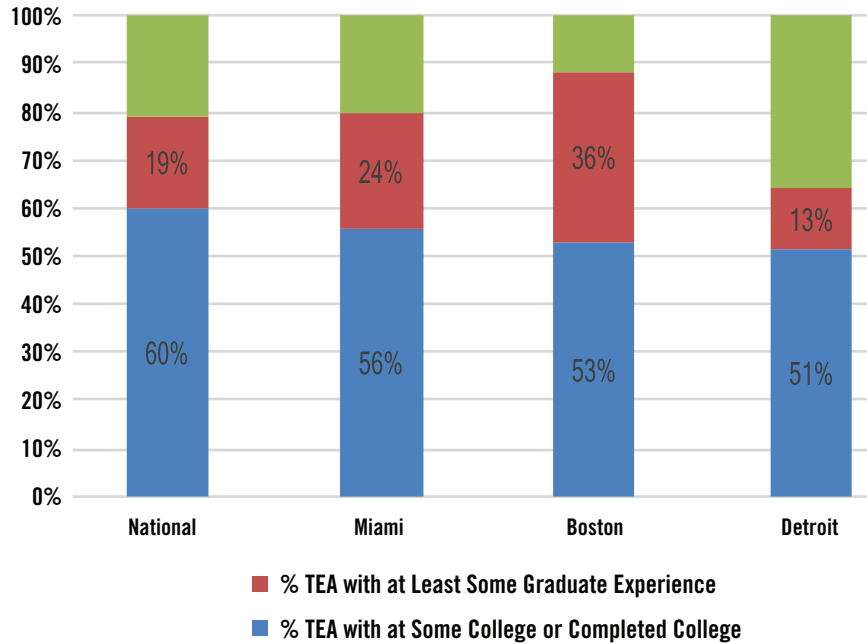
FIGURE 34 Total Entrepreneurial Activity Rates in the United States and in Three Cities by Age Group, GEM 2016

## CHAPTER 5

### ENTREPRENEURSHIP RATES BY EDUCATION

Some differences also exist in terms of founders' educational backgrounds (see Figure 35). In all three cities, about half to slightly greater than half of the founders have at least some college education which is below the national average of 60%. In Miami (24%) and Boston (36%), however, a larger percentage of the entrepreneurs have at least some graduate education compared to the national average (19%). In Detroit, 13% of the entrepreneurs have at least some graduate education.

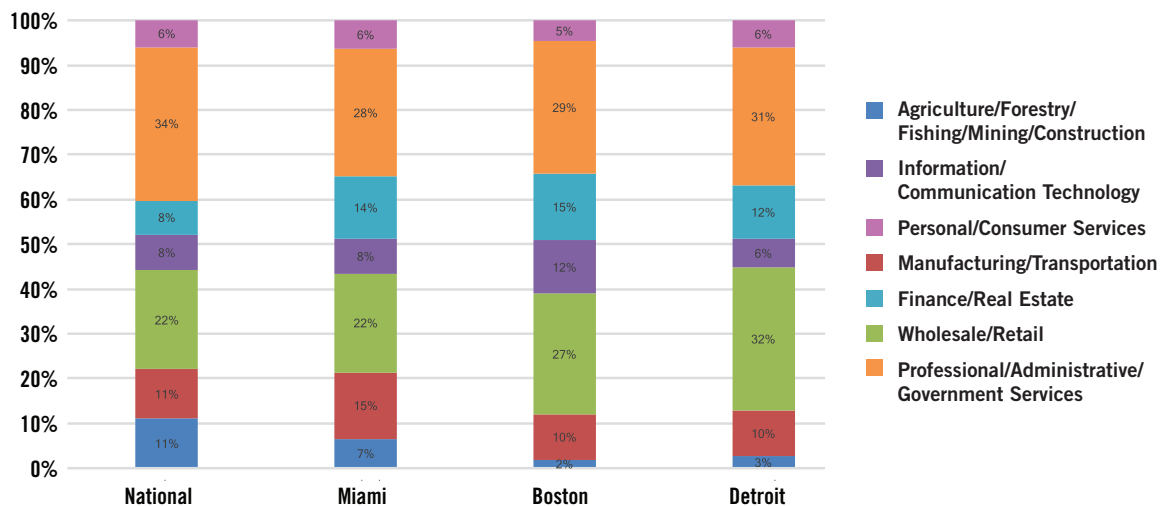
**FIGURE 35**  
Breakdown of Total Entrepreneurial Activity in the United States and in Three Cities by Education Level, GEM 2016



### ENTREPRENEURSHIP RATES BY INDUSTRY

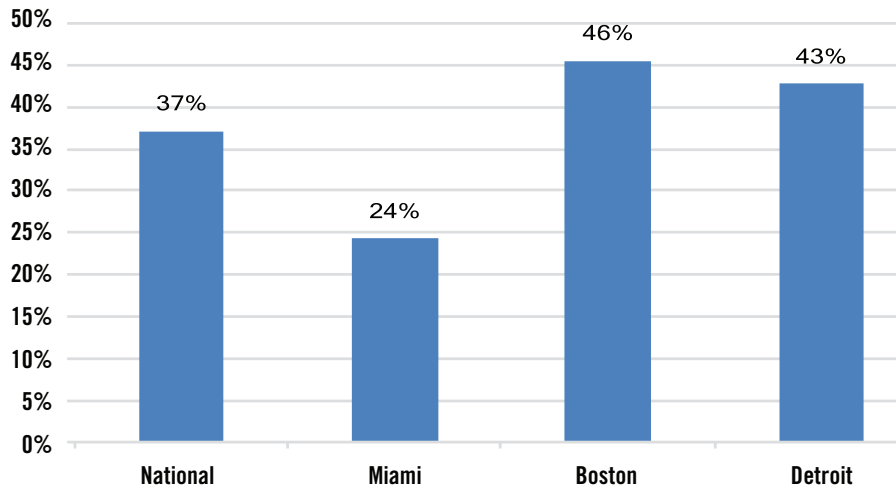
In terms of industry, the three cities show some differences between themselves and the national averages (see Figure 36). Miami shows high startup activity in the manufacturing/transportation and finance/real estate sectors, compared to national averages. Boston has higher than average levels of startups in information/communications technology and finance/real estate. Detroit exhibits high wholesale/retail activity.

**FIGURE 36**  
Breakdown of Total Entrepreneurial Activity in the United States and in Three Cities by Industry, GEM 2016



**INNOVATIVE ACTIVITY**

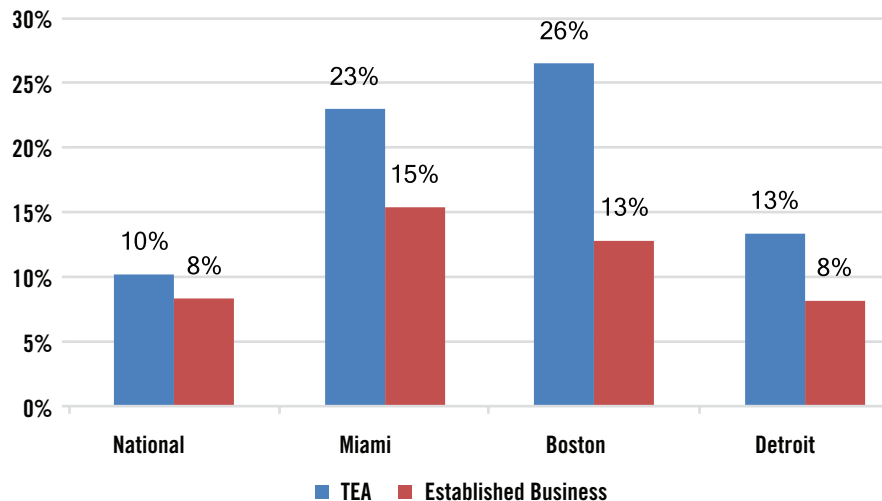
In terms of innovative activity, Figure 37 shows substantial differences between the three cities. Both Boston and Detroit show higher levels of innovative entrepreneurial activity compared to the national average, with Boston's level at nearly twice that of Miami.



**FIGURE 37**  
Percentage of Total Entrepreneurial Activity with New Product/Market Innovations in the United States and in Three Cities, GEM 2016

**INTERNATIONALIZATION**

Figure 38 displays information about international sales for early-stage startup and established business activity in the three cities. Nationally, the United States, with its large and diverse market, shows low internationalization levels compared to other economies participating in GEM. Compared to this national average, Miami and Boston foster a much higher proportion of entrepreneurs who plan for more than 25% of their total sales to go to international markets. Boston entrepreneurs are two and a half times as likely to aim for this level of international sales than the average American entrepreneur. Even among existing owners, both Miami and Boston exceed the national average, a fact that reveals the importance of international entrepreneurs in these cities.

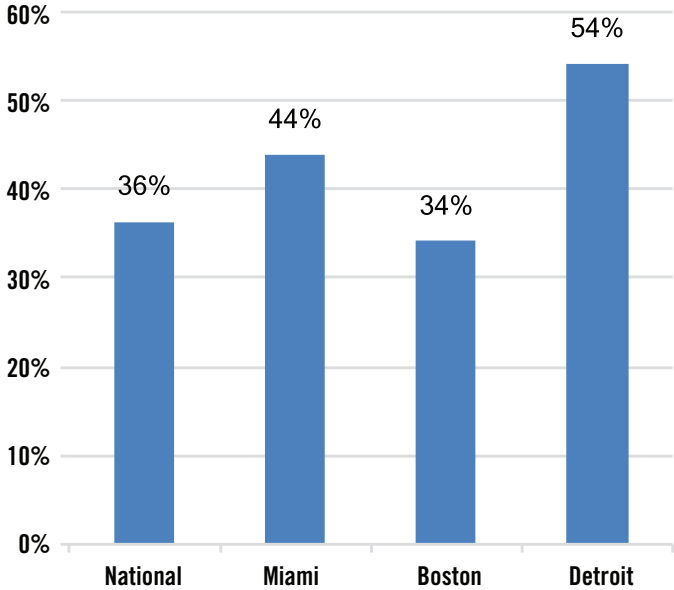


**FIGURE 38**  
Percentage of Total Entrepreneurial Activity and Established Business Ownership with More than 25 Percent of Sales to International Customers in the United States and in Three Cities, GEM 2016

JOB EXPECTATIONS

Figure 39 presents expectations of business growth in terms of the expected number of jobs (6+) in five years. In Miami (44%) and Detroit (54%), greater proportions of entrepreneurs plan to grow their businesses compared to the national average (36%).

**FIGURE 39**  
Percentage of  
Total Entrepreneurial  
Activity with 6+ Job  
Expectations in Five  
Years in the United  
States and in Three  
Cities, GEM 2016





INVESTMENT ACTIVITY

Overall in the United States, just under 4% of working-age adults invested money in entrepreneurs, at a median level of \$5,000. A slightly higher percentage of people made these investments in Boston (5.3%) and Detroit (4.7%). The average investment in Boston was similar to the national level, while investors in Detroit funded much smaller amounts (\$2,000).

Figure 40 conveys information about the relationship between the investors and the entrepreneurs they most recently funded. Investments in close family members' businesses are much lower in the three cities compared to the country's average, but the investment percentage to other relative's business is higher in Detroit than the national average. Investments in businesses started by work colleagues are higher than the national average in all three cities, but particularly for Detroit. Miami stands out for its frequent investments in the entrepreneurial ventures of friends and neighbors. Stranger-funders are close to or exceed the national average, more so for Boston.



FIGURE 40  
Breakdown of Investment Activity by Relationship of Entrepreneurs to Investors in the United States and in Three Cities, GEM 2016

# Conclusions and Implications

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While there are many indications that entrepreneurship is thriving in the United States, nonetheless there are areas that can be addressed to enhance the impact of entrepreneurs on the U.S. economy and the well-being of U.S. society. GEM findings can contribute to the design of national policy interventions and the evaluation of progress toward objectives. Given the size and variation of the third largest country by both population and land area, however, actions directed toward entrepreneurship in the United States will require attention to regional, state and municipal-level characteristics and conditions. Comparisons of the United States with other developed economies, examinations of selected states in previous GEM U.S. reports and this report's highlight of three cities all illustrate the unique and diverse profile of entrepreneurship in the United States. Through education, research, debate, experimentation and assessment, we can learn and accomplish much. Following are some key implications to consider for policy and practice.

## IMPLICATIONS

1. Entrepreneurship requires both a will and a way. Entrepreneurs are fueled by their abilities and confidence but also by their inclinations and determination. Compared to 2009, twice as many Americans believed there were good opportunities around them in 2016, and a persistently high proportion believed they had the ability to start a business. Yet compared to those in the average innovation-driven economy, Americans are one-fourth less likely to have intentions to start a business. This result is offset by what is perhaps more important—actual TEA levels—indicating a willingness to act and likely few barriers to accomplish these actions. But this result also suggests a lower level of potential entrepreneurs, who are otherwise needed to supply future startup efforts. Is entrepreneurship often seen as something other people do? Are other career pursuits more attractive than starting a business? Questions such as these provide interesting possibilities for further research and action.
2. The jump in established business ownership in 2016, which is consistent with prior increases in startup activity, shows the value of tracking different phases in the business life-cycle process. While many efforts to promote entrepreneurship target the startup phase, often with a focus on women, entrepreneurs with high growth potential, technology-based ventures or other specific targets, we need to pay equal attention to sustainability. Even if a firm stays small or medium-sized, its ability to remain in business ensures stability for employees, customers, investors and other stakeholders.
3. While the ethnic makeup of entrepreneurship more or less matches the U.S. population, it is curious that the Latino/Hispanic and especially the Black/African American population have experienced higher levels of fluctuation in the past three years. While some conditions may explain persistent differences among ethnic groups, it would be useful to understand cyclical factors that explain relative shifts at particular times.
4. High rates of both TEA and EEA in the United States suggest the presence of both startup and organizational entrepreneurs, or the presence of those who can operate in both domains. This trend suggests a range of implications. For one, organizations can benefit from the energy of startup entrepreneurs yet will likely need to provide different conditions and practices to ensure this energy is harnessed advantageously. Additionally, while there is a recent emphasis on building appropriate ecosystems to encourage startup activity, entrepreneurial activity within organizations may also rely on factors in the external environment.

5. It is a promising result that entrepreneurial activity in the United States leans toward technology and service industries. However, entrepreneurs' relative emphasis on finance and service offerings, accounting for nearly half of all businesses, greatly outpaces ICT businesses (8%). While many government and private concerns emphasize investments in technology industries, the level and range of service offerings may produce equal or greater impact.
6. U.S. entrepreneurs report high levels of innovative activity and job creation potential but are not venturing out substantially into international markets. This trend may be due to unfamiliarity with business and trade conditions and regulations in other countries, particularly for the range of industries represented, thus indicating a need for targeted assistance. This need may be greater for women entrepreneurs as they are less likely than men to report substantial international sales.
7. Many young people in the United States want to be entrepreneurs and see opportunities for starting businesses, but compared to the older age groups, feel they lack the requisite skills to start a new venture and they have greater fear of failure. These attitudes point to a need for adequate training that builds not only skills but confidence and generates practical learning experiences that enable potential entrepreneurs to experiment and engage in business activities.
8. Older age groups are confident in their ability to start a business and are less fearful of failing, but they do not see enough opportunities and they are not taking actions to start businesses. This population needs to be aware of the latest technological developments and social trends so they can recognize more opportunities to start new businesses, and they need to face fewer barriers in acting on these opportunities.
9. The data confirm the assumption that women are less likely than men to compete in technology industries, instead dominating wholesale/retail and health/education/government/social services. At the same time, women are more likely than men to state that their offerings are innovative. While we devote much attention to encouraging women to enter STEM (science, technology, engineering, math) fields, perhaps more emphasis could be placed on supporting women in industries where innovations receive less visibility.
10. This report demonstrates the value of analyzing entrepreneurship data at the city level. Policy and practice can address and consequently assess the unique characteristics and gaps such as those revealed in the three cities detailed in the report.
  - a. Miami can celebrate its high rates of entrepreneurship and the job creation potential and international reach of its entrepreneurs yet might address the high level of necessity as an entrepreneurial motivator and low innovativeness indicated in the data.
  - b. Detroit also has high rates of entrepreneurship, particularly among young and low-income populations, which may benefit from targeted assistance.
  - c. Boston entrepreneurs are fewer in number but comparatively older, educated, opportunity-motivated, innovative and international. Efforts might aim toward the knowledge-based industries that typically attract entrepreneurs in this city, such as ICT and finance.

# Sponsors

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The **Global Entrepreneurship Research Association (GERA)** is, for formal constitutional and regulatory purposes, the umbrella organization that hosts the GEM project. GERA is an association formed of Babson College, London Business School and representatives of the Association of GEM national teams.



The GEM program is a major initiative aimed at describing and analyzing entrepreneurial processes within a wide range of countries. The program has three main objectives:

- To measure differences in the level of entrepreneurial activity between countries
- To uncover factors leading to appropriate levels of entrepreneurship
- To suggest policies that may enhance the national level of entrepreneurial activity

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