

INTRODUCTION

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Entrepreneurship is generally acknowledged and accepted as a driving force for improving living standards. This volume of collected essays, which includes contributions from leading international academics, explains (1) the importance of entrepreneurship to economic prosperity, (2) how changing demographics, and more specifically the aging of populations in developed countries, could adversely affect entrepreneurship—and may already be doing so, and (3) policy levers that can be used to mitigate these negative demographic effects. The Fraser Institute is proud to be the lead organization amongst four in this important endeavor: the Centre for Strategic and International Studies (US), the Institute of Public Affairs (Australia), and The Entrepreneurs Network (UK).

Technological change is the primary factor driving increases in standards of living in developed countries, and innovation is at the heart of technological change. That is, the introduction and widespread adoption of new ways of producing output, including new ways of organizing business activity, as well as new or modified goods and services, are the primary means for making people healthier and wealthier.

While not the exclusive source of innovation, start-up firms, usually relatively small, are disproportionate contributors to innovation, as well as to changes (large or small) in what people consume, where they live, where they work, and how much they earn. The rise of new firms, which often

results in the demise of less competitive, older firms, comprises the phenomenon that the economist, Joseph Schumpeter, identified as “creative destruction” (Schumpeter, 2009). The creative destruction phenomenon is the lifeblood of a healthy capitalist system, as it results in the constant replenishment of an economy’s innovation pipeline. At the core of the innovation process are the entrepreneurs who create start-up firms, as discussed in detail by Robert Murphy in **Chapter 1**. While many start-ups are not sources of important innovations, the minority that are can be a major force for economic change as recently exemplified by companies such as Alphabet (formerly Google), Facebook, and Tesla. Since relatively few start-ups become successful industry leaders, it is desirable to reduce barriers to entrepreneurship, so that more, rather than fewer, start-ups compete to become the next Microsoft.¹

There is a growing literature focusing on the environmental and personal attributes that contribute to the making of entrepreneurs. One prominently identified attribute discussed in the literature is demography. In particular, Liang, Wang, and Lazear (2014) identify age as a major attribute influencing the propensity of individuals to become entrepreneurs. Specifically, they identify the late 20s to early 40s as the critical age range for entrepreneurs. The relevant distribution is U-shaped. That is, the propensity for entrepreneurship rises within this age span, reaches a maximum, and then decreases.

Those authors identify two main factors that account for the critical age span for entrepreneurship as Russell Sobel discusses in **Chapter 2**. One factor is that relatively young people have “supple” brains that facilitate creative thinking. A second factor is that individuals ordinarily need some business experience to successfully run a company, even a start-up business. To the extent that senior and junior executives are relatively old, their continued participation in the work force can deprive young people of the

1 This is not to say that established firms have only a minor role to play in the economic growth process. As Carden and McCloskey discuss in their chapter in this volume, economies of scale associated with large, established firms are complementary to the innovations created by start-ups. See also Weiblen and Chesbrough (2015).

business experience they need to hone their managerial skills in areas such as production, finance, and accounting. In short, an aging population can be a prominent barrier to entrepreneurship and, therefore, to the major economic benefits conveyed by start-up companies.

In his chapter, Sobel presents demographic data for a number of developed economies that paint a pessimistic long-run picture for entrepreneurship. Specifically, developed countries have been aging, and the aging process is set to accelerate generally beyond the year 2025. For example, the percentage of the population in the 25-to-49 age group was at its highest in 1995 in Canada, the US, the UK, and Australia. That year, 40.1 percent of the population was in this age group in Canada, 38.4 percent in the US, 36.3 percent in the UK and 38 percent in Australia. By 2015, that percentage was lower in all four countries by some two to five percentage points. Furthermore, for these four countries, the percentage aged 25 to 49 will continue to fall by an average of four percentage points over the next five decades.

In **Chapter 3**, Joel Emes, Taylor Jackson and Steven Globberman present and discuss data bearing upon the changing rate of start-up businesses in Canada, the US, Australia, the UK, and Germany. The broad pattern is the same across the various sample countries. Namely, small start-up companies as a share of the population of small business incumbents declined in the post-2000 period. Table I-1 summarizes this decline.

The decline is particularly notable in the post-2008 period consistent with the likelihood that the financial crisis of 2008 and the subsequent recession and slow economic recovery discouraged entrepreneurial start-ups. However, a longer time series for the US and Canada suggests that the decline in entrepreneurial start-ups is not uniquely a function of the severe recession of 2008. Specifically, the declining share of small firm start-ups begins earlier and generally overlaps the aging profile of the populations of the sample countries. While it was not possible to do formal statistical testing, the broad coincidence of declining rates of small business start-ups and aging populations in the countries examined is consistent with the econometric evidence of Liang, Wang, and Lazear (2014) that is discussed in Sobel's chapter.

Table I-1: Small Business Entry Rates per 100 Small Business Incumbents, Three Year Averages, 2003–2014

Period	2003–2005	2006–2008	2009–2011	2012–2014
Australia*	17.59	14.99	14.14	12.57
Canada*	15.74	15.74	14.29	13.73
United States*	13.61	13.12	10.68	11.30
Germany**§	6.06	6.62	6.36	4.76
United Kingdom**	15.48	14.72	11.60	14.94

Notes:

* Small enterprise defined as 20 or fewer employees.

** Small enterprise defined as fewer than 10 employees.

§ 2003–2005 is based on 2004 and 2005 data for Germany.

There is a break in the data for the United Kingdom and Germany, in that a new reporting system was adopted for these two countries from 2008 onwards.

Source: Australian Bureau of Statistics, 2007, 2012, 2016; Eurostat, 2012, 2017; Statistics Canada, 2017a; US Census Bureau, 2017; author calculations.

Chapter 3 also presents data on growth rates of multifactor productivity for the sample countries. This broad measure of productivity growth has noticeably slowed in recent years for most of the countries examined. By way of illustration, for Australia, Canada, Germany, the United Kingdom, and the US, multifactor productivity growth from 2011 to 2015 was, on average, only around 50 percent of the growth rate from 1991 to 1995. The declining productivity growth rate is consistent with a slowdown in business start-up rates. To be sure, there can be multiple causes of a slowdown in productivity growth; however, the latter phenomenon underscores the importance of gaining a better understanding of why business start-up rates have slowed, as well as the importance of identifying and implementing policies to revitalize entrepreneurial activity.

Perhaps the single most important institutional factor influencing entrepreneurial activity is the tax structure facing would-be entrepreneurs.

In **Chapter 4**, Seth Giertz discusses the various effects that taxes have on entrepreneurship. Most directly, higher taxes on incomes reduce the private sector savings that are available over time to fund entrepreneurial start-ups. In effect, an income tax reduces accumulated savings by reducing the amount available to be saved, and then by reducing the after-tax income that accrues from investing what is saved in an earlier period. In this regard, a consumption tax would be preferable to an income tax, as it would effectively not tax accumulated income from savings, at least until it was spent on consumption.

Giertz also highlights the impact of higher marginal income tax rates on risk-taking, which is an essential feature of entrepreneurship. In theory, if investors are risk-neutral and income losses from start-up ventures were fully deductible in the year they were incurred, symmetrical to income gains being fully subject to taxation in the year they are realized, higher marginal tax rates would have a neutral impact on risk-taking. In fact, losses from business start-ups are generally not fully deductible in the year that they are incurred. Hence, higher marginal tax rates discourage risk-taking, other things constant. This effect is magnified if investors are risk averse. An offsetting factor is that higher marginal income tax rates will encourage a substitution away from salaried employment to self-employment, especially if business tax rates are lower, at the margin, than personal income tax rates for any level of income. This might result in some increased start-up activity at the margin, although it is unlikely to be of the Schumpeterian variety, i.e., start-ups driven by innovation.

Dan Mitchell, Taylor Jackson, and Charles Lammam in **Chapter 5** address the importance of the capital gains tax structure. Many entrepreneurs anticipate that the main source of the payoff to their work efforts and risk-taking will be the capital gains that they realize when either taking their companies public or, increasingly, selling their companies to private equity investors. It makes sense that a higher capital gains tax will therefore discourage business start-up activity. In Chapter 5, the authors provide a very detailed review of the empirical literature on the impact of a higher capital gains tax rate on business start-ups. Unsurprisingly, the impact is generally quite substantial. Indeed, in some studies, the capi-

tal gains tax rate is the single most important policy instrument affecting start-up activity. The authors then summarize the capital gains tax structure for the US, Canada, the UK, and Australia, highlighting important differences across the countries reviewed.

In **Chapter 6**, Douglas Cumming and Sofia Johan provide additional perspective on the importance of a country's tax structure on entrepreneurship in their broad evaluation of how financial laws and regulations affect investments in business start-ups. Their analysis reveals that tax law is the most frequently linked policy variable to business start-ups in the entrepreneurship literature. This provides additional support for the importance of developed countries restructuring their tax systems away from taxing income and capital gains from entrepreneurial activity if more of that activity is to be realized.

Cumming and Johan also discuss the potential role that government might play in providing funding for entrepreneurship, particularly through tax-sponsored venture capital companies. In particular, they review the experience of Canadian Labour Sponsored Venture Capital Corporations (LSVCCs) and highlight the problems with those funds and their relatively poor financial performance. Cumming and Johan's conclusion is broadly consistent with a growing number of empirical studies that compare the financial performance of private sector investment managers to that of sovereign wealth funds. The latter are funds that invest government savings typically accrued through royalties and taxes on natural resources. While the mandates of private investment managers and sovereign wealth funds differ, the financial performance of the former group is generally better than that of the latter group.² Cumming and Johan also document the potential for direct or indirect (through tax credits) government funding of start-ups to crowd out private investment. This finding argues against governments accruing savings through taxes and royalties in order to fund

2 For a review and discussion of studies that compare the financial performance of privately owned investment managers to those of sovereign wealth funds, see Globberman and Shapiro (2018).

innovative business ventures, rather than allowing savings to be mobilized and invested through the private sector.

Cumming and Johan also discuss the relevance of bankruptcy laws, labour regulations, and equity crowdfunding rules on entrepreneurship. In particular, they highlight the importance of entrepreneur-friendly bankruptcy laws, limited labour market regulations, and securities laws that encourage initial public offerings, as well as support the activities of intermediaries, such as venture companies, in promoting business start-ups. Given the economic spillover benefits from start-up businesses, they highlight the potential for “intelligent” financial rules to improve economic efficiency. They caution that more research is needed on how public policy in the area of financial laws and regulations might improve efficiency.

Universities are widely seen as sources of new scientific and technical knowledge through the research activities of faculty. Increasingly they are also coming to be seen as engines of economic development as reflected in the growing establishment of university offices focused on encouraging start-up ventures based on faculty research, as well as the proliferation of formal educational programs in entrepreneurship. In **Chapter 7**, Art Sherwood discusses the prominent role that universities play in what he identifies as the “entrepreneurial ecosystem.” This system involves different parts of the university, in particular, technology transfer offices, as well as university faculty, interacting with private sector investors and businesses, and government officials and agencies, among other external institutions. Sherwood describes these interactions, as well as other, less formal ways, that knowledge created within the university can promote innovation. He also offers a number of suggestions based on case studies and other findings reported in the literature that promise to strengthen the role that universities can play in promoting entrepreneurship

Legal and regulatory institutions can play a prominent role in conditioning the entrepreneurial environment, as Cumming and Johan, among others, identify. In **Chapter 8**, Wayne Crews offers an extensive discussion of the burden that regulations place on would-be entrepreneurs, including phenomena such as health and safety regulations, professional licensing requirements, and environmental restrictions. Crews reviews the empiri-

cal literature on the relationship between regulation and start-up activity, highlighting the conceptual and statistical challenges researchers face in identifying the relationship using conventional empirical tests. Notwithstanding these difficulties, and while acknowledging that certainly not all regulations have net social costs, Crews makes a compelling case that in general, developed countries are much too highly regulated from the perspective of social welfare broadly considered, particularly given the vital role that entrepreneurship plays in promoting real economic growth. He provides an extensive set of recommendations for reforming the regulatory process so that it poses a substantially smaller barrier to entrepreneurial start-ups. In particular, he recommends that existing regulations be regularly reviewed and eliminated, unless there is a compelling social reason for their continuation.

Another way that individual countries can address the challenge to entrepreneurship posed by aging populations is to allow more immigration into their countries, particularly younger and more highly educated and skilled immigrants. In **Chapter 9**, Peter Vandor and Nikolaus Franke discuss important linkages between immigration and entrepreneurship. One critical issue they address is whether immigration “crowds out” domestic entrepreneurship. That is, are immigrant entrepreneurs complements to, or substitutes for, domestic entrepreneurs? While there is some conflicting evidence on this issue, Vandor and Franke conclude that on balance, immigration encourages start-up business activity. Certainly, as they report, immigrants account for a disproportionate share of successful business start-ups in developed countries. For example, in the United States, immigrants represented 24.9 percent of all new business owners between 2007 and 2011, but only 15.6 percent of the wage workforce. Similar observations have been made for Canada where the 2009 Labour Force Survey indicates that 17.5 percent of immigrants aged 18 to 69 were self-employed compared to only 14.4 percent of the Canadian-born population.

This dynamic of immigrants being disproportionately likely to start businesses is unsurprising. For one thing, immigrants are likely to be, by nature, more risk-taking than those who are native born, since immigration itself is a risky proposition. For another, immigrants face language

and other challenges to getting employment that native-born job-seekers are less likely to face, which should make the former more willing, at the margin, to start their own businesses. Vandor and Franke also discuss challenges that immigrants face in actually becoming successful as entrepreneurs, including access to financial capital and limited knowledge of local laws and regulations. In this regard, there is a potential role for public policy to play in helping immigrant entrepreneurs address those challenges.

Finally, in **Chapter 10**, Art Carden and Deirdre McCloskey discuss the importance of attitudes towards entrepreneurs as determinants of start-up businesses. This chapter summarizes and extends McCloskey's well-known writings on the virtues of the bourgeoisie. Carden and McCloskey describe how different social attitudes towards people engaged in business pursuits across European countries help explain why economic growth differed across those countries and, in particular, why Great Britain became the dominant European power by the mid-nineteenth century. In short, starting and running a business came to be seen in Great Britain and several other European countries as a worthy and honorable occupation. This was a departure from the traditional social hierarchy of Europe where the clergy and the military held an exalted status and where "shopkeepers" were looked upon as less worthy—indeed, perhaps unworthy—members of society. Carden and McCloskey remind us that entrepreneurs are often motivated by more than just pecuniary gain. Many contemporary entrepreneurs also want to be the source of important economic and social changes, as exemplified by the entrepreneurial projects of Elon Musk, who is aiming for nothing less than to enable people on earth to live on other planets.

Carden and McCloskey's discussion of social attitudes towards entrepreneurs has great contemporary relevance given the recent rise of "populism," which might be seen as a backlash on the part of those who have experienced economic displacement from the changes wrought by the Schumpeterian process. Certainly, Donald Trump's election as president of the United States was achieved, in significant measure, by his pledge to workers in industries such as steel and coal that he would restore their formerly high paying jobs. He has followed up his pledge, in part, by imposing tariffs on imported washing machines, steel, aluminum, and other manu-

factured products. Portraying oneself as a defender of those adversely affected by economic and social change may become an increasingly popular gambit for politicians seeking the support of relatively narrow groups of voters. The solid voting support of even narrowly defined voting blocs seems to be increasingly the difference between winning or losing elections. This political dynamic might prove to be an increasingly important deterrent to entrepreneurship, since protection of the *status quo* will slow or prevent the migration of financial capital and other productive resources from inefficient incumbents in developed economies to start-ups that have better ideas about what products will create consumer surplus and how to produce those products.

While entrepreneurs such as Steve Jobs and Elon Musk may enjoy an exalted social status, Schumpeterian competition might not. Indeed, and arguably contrary to the enlightened nineteenth century attitude towards business ownership described by Carden and McCloskey, surveys that show a growing preference on the part of millennials in the United States for socialism speak to the threat that possibly changing social attitudes pose to a system of institutions supportive of entrepreneurship.³ Against the background of a challenging political environment, it is critical for government officials and policymakers to be reminded of the fundamental importance of entrepreneurship to a society's well-being, as well as the growing threat that an aging population poses to entrepreneurship.

The headwind to entrepreneurship posed by an aging population highlights the need for policies that encourage business startups and (hopefully) mitigate the challenges to entrepreneurship posed by demography. In this regard, promoting some or all of the policy initiatives put forth in this volume is a worthy task for those who want to reinvigorate entrepreneurial activity in developed countries.

3 See, for example, Lane (2017).

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