

Driving Canadian Growth and Innovation

Five Challenges Holding Back
Small and Medium-Sized Enterprises in Canada

Dan Herman and Anthony D. Williams
May, 2013



deepcentre
Centre for Digital Entrepreneurship
+ Economic Performance



Small and medium-sized enterprises (SMEs) are commonly portrayed as the backbone of the Canadian economy and heralded for their contributions to growth and prosperity. Such praise is neither surprising nor entirely undeserved. Collectively, one million SMEs account for over 99 percent of all enterprises in Canada and nearly 70 percent of private sector payrolls; yet, a deeper examination of what actually drives growth, innovation and employment in Canada paints a far subtler picture. As in other Western jurisdictions, only a small minority of companies (roughly 4 to 7 percent) experience sufficient growth to make significant contributions to overall job creation and GDP. While the small companies that comprise the majority are an important part of Canada's economic fabric, their sheer number masks the fact that many smaller enterprises that would like to grow face serious hurdles. Removing these impediments and getting a larger share of the "untapped majority" on a growth trajectory may represent one of the most promising ways to lift employment and ensure a higher standard of living for all Canadians.

This report identifies the key obstacles to SME growth and lays out a series of targeted recommendations for policy-makers to help business owners to overcome them.

A Portrait of SMEs in Canada

It is both a well-known and often-cited fact that companies with fewer than 100 employees predominantly populate Canada's economic landscape. Over 99 percent of companies in Canada are classified as SMEs, over 75 percent of which are so-called micro-enterprises, each employing less than 10 people (Industry Canada 2012). Collectively, these firms employ over 6.9 million Canadians and account for nearly 70 percent of private-sector payrolls. For this reason alone, it would seem to make sense to align economic development policy with the needs of the SME sector. More advantageous tax and investment policies to support SME expansion, for example, would enhance the sector's potential to create the jobs and economic growth that the Canadian economy needs.

Five recent trends in the SME sector, however, question such conventional wisdom and suggest, furthermore, that if the country's economic potential is to be realized in the decades ahead, policy-makers must exercise greater urgency and precision in designing policies that support SME growth in Canada.

- 1 Most firms experience zero or negative employment growth: While the aggregate statistics on SMEs are impressive, they obscure the fact that only a small subset of high-growth companies are creating most of the employment growth. Between 2003 and 2006, just 4.7 percent of firms (or 13,000 out of a total of over 1.2 million) were responsible for 45 percent of net job creation in Canada. Over half of the remaining 95 percent of firms experienced zero or negative employment growth.

As it stands, Canada already lags behind most international peers in its capacity to nurture firms with high-growth potential. The UK, New Zealand, the United States and Spain, for example, have all been more successful in generating a larger share of high-growth firms that go on to compete internationally and make significant contributions to both national growth and job

creation. Canada's ability to properly position itself for ongoing economic and employment growth in the future depends on improving the capacity to graduate more firms from small to medium-size, or from low- to high-growth classification.

- 2 A declining number of mid-sized firms: At the same time, the number of mid-sized firms in Canada is shrinking, making the economy even more dependent on a very small number of high-growth firms to carry the burden of job creation. While mid-sized firms account for only 1.7 percent of total firms, they contribute 16 percent of Canadian jobs, 17 percent of total exports and pay higher wages than small businesses do (Business Development Bank of Canada [BDC] 2013). Worrying for Canada's economy, the number of these mid-sized firms decreased by 17 percent between 2006 and 2010: 14.9 percent of them either closed or saw their operations shrink to the point where they were reclassified as small businesses. This decline is most prominent in the manufacturing sector, which is especially troubling, given the sector's contributions to research and development (R&D), innovation and exports. Just 1.4 percent of Canadian mid-sized companies grew to become large firms.
- 3 Dampening entrepreneurial activity: While entrepreneurial activity is a key measure of economic dynamism and most politicians would like to see more start-ups forming in their jurisdictions, the data suggests that the vast majority of Canadians are reluctant to pursue new entrepreneurial ventures, particularly in the wake of the post-2007 global financial crisis. In fact, Canada's index of entrepreneurial activity (as measured by the share of self-employed individuals in the labour force who employ at least one other person) peaked in 2005, stagnating thereafter, which indicates a decreasing rate of new start-up births as a share of the overall firm population (BDC 2012). Meanwhile,

self-employment as a percentage of overall employment has barely changed in over a decade, rising by just 0.2 percent (Industry Canada 2012).

- 4 A downward trend in start-up size: This decreased rate of entrepreneurial activity is associated with a downward trend in the size and growth potential of start-ups. Notably, few self-employed individuals are choosing to take on the risk and responsibility of hiring additional employees. Between 2000 and 2008, the average size of Canadian start-ups dropped by 17 percent (Ciobanu and Wang 2012). This data mirrors findings in the United States, where the average size of start-up firms has decreased since 1999 by over 20 percent (Reedy and Litan 2011). The end result is that the firms that continue to operate play an increasingly important role in aggregate employment growth, thus warranting further support and the concentration of policy efforts to develop the momentum, dynamism and growth prospects of Canada's underperforming SME population.

“Canada’s less-than-favourable performance in nurturing high-growth firms should convince policy-makers of the need to redouble their efforts to facilitate growth.”

- 5 The disappearance of goods-producing firms: SME growth is concentrated in the service sectors, while goods-producing firms are struggling to remain competitive. Statistics Canada researchers Ciobanu and Wang (2012) note that between 2002 and 2008, the Canadian economy experienced a net annual inflow (entries minus exits) of 8,000 firms. Between 2000 and 2010, this net inflow averaged 9,655 entries. This aggregate

statistic, however, hides an important piece of data: notably, that goods-producing firms saw a total decline of over 6,000 firms during this ten-year period, leaving all firm growth in the service sector. The declining number of firms in the sector suggests that goods-producing firms in Canada are struggling to compete in the current economic environment (although many will point to the realities of global economic activity as the rationale for this change). Given that goods-producing firms are responsible for the largest share of R&D in Canada, their decline is tantamount to a decrease in the country's innovative capacity.

All things considered, these troubling trends suggest that the economic potential of Canada's SME sector is neither as assured, nor as dynamic, as is sometimes assumed. Declining numbers of mid-sized firms, stagnating rates of entrepreneurial activity, an overdependence on a comparatively small proportion of high-growth firms for job creation, and weakening competitiveness in goods-producing sectors are not hallmarks of the robust economic dynamism required to promote ongoing economic and employment growth. On the contrary, they suggest that Canada is failing in several fundamental elements of its approach to developing the full capacity of our SME sector, making policy reform an urgent priority.

This is not to say that the current emphasis on stimulating entrepreneurial activity is misguided, especially given the lack of obvious alternative growth engines; rather, Canada's less-than-favourable performance in nurturing high-growth firms should, if anything, convince policy-makers of the need to redouble efforts to facilitate the growth of these entrepreneurs. Doing so, however, requires significant policy adjustments to ensure that entrepreneurs and small-business owners can realize their true economic potential.

In particular, five key challenges undermine the ability of small businesses to graduate into world-class firms with the capacity to expand their operations and contribute meaningfully to both employment and economic growth:

- a. a lack of incentives to pursue growth and international expansion;
- b. a shortage of management skills required to achieve high growth;
- c. under-investment in technology to enhance productivity and growth;
- d. a lack of investment in R&D to drive innovation; and
- e. insufficient access to capital to finance growth (including investments in technology, R&D and management capacity).

In what follows, it is made clear that these challenges require the urgent attention of policy-makers at all levels of government.

“Upwards of 18 percent of the productivity gap between Canadian and American firms is attributable to the smaller average size of Canadian firms.”

Insufficient incentives to pursue growth.

The small size of companies in Canada, while often celebrated, is actually a drag on productivity and the wider economy. While Canadian data on the topic is sparse, the little research that exists demonstrates a clear relationship between firm size and productivity. One report shows that small Canadian manufacturing plants (less than 100 employees) are just 46 percent as productive as their larger (greater than 500 employees) counterparts (Baldwin, Jarmin and Tang 2002), while another finds that, compared to their

small-sized counterparts, large manufacturing firms are 17 percent more productive, and medium-sized firms (100-500 employees) are 15 percent more productive (Lee and Tang 2001). Observing both manufacturing and non-manufacturing employers, Leung, Césaire and Terajima (2008) similarly conclude that “relative to firms with 0-100 employees, firms with more than 500 employees are roughly 30 percent more productive and firms with between 100 and 500 employees are roughly 20 percent more productive.” Further, they add, upwards of 18 percent of the productivity gap between Canadian and American firms is attributable to the smaller average size of Canadian firms.

Of course, small firms and start-ups often contribute new ideas, processes, and resources to the economy—contributions that could end up making significant impacts on future growth and prosperity. However, these contributions would be greater still if small firms had both stronger incentives to pursue growth and a clearer runway to international expansion and success. Unfortunately, a combination of private ambition and public policy are dampening the growth aspirations of many Canadian small firms, thereby undermining Canada’s economic performance on the global stage.

The first, and arguably most, significant obstacle to growth is the apparent dearth of business owners with an appetite for strong development in the first place. Recent survey data suggests that a significant proportion of Canadian business owners have no ambition to grow their small businesses into large-scale companies with the capacity to compete internationally. Companies that are interested in growth typically express a strong desire to internationalize, as internationalization opens up new markets and opportunities. However, many business owners are simply not interested in internationalizing because they are satisfied with the local niches they have developed (Wilson 2007). Survey data collected by BDC (2011) indicates that, of the 44 percent of Canadian SMEs that are not active internationally, 26 percent see no benefits to expanding to that level, despite the well-established link between export activity and high-growth potential. Another study, conducted

by the Canadian Imperial Bank of Commerce (CIBC) in 2005 reinforces these findings (Tal 2005). The CIBC study found that 57 percent of Canadian small business owners were “interested in using their businesses as a means of generating income while balancing other commitments or lifestyle choices,” suggesting that high growth and the intense demands it places on the business owner is not a very high priority. Canadian business owners have also proven to be substantially more risk averse than US entrepreneurs, and more reliant on government assistance to pursue new projects (Industry Canada 2010; Currie 2011).

Conversely, the firms with growth ambitions face serious hurdles and, to some extent, a lack of public policy incentives. Provincial and federal tax policies, for example, provide significant advantages to small firms by providing a lower rate of tax. For many small business owners, preferential tax treatment is obviously welcome: lower tax rates free up cash to invest in the business—cash that could conceivably be used to finance growth or generate additional employment.

This preferential tax treatment for small firms, however, creates a sizable penalty for graduation in terms of revenue, capital and profits, as Drummond and Bentley (2010) note. According to these authors, this penalty will incentivize “the strategy of many small businesses in Canada ... to keep taxable capital under \$10 million and profits under \$500,000.” In Ontario, for example, tax rates double for income earned over these thresholds. Similar privileging in the federal government’s Scientific Research and Experimental Development (SR&ED) tax incentive program further dampens the benefits of growth over certain thresholds. While generously funded (to the tune of \$ 3.6 billion), it provides benefits on the basis of firm size rather than growth. Thus, while SMEs benefit from a 35 percent credit rate on the first \$3 million in R&D expenditures, the rate drops to 20 percent after this ceiling has been reached. Increases in R&D spending over this threshold are therefore negatively tied to government incentives. In both cases, growth is penalized, as opposed to being either promoted or treated neutrally.

Inadequate management skills to support high growth.

A review of the literature on SME growth and failure suggests that management competencies are an important driver of SME success—as important as access to capital and investments in R&D and productivity-enhancing technologies; indeed, these factors are complementary. As a 2010 Canadian Science, Technology and Innovation Council (STIC) report notes, “management skills are a key complement to science and technology skills in a knowledge-based economy,” and a wealth of research supports this view. Bloom and Van Reenen (2007) find that “measures of managerial practice are strongly associated with firm-level productivity, profitability, and survival rates.” Similar conclusions are made in other studies, where, for instance, the international orientation—and thus growth orientation—of the owner-manager or other key decision-makers in SMEs are described as a key determinant of the nature and extent of internationalization (Wilson 2007).

When ranked against other mature economies, Canada’s management practices and capabilities leave some room for improvement. A study conducted by the London School of Economics (LSE) and McKinsey concludes that Canadian firms are, on balance, well-run, but lag firms in the United States, Japan, Germany and Sweden, all of which outperform Canada when it comes to producing high-growth firms (Bloom et al. 2005). Domestically, a lack of adequate management skills has long been identified as a key impediment to growth and innovation. A 1997 study on business bankruptcies found that “the main reason for failure is inexperienced management. Managers of bankrupt firms do not have the experience, knowledge, or vision to run their businesses. Even as the firms age and management experience increases, knowledge and vision remain critical deficiencies that contribute to failure” (Baldwin et al. 1997). The study concludes that over 70 percent of the firms that went bankrupt had either general or financial-management deficiencies.

A subsequent study uncovers what sets

continuing, successful firms apart from the failing ones, with a focus on the role that knowledge and management assets play in supporting sustainable growth (Baldwin and Gellatly 2006). They find that “high-growth entrants tend to develop a sharper strategic stance in several areas: marketing, management, human resources and financing.” The study also finds that exceptional rates of R&D investment and innovation are tightly correlated with above average management competencies. Firms that make investments in managerial assets through training and exposure to research, technology and international markets have increased rates of survival and success. As the authors note, “new knowledge—whether embodied in new product designs, superior production methods or organizational forms—is borne out of purposive action.”

Moreover, as the 2007 report “Strengthening Management for Prosperity” concludes, the importance of management skills in innovative companies cannot be underestimated (Martin and Milway 2007). While successful high technology firms are typically founded by

“Improving the conversion ratio from low to high growth is predicated on building a pipeline of skilled talent—both managerial and scientific.”

science and engineering graduates, their technological skills become less important as firms mature and require managerial competencies to facilitate ongoing growth and expansion (*ibid.*). Another report, meanwhile, highlights the difficulty that Canadian start-ups face in the recruitment of skilled managers and the subsequent link between high failure rates and the lack of commerce and management skills (Barber and Crelisten 2009).

Building managerial capacity is thus a fundamental piece of Canada’s ongoing innovation and productivity puzzle. As Micheál Kelly, Dean of the School of Business and Economics at Wilfrid Laurier University notes, “unless we redress (the management gap), we will continue to have the same conversation on innovation in Canada that we have been having for the past three decades” (Kelly 2012). Facilitating improved survival rates for SMEs, and ultimately, improving the conversion ratio from low to high growth is predicated on building a pipeline of skilled talent—both managerial and scientific.

Under-investment in productivity-enhancing technologies.

That technology adoption drives productivity growth and competitiveness is a well-established truth. The fact that most Canadian firms lag so far behind international competitors in adopting productivity enhancing technologies, however, remains a perplexing mystery. Canada’s average technology investment as a share of GDP in the 1970s, 1980s, and 1990s was the second lowest—only France had a poorer investment record. The record improved somewhat during the 2000s. According to the Organization for Economic Co-operation and Development (OECD), Canada ranked eleventh among 21 OECD countries in total economic investment in information and communication technologies (ICT) in 2006, down from tenth in 2005 and ninth in 2004—but these modest improvements reflect lower investment shares in other countries, rather than an increased investment share in Canada. According to the Canadian Manufacturers & Exporters (CME), technology investments by Canadian manufacturers have actually fallen by 37 percent since 2000, despite the Canadian dollar’s growing strength, which has made capital investment more affordable (Myers 2010).

The subsequent 33 percent technology investment gap between Canadian and US firms goes a long way toward explaining Canada’s comparatively poor productivity performance and fledgling international competitiveness.

The gap is even wider for SMEs (more on this below), which means that small businesses are forgoing opportunities to use technology to increase exports, enable new business models, boost employee productivity and dramatically reduce overhead costs. Shifting retail operations online, for example, can increase cross-border sales and boost profitability. In the UK, the overall sales of high-and-medium Web-based businesses grew by 4.1 percent annually from 2007 to 2010—about seven times faster than the sales of businesses with little or no Web presence. In many countries, including Germany and France, SMEs that have engaged actively with consumers on the Internet have also experienced three-year sales growth rates up to 22 percentage points higher than those companies with little or no Internet presence (Dean et al. 2012). In fact, evidence suggests that greater adoption of technology by SMEs not only benefits individual companies, but also the economy at large through increased job creation, productivity improvements and economic growth (see forthcoming DEEP Centre report “The Rise of Micro-multinationals”).

“Canadian SMEs are forgoing opportunities to use technology to increase exports, enable new business models, boost productivity and dramatically reduce overhead costs.”

The bottom line for policy-makers is that if Canadian SMEs are to grow, technology investment and innovation must grow, too. Unfortunately, SMEs are less likely to adopt cutting-edge technologies than large firms, and invest far less on technology per worker. According to the Centre for the Study of Living Standards (CSLS), Canadian SMEs spend on 62 percent of what their US counterparts spend on technology (2008). Further research

by the Institute for Competitiveness and Prosperity (2008) supports these findings, noting that Canada’s businesses invest about one-third less per dollar of GDP in ICT. Given the aforementioned productivity, growth and revenue enhancements that come from such investments, these gaps function as a primary inhibitor to growth. For example, according to the 2012 CEFRIIO survey of Canadian SMEs, while two-thirds of Canadian SMEs have a website, only 8 percent of them have adapted it for use on mobile platforms. Given the explosion of mobile usage and the growing popularity of location-based applications, this stands out as an area of under-utilization. Moreover, given the preponderance of service firms among Canadian SMEs, the fact that only 12 percent of them use supply-management software is equally illustrative of the growth potential that is being left on the table.

While it is perplexing that Canadian SMEs under-invest in technology, they are at a relative disadvantage when it comes to accessing the capital and other resources that would permit them to do so. SMEs tend to be more risk averse than the more profitable, larger firms that can easily afford to experiment with the latest technologies. Another significant disadvantage for small firms in Canada is the lack of competition in the telecom market, which saddles small businesses with some of the highest costs for broadband and wireless coverage in the developed world. A 2007 survey by the Canadian Federation of Independent Business outlined the perceived barriers for SME investment in new technologies, finding that only 15 percent of respondents say they face no important barriers to investing in technology (Debus 2007). The primary barriers for the other 85 percent are (in order of prevalence) purchase costs, congruency with business needs and the lack of qualified staff to implement the tools.

National Research Council Canada’s recently announced Digital Technology Adoption Pilot Program (DTAPP), a three-year \$80 million pilot program designed to spur adoption of digital technologies by SMEs, is a step in the right direction. To be effective, however, concomitant efforts must be made by both provincial-level

governments and industry stakeholders, providing not only financial assistance for potential investments, but also to provide clear and evidence-backed messaging on the value and return that such investments signify.

Inadequate investment in R&D.

A fourth obstacle to increasing Canada's share of “hyper-growth” firms concerns the relative under-investment in research and development by Canadian SMEs. Research across multiple jurisdictions highlights a clear link between extensive R&D investment and a firm's propensity to qualify as a “high-growth” or “high-impact” organization. High-growth firms in Canada are no exception: a significant number are characterized by their export orientation and their sizable investments in R&D. The relationship between R&D investments and internationalization are complementary. Industry Canada finds that, on average, exporters were more R&D focused and growth-oriented, and had been in operation for more years than non-exporters. Moreover, Canadian high-growth firms spend 20 percent or more of their investment budget on research, a ratio that is approximately double the rate of R&D intensity in traditional Canadian SME firms. In the UK, NESTA (2009) finds a similar relationship among its 6 percent share of “vital” high-growth firms, which generate over one-half of all new jobs created and are characterized by their investments in new product and process innovations. In particular, “innovators” in the UK are found to experience double the revenue growth of “non-innovators.” A meta-review sponsored by the OECD (Audretsch 2012) adds further evidence, finding that high-impact firms are usually export-oriented, have a greater propensity to hold intellectual property assets, and thus conduct research and development activities.

As with technology investment, questions remain as to why more Canadian firms—SMEs, in particular—fail to invest in research as a means of growing their businesses. Only 4.2 percent of SMEs in Canada qualify as “innovative SMEs,” defined by the allocation of more than 20 percent of investment expenditures on research and development (Wang 2009). Meanwhile,

some 75 percent of the general population of SMEs made no investments in R&D whatsoever (Huot and Carrington 2006).

A related concern is the lack of collaboration between private and public enterprise in Canada. Basic science research—the kind conducted in leading research universities—remains one of the most crucial inputs into innovation and economic growth over the long term. Imagine farming without organic chemistry; medicine without microbiology; or electronics, computing, and semiconductors without quantum mechanics. Other jurisdictions, notably the US, have done a good job of translating science into disruptive products and services (and ultimately high-growth firms) by fostering partnerships between private enterprise, academia and government. And yet, the relationship between research universities and private SMEs in Canada is negligible.

In Canada, just one in five SMEs surveyed has worked with a post-secondary institution. Of those, two-thirds say it was beneficial. In particular, 44 percent noted the experience gave them access to expertise they did not have; 44 percent said it gave them new ways of seeing things; and 34 percent said it gave them the resources needed to do R&D (BDC 2011). Of those who have not worked with the sector, a lack of awareness about the potential opportunities, as well as resource constraints, top the list of reasons for this lack of collaboration.

The case for increased SME investment in R&D is clear, as are the potential opportunities for collaboration with public educational institutions, so what holds the other three-quarters of Canadian SMEs back?

Survey data indicates that investment in general is inhibited primarily by financial and resource (time and qualified staff) constraints. While it may be accurate to place financial considerations at the top of the list, it is instructive to note that “innovative” SMEs in Canada are less successful in obtaining loans than are “non-innovative” SMEs. In particular, innovative firms are twice as likely to be turned down by credit suppliers than non-innovative firms. Moreover, innovative SMEs experience a higher rate of “discouraged

borrowers,” where firms choose not to apply for external financing under the belief that the application will be denied. The fact that financing challenges are felt most acutely by innovative, risk-taking firms is especially worrying, because it is these very firms that are most likely to experience high growth and make significant contributions to job creation.

Although specific financing challenges are addressed in the next section, the ability to close the R&D gap in Canada will depend on much more than simply making more capital available to entrepreneurs and business owners. Changing perceptions about the applicability and value of research in all sectors of the economy, informing SMEs about the potential collaborative avenues for the development of new research, and helping SME owners translate the potential of path-breaking science into marketable innovations are equally significant.

“Financing challenges are felt most acutely by innovative, risk-taking firms . . . the very firms that are most likely to experience high growth and make significant contributions to job creation.”

Insufficient access to capital to finance growth and innovation.

Across these four challenges, a common theme—obtaining sufficient financing for growth—emerges. In particular, as a series of studies highlight, Canadian SMEs identify insufficient access to sources of capital as the primary impediment to technological, managerial and R&D investment. Together, these

three facets of firm activity underpin economic growth, notably the transition from low or stagnant growth to high growth. Poor access to finance for investment in these areas is part and parcel of Canada’s innovation and productivity challenge and must be addressed if the ratio of high-growth firms is to increase.

Two details, in particular, emerge from the data on SME lending in Canada that are important and policy-relevant areas for intervention. First, Statistics Canada data shows that younger firms are more likely to have their credit applications declined. In fact, the younger the firm is, the more likely the decline. While this high rate of decline is likely the result of a realistic appraisal of SME failure rates, it also emphasizes the limitations that nascent companies face, as their operations sit in the “valley of death” before commercialization and market penetration take hold.

This metric on decline ratios is similarly true for companies that invest heavily in R&D. R&D-intensive firms are declined twice as often as the average SME. Again, while this reflects the higher level of risk that accompanies technological and knowledge-intensive ventures, it also neglects a potentially rich population of firms whose innovations and inventions may have yielded future high-growth firms.

The lingering effects of the 2008 global financial crisis have compounded the financing challenges for SMEs. A 2010 survey of Canadian SMEs conducted for BDC shows that both the approval rates for capital loans and the authorization levels for the amount of those loans have dropped significantly between 2004 and 2009 (Wyman 2010). The effects of the global financial crisis have clearly weighed on the risk appetites of Canadian financial institutions, evidently more reticent to lend funds to high-risk ventures. Unfortunately, this restraint further undermines Canada’s economic performance by starving entrepreneurs of the funds they require to grow their companies.

The way forward: Promoting high-growth firms

SMEs have long been an essential part of Canada's economic landscape and are likely to become even more important to job creation and innovation in the future. However, Canadian entrepreneurs still face considerable challenges in building high-growth companies that can compete on a global level. These challenges not only inhibit firm growth, they also undermine Canada's true economic potential.

While Canada's economic landscape is dominated by SMEs, the vast majority of these firms exhibit poor productivity and growth performance. Many Canadian business owners are satisfied serving a local niche market and express little desire to grow their small operations into large-scale companies that compete internationally; others are discouraged to do so by tax policies that penalize growth. To make matters worse, the degree of creative destruction and competitive pressure in many sectors is insufficient to either weed out poorly run companies, or reward superior enterprise performance, leading to stagnant firms and economic incumbents that inhibit progress. At the same time, issues such as a shortage of management skills required for high growth, a reticent approach to R&D, and a lack of technology adoption compound the overall problem. So, too, does a lack of capital to finance SME growth, including investments in technology, R&D and management capacity.

None of these observations take away from the paramount importance that SMEs play for the well-being and prosperity of the Canadian economy—quite to the contrary. On balance, it is fair to conclude that SMEs are a reflection of the incentive structures and framework conditions that they are subject to. If the overall policy ecosystem for growth, productivity, innovation and management is poor, it is not surprising that many companies cannot live up to their potential to seize new opportunities. The inevitable result, however, is that the burden of growth and job creation are overwhelmingly carried by a very small percentage of high-growth companies that manage to overcome the impediments to achieving success.

This challenging set of circumstances raises a number of urgent questions: how can Canadian entrepreneurs help meet Canada's growth challenge, and what can policy-makers do to create frameworks that will amplify and accelerate the economic potential of the SME sector? How might some of the greatest inhibitors—like risk aversion, low technological adoption and weak R&D performance that result in poorer long-term growth potential—be reversed? And how can assets, like the expertise and research excellence that resides in Canada's publicly funded post-secondary institutions, be built upon?

The primary target for policy-makers in Canada should be to help enlarge the pool of high-growth, high-impact firms. This means, among other things, identifying high potential graduates among the broader population of SMEs and enacting policies that ensure that growth, rather than size, is incentivized and compensated. Policy initiatives alone, however, are not sufficient to create a more fertile environment for SME growth. Policy-makers must work in concert with entrepreneurs, researchers and financiers to advance a handful of important initiatives that could eliminate many of the key obstacles to growth and innovation within the SME sector and in the economy at large. These include:

1. Making growth attractive.

Canadian business owners may not prioritize growth and wealth creation to the same extent that American entrepreneurs do, but tax regimes that penalize growth are counterproductive. Tax policy reforms that incentivize revenue and employment growth, and not simply size, would convince a greater proportion of business owners to pursue more ambitious growth objectives.

2. Promoting internationalization.

There is a clear link between Canada's high-growth firms and their propensity to export abroad. Augmenting the number of internationally competitive, export-oriented companies will be key

to achieving Canada's job creation and growth objectives. Policy-makers and stakeholders could do more to facilitate SME access to export markets by proactively identifying would-be exporters and facilitating their internationalization through management training, export assistance, and export financing.

3. **Building management competencies for high growth.**

Making the leap from a small, low-growth business to a mid-sized, high-growth firm is an incredibly rare accomplishment. Even a firm with good ideas can fail because rapid growth places a significant strain on its management capabilities. Facilitating the development of enhanced management skills among Canada's SMEs is thus central to increasing the sector's role in job creation and economic growth. Ongoing efforts toward management skill development at Canadian business schools are part of the answer, but so too are innovative management mentorship programs and incentives for ongoing training.

4. **Promoting technology adoption among SMEs.**

Productivity gains, product and service innovations, and increased competitiveness can all be achieved with access to the best technologies. Yet, for various reasons, SMEs are often slow to adopt the latest technologies, and their growth and productivity potential suffers accordingly. Governments should encourage technology adoption through a collaborative industry-government approach to financing and information-sharing that builds the case for technological investment. Moreover, it is worth emphasizing that technology adoption is not a niche issue pertaining mostly to knowledge-intensive companies or tech start-ups. Firms in all industries increasingly depend on access to world-class digital infrastructure to be successful and competitive, including the many companies that don't have

information technology at the core of their business model.

5. **Facilitating competitive prices for telecommunication services.**

As noted earlier, Canadian firms still face some of the highest rates among advanced industrial countries. This is a distinct disadvantage, particularly for SMEs. Given their size, small firms have neither the resources nor the market leverage to negotiate advantageous contracts with telecom suppliers. To their credit, policy-makers in Ottawa have recognized the burden that high prices place on both business and consumers, and have taken steps to increase competition in the Canadian telecommunications market by auctioning off spectrum to new players. Unfortunately, new wireless communications entrants have, thus far, failed to make significant inroads, collectively controlling less than 5 percent of the market in 2012, citing the dominance of the existing carriers. Policy-makers should further encourage competition by more forcefully liberalizing the Canadian telecommunications sector and encouraging foreign investment. For example, Ottawa should ensure that incumbents are actively using previously allocated spectrum, and should make additional spectrum available exclusively to new firms. It should also ensure that limitations on buying up smaller competitors are placed on incumbents, especially in light of the recent rumours that several new entrants into Canada's wireless market may put their companies up for sale.

6. Encouraging R&D spending and exploitation.

Most small firms understandably lack the sophisticated intellectual property licensing and technology acquisition shops found in large, research-intensive firms. Yet, a lack of awareness and resources should not automatically deprive SMEs of access to such a critical pipeline for innovation. Canadian research universities should do more to publicize opportunities and reach out to the SME community as they seek to enhance and enlarge their own capacity for developing technology commercialization relationships. Policy-makers and business development agencies could also do more to encourage R&D activity among SMEs by facilitating the development of industry-academic partnerships in both product and service industries, and by providing greater financing opportunities and commercialization support for firms that enter into promising ventures with university partners.

7. Improving access to capital for firms with high-growth potential.

Traditional financial institutions often shy away from lending to young firms, which are perceived as more risk-oriented because of the higher potential for default, while venture and angel financiers typically focus their resources on high-tech fields. Provincial and federal governments can help improve SME access to capital through a series of targeted initiatives by providing conditional loans and matching grants to facilitate private SME investment in technology, training and R&D. Given the strong link between these investments and high-growth performance, facilitating increased SME adoption of such practices is integral to the development of more high-growth firms in Canada.

By working together to address these seven priorities, public and private sector leaders can lay the foundation for a strong and sustainable Canadian economy—one that leads in innovation and competitiveness. The signals currently emanating from Canada's SME sector, however, are far from encouraging. Declining numbers of mid-sized firms, stagnating rates of entrepreneurial activity, and weakening competitiveness in goods-producing sectors are indications that Canadian policy-makers have yet to find the right mix of policies to fully unleash the potential of the SME sector.

As dynamic, new exporting countries increase the level of innovation and competition in the global economy, Canadian SMEs will need an even more supportive policy framework to grow and succeed. Simply put, the Canadian economy needs a greater proportion of its large population of SMEs to morph into high-growth, productive firms with the potential to expand and compete successfully beyond Canada's borders. In fact, Canada's long-term economic performance and its ability to create ongoing employment growth will be very much dependent on its ability to facilitate their success.

Fortunately, there is much that policy-makers, entrepreneurs, financiers and academic leaders can do to create a more fertile environment for growth and innovation. Whether improving access to capital, encouraging greater technology adoption, building management competencies, or facilitating R&D partnerships with leading universities, there is a need for leadership from all sectors. As the global economy rests tenuously on a shaky foundation, the urgency to adopt many of the measures laid out in this policy brief could not be more pressing, nor could there be a more opportune moment for Canadian policy-makers to take a more proactive approach to stimulating one of Canada's most under-utilized economic assets.

Works Cited

- Audretsch, David B. 2012. "Determinants of High-Growth Entrepreneurship." Report prepared for the OECD/DBA International Workshop on High-growth Firms: Local Policies and Local Determinants. Copenhagen, Denmark, March 28.
- Baldwin, John, Tara Gray, Joanne Johnson, Jody Proctor, Mohammed Rafiquzzaman, and David Sabourin. 1997. "Failing Concerns: Business Bankruptcy in Canada." Statistics Canada Research Paper, Catalogue No. 61-525-XPE.
- Baldwin, John, Ron Jarmin, and Jianmin Tang. 2002. "The Trend to Smaller Producers in Manufacturing: A Canada/U.S. Comparison." Statistics Canada Economic Analysis Research Paper Series No. 3.
- Baldwin, John, and Guy Gellatly. 2006. "Innovation Capabilities: The Knowledge Capital Behind the Survival and Growth of Firms." Statistics Canada Research Paper, Catalogue No. 11-622-MIE.
- Barber, Douglas, and Jeffrey Crelisten. 2009. "Understanding the Disappearance of Early-stage and Start-up R&D Performing Firms" The Impact Group Research Paper.
- Bloom, Nick, Stephen Dorgan, John Dowdy, Tom Rippin, and John Van Reenen. 2005. Management Practices across Firms and Nations. London: London School of Economics and McKinsey & Company, Inc.
- Bloom, Nick, and John Van Reenen. 2007. "Measuring and Explaining Management Practices Across Firms and Countries." The Quarterly Journal of Economics 122: 1351--1408.
- BDC 2011. "Investments: BDC Viewpoints Study." BDC Research and Market Intelligence Team report, October.
- . 2012. "BDC Index of New Entrepreneurial Activity." BDC Research and Economic Analysis Team Report.
- . 2013. "What's Happened to Canada's Mid-sized Firms?" BDC Research and Economic Analysis Team Study.
- CEFRIO. 2012. "ICT-Driven Innovation: Results of a Survey of Quebec and Canadian Businesses and Organizations." CEFRIO Report, November.
- CSLS. 2008. "The Canada-U.S. ICT Investment Gap in 2007: Narrowing but Progress Still Needed." CSLS Research Note, October.
- Ciobanu, Oana and Wang, Weimin. 2010. "Firm Dynamics: Firm Entry and Exit in Canada, 2000 to 2008." Statistics Canada Canadian Economy in Transition Series, No. 22.
- Currie, Bill. 2011. "The Future of Productivity, 2011" Deloitte Future of Canada Research Series.
- Dean, David, Sebastian DiGrande, Dominic Field, and Paul Zwillenberg. 2012. The Connected World: The Digital Manifesto: How Companies and Countries Can Win in the Digital Economy. Boston: The Boston Consulting Group.
- Debus, Aneliese. 2007. "Building Business Success: A Survey of SMEs on Productivity." Canadian Federation of Independent Business Research Report, April.
- Drummond, Don, and Alistair Bentley. 2010. "The Productivity Puzzle: Why is the Canadian Record so Poor and What Can Be Done About It?" TD Economics Special Report, June.
- Huot, Patrick, and Christine Carrington. 2006. "Financing Profile: High-Growth SMEs, SME Financing Data Initiative." Industry Canada Report, May.
- Industry Canada. 2010. "Business Innovation and Strategy: A Canadian Perspective." Industry Canada Report Based on the Survey of Innovation and Business Strategy (SIBS).
- . 2012. Key Small Business Statistics. July 2012 ed.
- Institute for Competitiveness and Prosperity. 2008. "Setting our sights on Canada's 2020 Prosperity Agenda." Institute for Competitiveness and Prosperity: Report on Canada 2008.

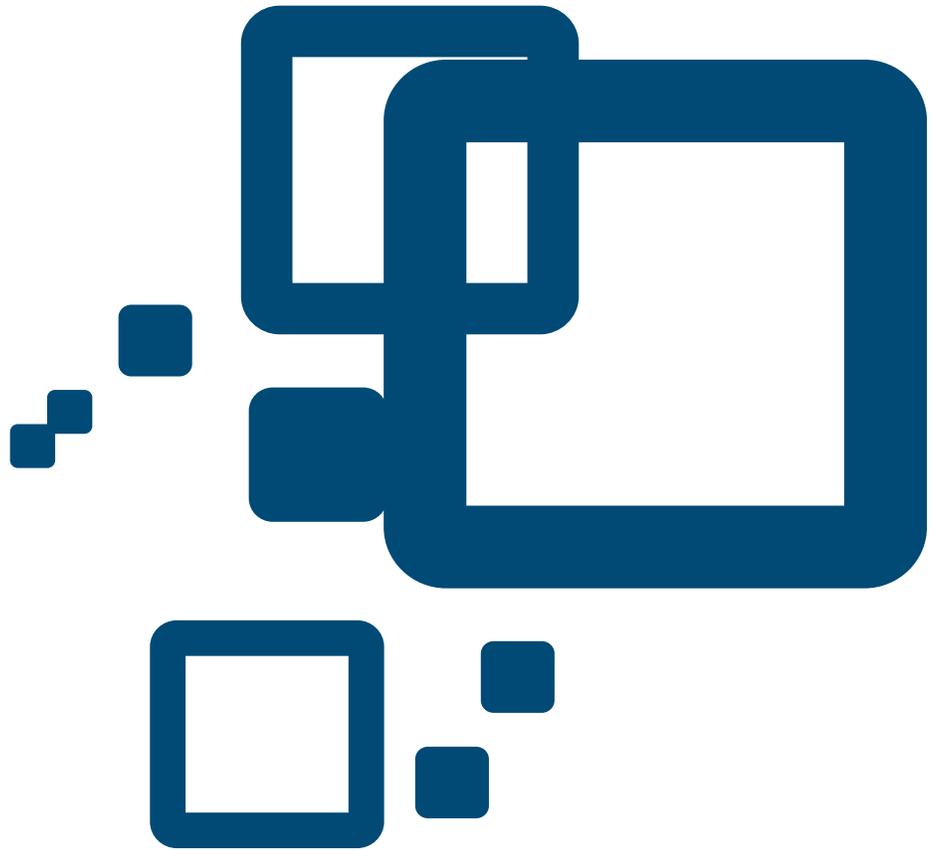
About the Authors



Anthony D. Williams is co-founder and president of the Centre for Digital Entrepreneurship and Economic Performance (DEEP Centre) and co-author (with Don Tapscott) of the groundbreaking international bestseller *Wikinomics* and its follow-up *MacroWikinomics: New Solutions for a Connected Planet*. Anthony is a senior fellow for innovation with the Lisbon Council in Brussels, executive editor for the Global Solutions Network at the Martin Prosperity Institute and chief advisor to Brazil's Free Education Project, a national strategy to equip 2 million young Brazilians with the skills required for a 21st Century workforce. Anthony was recently a visiting fellow with the Munk School of Global Affairs at the University of Toronto and Program Chair for the 18th World Congress on Information Technology in Montreal. Anthony's work on technology and innovation has been featured in such publications as the Huffington Post, BusinessWeek, Harvard Business Review and the Globe and Mail. He is currently at work on a new book on how micro-multinationals are revolutionizing work, life and the global economy.



Dan Herman is co-founder and executive director of the Centre for Digital Entrepreneurship and Economic Performance (DEEP Centre) and a PhD Candidate at the Balsillie School of International Affairs. His research examines the impact of changing patterns of global economic activity on mature industrial economies, with a particular focus on how trade and innovation policy interacts with Schumpeterian creative destruction. Dan has served as a Senior Policy Advisor in the Government of Ontario's Ministry of Economic Development and Innovation and was previously the Program Director of nGenera Insight's Government 2.0 research program, a multi-client research program sponsored by governments from across North America and Europe. Dan holds an M.Sc. in Development Studies (with distinction) from the London School of Economics where he focused his research on trade and economic development.



deepcentre

Centre for Digital Entrepreneurship
+ Economic Performance



The Centre for Digital Entrepreneurship and Economic Performance (DEEP Centre) is a Canadian economic policy think-tank based in Toronto and Waterloo, Ontario. Founded in 2012 as a non-profit and non-partisan research institute, the DEEP Centre's work shapes how jurisdictions build fertile environments for launching, nurturing and scaling companies that will thrive in an increasingly connected world. We understand the changing drivers of success in the global economy and the critical interconnections between technology, entrepreneurship and long-run economic performance. Our goal is to help policymakers identify and implement powerful new policy levers to foster innovation, growth and employment in their jurisdictions.

Join us in building a new foundation for prosperity.

www.deepcentre.com