

Firm Strategy, Competitiveness and Productivity: The Case of Canada

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- The strategies that firms pursue to achieve a competitive advantage—through investment, innovation and productivity improvements—influence potential growth, i.e., the rate at which an economy can grow without a buildup in inflationary pressures. In the aftermath of the Great Recession and against a number of transformative global trends, the medium-term competitiveness strategies that Canadian firms are following are of particular interest for the conduct of monetary policy.
- The findings of the Bank of Canada's 2013 *Firm Strategy Survey* suggest that, in a slow-growth environment amid strong competition and uncertainty regarding the timing of a strengthening in demand, Canadian firms have generally placed more emphasis on defensive competitiveness strategies, aimed at reducing cost structures or differentiating existing products to help retain customers, than on measures targeting expansion or longer-term competitiveness.
- Firms that are the most entrepreneurial or agile in the way in which they combine capital and labour report generally better innovation outcomes and have a more favourable view of their ability to improve their competitive position relative to global best practices.

Insights into what businesses are anticipating and planning, and how they are adjusting to shocks and changing economic conditions, serve as an important input into the Bank of Canada's economic outlook. The combination of forces influencing Canadian businesses over recent years has been profound. These forces include the Great Recession, higher levels of connectivity and mobility worldwide, the rise of disruptive innovations, more-complex global supply chains and the growing prominence of emerging economies. The Bank's regional offices conducted the *Firm Strategy Survey* (FSS) to gain insights into the adjustments that businesses are making against this backdrop and the factors affecting their strategies to be competitive over the coming three to five years, in order to inform the Bank's outlook for exports, investment and productivity growth.

The 2007–09 financial crisis and recession represented a major shock for Canadian businesses, particularly exporters. Some businesses closed, net firm creation slowed and firms were forced to adjust to survive (Poloz 2013). The Canadian economy recovered, supported by monetary and fiscal stimulus. Five years after the start of the recovery, however, signs of sustained strengthening in the momentum of global and domestic economic growth have been slow to materialize. Quarterly business surveys suggest that conditions of prolonged uncertainty have led firms to favour shorter-term, more-reversible capital outlays over recent 12-month horizons, or targeted upgrades or replacement of existing capital, resulting in modest aggregate growth in business investment.¹

At the same time, import penetration into Canada has increased over recent years and data show a loss of market share abroad among Canadian exporters (Macklem 2011; de Munnik, Jacob and Sze 2012). The Canadian dollar appreciated over much of the past decade, in the face of persistently weak productivity growth, contributing to a loss of Canadian competitiveness. Canada has trailed on a number of indicators that are known to increase productivity, including investment in information and communications technology and research and development.² Studies point increasingly toward organizational capital as a promising area to focus on to better understand the determinants of productivity (see Bloom et al. (2014), for example).

Organizational capital, defined as the accumulation of firm-specific knowledge (Atkeson and Kehoe 2005), along with software, technological know-how, and research and development, is part of a firm’s intangible capital. It affects a firm’s choices about desired levels of capital and labour, subject to its external environment (i.e., competition, market, industry, and cultural and institutional factors). It includes strategic planning, management practices and other organizational competencies, as well as investment to redesign or reconfigure existing products or to promote brand equity in order to maintain or gain market share (Corrado, Hulten and Sichel 2009).³ Taken together, investments in intangible capital are important drivers of profitability at the firm level and of productivity at the economy-wide level.

Recent studies have focused on investments in intangible capital that promote firm “agility” (i.e., the ability to surpass rivals by spotting opportunities early and adapting in real time to environmental and technological shifts) as a way to increase competitiveness in dynamic and uncertain environments.⁴ While studies approach the issue of agility from various perspectives, common features include simultaneously implementing strategies to create demand through innovation; enhancing operating efficiency relative to competitors through the adoption of new technologies; and maximizing organizational learning through intense use of knowledge, information and networks. In other words, productivity-enhancing behaviours are integrated throughout various

◀ *At the aggregate level, the more widespread productivity-enhancing strategies and behaviours are across firms, the more favourable the prospects for the macroeconomic outlook and growth in potential output*

1 See the Bank of Canada’s *Business Outlook Survey* from 2012 to 2014. These reactions are in line with predictions of models regarding firm investment behaviour during periods of elevated uncertainty (Bloom 2009).

2 The World Economic Forum’s 2014–15 *Global Competitiveness Report*, for example, shows that Canada’s competitiveness ranking slipped from 10th to 15th place over the past five years, reflecting deterioration in the areas of technological adoption, innovation, business sophistication and infrastructure (Schwab 2014).

3 See Baldwin, Gu and Macdonald (2012) for an analysis of the contribution of intangibles to labour productivity growth in Canada. At present, only a limited portion of investment in intangibles is capitalized in Canadian national accounts data.

4 See, for example, EIU (2009); Madhok and Marques (2014); McGrath (2013); Sherehiy, Karwowski and Layer (2007); and Zhang (2011).

aspects of the organization. At the aggregate level, the more widespread such strategies and behaviours are across firms, the more favourable the prospects for growth in investment, productivity, exports and potential output.

This article summarizes the results of a survey designed to explore these issues. After a brief description of the survey, results are presented in three sections. The first assesses the changes in the competitive environment over the previous five years that are pertinent to understanding firm strategy. The second section discusses the competitiveness objectives of Canadian firms and the focus of investment plans over the medium term (three to five years). The third section aggregates responses to provide insights on the organizational agility features of Canadian businesses. The final section discusses macroeconomic implications.

The Survey

The theoretical framework underpinning the questionnaire is one in which the representative firm formulates strategy in order to maximize expected profit or value, subject to its information set and various constraints, including implied opportunity costs, over its planning horizon. This optimization is influenced by competitive conditions and the economic environment. It may lead a firm to rationally choose a more defensive cost-minimization strategy during certain periods, and a more aggressive strategy to create its own demand through innovation or speed to market during others.

The survey questions were divided across the key drivers of profitability at the firm level: external factors (i.e., competition, market structure, constraints); organizational capital (i.e., competitiveness objectives, organizational competencies, processes for strategy formulation, extent of adjustment to recent technology, nature of participation in export markets); innovation behaviour; and tangible and intangible investment strategy.⁵ The questions for each driver can be divided into two categories: *action-based* (relating to recent actions taken by the firm) and *vision-based* (questions that required firms to evaluate statements and choose the one that best described their strategic organizational objectives). The wording of questions was selected to align as closely as possible with concepts tested in the literature and to provide a link to macroeconomic variables of interest to the Bank.

Senior economics staff in the Bank's regional offices conducted the survey between September and December 2013, through face-to-face interviews with senior executives at 151 companies who were able to speak about the overall strategy of the firm.⁶ The survey used a quota-sampling framework that is broadly representative of the Canadian economy, providing a range of views across regions, sectors and firm size (see **Table 1** for summary statistics).⁷

⁵ For more details on the survey, see Rennison, Novin and Verstraete (forthcoming).

⁶ Respondents were the chief executive officer, president, chief financial officer, chief operating officer or treasurer.

⁷ Specific sample targets by sector, region and firm size were selected in accordance with the quota-sampling procedure used for the *Business Outlook Survey* (de Munnik, Illing and Dupuis 2013), with the exception of regulated utilities, which were excluded. The proportion of exporters in the sample is larger than their share in the overall population of businesses to ensure reasonable coverage among those exposed to global conditions. The manufacturing sector is also oversampled relative to its share of business sector GDP in recognition of its extensive linkages to other sectors of the economy.

Table 1: Summary statistics on the 151 firms in the *Firm Strategy Survey* sample

| Sector | % ^a | Region | % ^a | Size and other information | % |
|-------------------------------------------------------|----------------|------------------|----------------|-------------------------------|----|
| Primary | 13 | Atlantic | 14 | Small | 23 |
| Manufacturing | 26 | Quebec | 20 | Medium | 38 |
| Construction, information and transportation services | 15 | Ontario | 26 | Large | 39 |
| Wholesale and retail trade | 13 | Prairies | 20 | Exporter ^b | 64 |
| Finance, insurance and real estate | 15 | British Columbia | 21 | Intense exporter ^c | 32 |
| Commercial, personal and business services | 19 | | | Publicly traded company | 32 |

a. Percentages may not add to 100 because of rounding.

b. Firms with any international sales or indicating export potential

c. Firms with more than 50 per cent of their sales in international markets

The Results

Evaluating the competitive landscape

The FSS evaluated the Canadian competitive landscape from three perspectives: (i) changes in the number of direct competitors, (ii) firms' adjustment to changing market conditions, and (iii) barriers to entry.

Changes in the number of direct competitors

On balance, firms selling solely to the Canadian market reported facing a greater number of direct competitors in the primary market for their main product (good or service) than five years before.⁸ Many saw greater foreign competition as driving the increase, as well as advances in mobility and connectivity, and changes in technology that have enabled the establishment of more Internet-based businesses and new product development. Changing consumer tastes have resulted in demand for more variety, providing scope for new competitors to enter their main market.

Firms with some exposure to export markets, in contrast, reported little change in the number of direct competitors relative to five years before. Those with the greatest export exposure (50 per cent or more of sales to international customers) reported a net decline in the number of direct competitors. Many exporters witnessed the exit or takeover of weaker competitors, as foreign demand fell sharply during the recession, or the merger or consolidation of other exporters.

Firms' adjustments to changing market conditions

Firms' accounts of the strategies they followed in the aftermath of the Great Recession provide insights into how competitive pressures were evolving. Most surviving firms were focusing on rationalizing cost structures (Chart 1). This was particularly true for exporters.⁹ Some saw their market become dominated by a few low-cost producers. While there were fewer traditional competitors in their primary market, some cited more competition in secondary markets as other businesses diversified in an effort to find untapped sources of demand. At a time when foreign demand was slow to recover, the combination of shifting

◀ *Domestic firms reported a greater number of direct competitors than five years ago, stemming from foreign entrants, advances in technology and changing consumer tastes...*

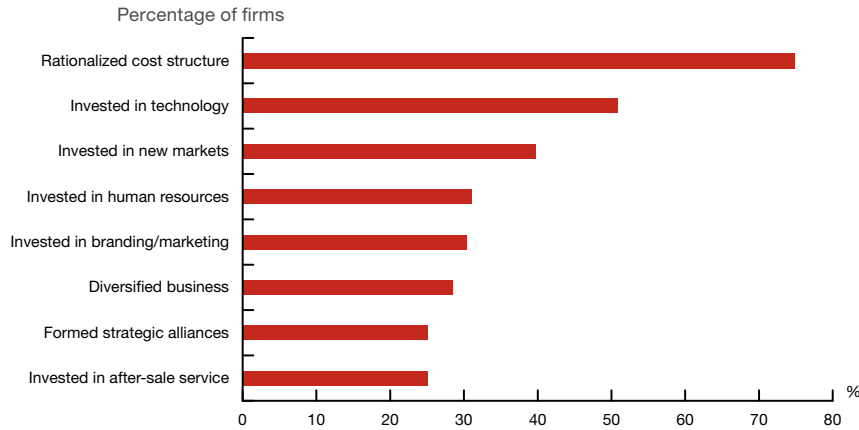
◀ *...while many exporters witnessed the exit or takeover of weaker competitors, as foreign demand fell sharply during the recession*

◀ *In the aftermath of the Great Recession, most surviving firms were focusing on rationalizing cost structures*

⁸ The share of firms reporting that they were facing more direct competitors than five years before exceeded the share reporting that they faced fewer.

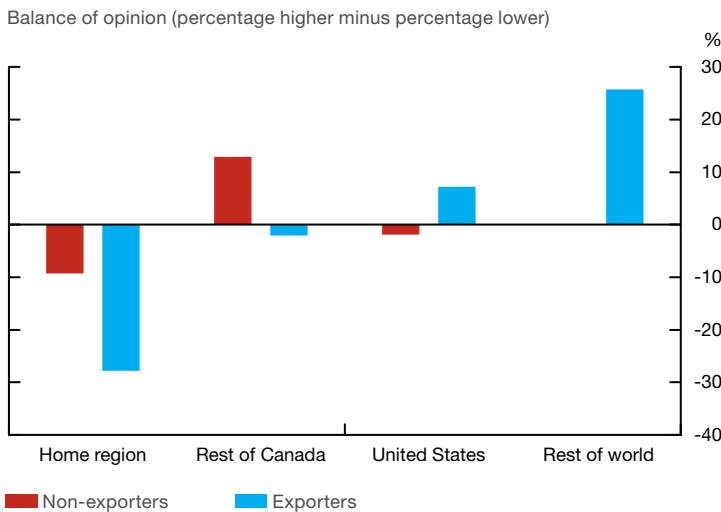
⁹ Eighty per cent of exporters reported that they have reduced their cost structure since the recession, compared with 65 per cent of domestic firms.

Chart 1: Most-common firm strategies following the Great Recession



Notes: Firms were asked to provide an account of the strategies they followed in the aftermath of the Great Recession, in terms of externally directed actions (i.e., related to their market) or internally directed actions (i.e., directed toward changing structure, processes, systems or resource use within the organization). Multiple responses were allowed. Responses shown are those actions cited by at least 25 per cent of firms.

Chart 2: Comparison with sales five years before



Notes: Survey question: Please indicate whether the approximate percentage of your total sales in each of the following markets is notably higher, lower or about the same as it was five years ago. Exporters are firms with any international sales or indicating export potential.

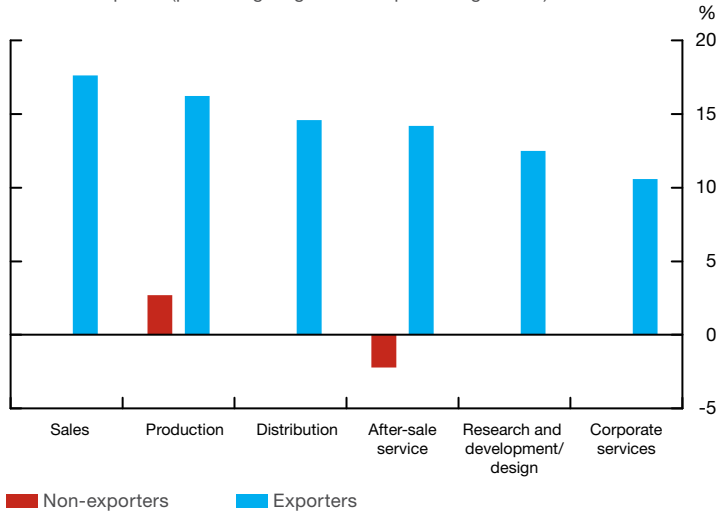
global trade patterns, more-complex global supply chains and greater digital trade (e-commerce) raised the intensity of competition for exporters, even though the number of direct competitors did not increase.

In addition to efforts to rationalize cost structures, firms reported investing in technology, new markets (particularly exporters) and in skills development. Investments in branding or marketing and after-sale service were used to promote customer loyalty and retention.

Overall, domestic and export-oriented firms reported that sales outside their home region accounted for a greater share of their sales base than five years earlier (Chart 2). As well, the corporate activities of exporting firms became somewhat less concentrated within Canada across all functions (Chart 3), as a number of firms shifted or added resources outside Canada, mainly to be closer to demand.

Chart 3: Change in resources allocated to owned facilities outside Canada

Balance of opinion (percentage higher minus percentage lower)



Notes: Those reporting that the proportion of their corporate activities taking place in owned facilities outside Canada has increased over the past five years versus those reporting that it has decreased. Exporters are firms with any international sales or indicating export potential.

Barriers to entry

Nearly all firms (92 per cent) believe that there are barriers to entry that restrict new firms from entering their industry, either in the form of a structural barrier (scale of production, regulation, access to resources or access to financing) or a strategic barrier (related to knowledge or a strong brand name). Over half of firms characterize the barriers to entry as significant. Firms in the resource and manufacturing sectors were most likely to indicate that barriers to entry allow competitive advantage in the industry to be sustained over long periods. A number of manufacturers more heavily engaged in new product development, however, noted that new products are quickly copied, and advantages from these efforts tend to be short-lived. As well, firms in the services sector noted that competitors can quickly catch up to any gains in cost efficiency. Many of these firms indicated that competitive advantage can be preserved only by offering highly customized products, which can mitigate efforts to improve productivity.

◀ Nearly all firms believe that there are barriers to entry that restrict new firms from entering their industry

Strategies for competitiveness

Against the backdrop of this competitive landscape, firms' top three strategies for competitive advantage¹⁰ over the coming three to five years were to obtain a cost advantage (improve their cost structure or productivity); to achieve a differentiation advantage (improve customer loyalty by customizing offerings or differentiating their product); and to focus on skills (recruiting, retaining, training or creativity-building) (Chart 4). Very few firms selected growth-related strategies such as innovation advantage (leading the market by introducing completely new or notably better products) or the advantage of geographic presence (being present in more geographic markets) as "most relevant" for their market share over the next three to five years.

◀ Few firms selected leading the market through innovation as the most relevant competitiveness strategy for the next three to five years

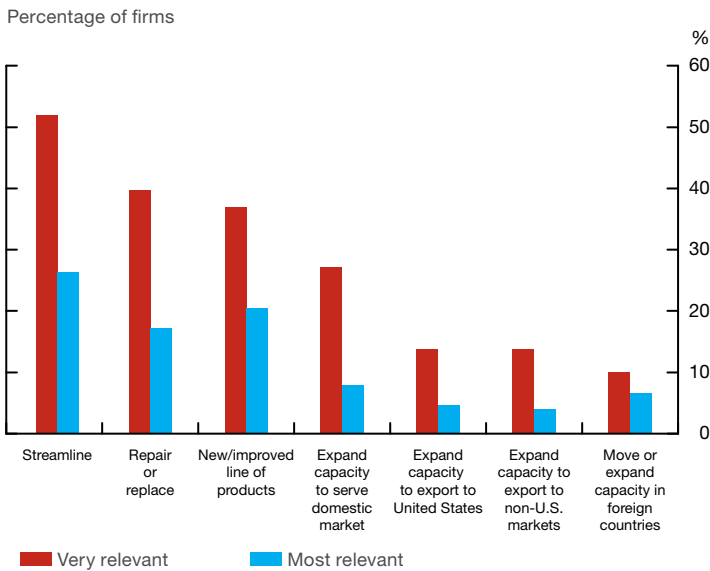
¹⁰ The response categories offered to firms can be grouped into supply-side objectives (related to costs or labour) or demand-side objectives. The latter group includes strategies related to the elasticity of demand (to target a specific segment of the market, or niche, that is not currently being met by competitors, or by differentiating one's product to attract customers from competitors in existing markets), as well as strategies to create one's own demand through completely new or notably better products, or to get new products to market more quickly than rivals.

Chart 4: Strategy for competitive advantage over the coming three to five years



Notes: Survey question: How would you rate the relevance of the following strategies for your competitive position and market share over the next three to five years (very relevant, somewhat relevant, not relevant)? If more than one strategy is considered “very relevant,” please also indicate which strategy is the most relevant. The chart shows responses for very and most relevant only.

Chart 5: Objective for investment spending over the coming three to five years



Notes: Survey question: How would you rate the relevance of the following objectives for your investment spending over the next three to five years (very relevant, somewhat relevant, not relevant)? If more than one objective is considered “very relevant,” please also indicate the most relevant. The chart shows responses for very and most relevant only.

Firms reported that they are targeting investment mainly at streamlining production, at repairing or replacing existing equipment or facilities, or at differentiating current product offerings (Chart 5). Few reported that they are targeting investment at expanding longer-term capacity to serve either domestic or international markets. Exporters generally reported shorter desired payback periods on investment in machinery and equipment than firms focusing on the domestic market, suggesting a shorter-term focus for investment plans in the current environment.

Table 2: Examples of characterization by firms of their way of working

Number of firms: 151

| Aspect of organizational capital | Choices given to respondents | % |
|-----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|----|
| Innovation in our organization tends to be... | An ongoing and central element of our strategic plan | 58 |
| | Generally encouraged and occurs when conditions are right | 36 |
| | Relatively rare | 5 |
| We are most likely to consider or introduce organizational innovations... | Under conditions of slack demand or when facing competitive or financial pressures | 17 |
| | When demand is strong or improving | 12 |
| | Whenever necessary to support our overall strategy for competitiveness, regardless of the state of demand | 67 |
| Over the past three years, our business processes changed in response to advances in ICT ^a and increased connectivity: | To a great extent | 41 |
| | To some extent | 47 |
| | Not at all | 7 |
| | Expect to adjust over the next few years | 5 |
| Our organizational capabilities are most closely geared toward... | Discovering entrepreneurial opportunities | 12 |
| | Continuously developing new competitive advantages | 19 |
| | Maintaining and extending our existing competitive advantages | 70 |
| Our organizational structure and processes are generally set up to... | Encourage staff to demonstrate creativity and take risks, even if doing so raises the likelihood of failure | 20 |
| | Encourage staff to take calculated risks, based on an evaluation of alternatives, with a goal to minimize the chance of failure | 80 |
| Capital budgets are developed... | In cycles of two to three years, or longer | 27 |
| | Annually | 56 |
| | Quarterly or on a rolling basis | 15 |
| If you are an exporter, which statement best describes your participation in export markets? ^b | We move in and out of export markets in response to economic circumstances. | 24 |
| | We prefer to maintain a continuous presence in our export markets regardless of changes in economic conditions. | 62 |
| | Don't know | 14 |
| Which factors have the greatest impact on your strategy formulation? | Vision and objectives of the leader or leadership team | 87 |
| | Opportunities in the market | 57 |
| | Feedback from customers, supply chain or employees | 42 |
| | Internal analysis using strategic management instruments | 31 |
| | Competitors | 21 |
| | Advice and initiative of external consultants | 10 |
| Over the past three years, has your firm introduced new ways of measuring and monitoring in any of the following areas? | Communication and the exchange of information | 35 |
| | Employee/management performance | 51 |
| | Efficiency and quality of our products and processes | 54 |
| | Customers' experience | 44 |
| | Competitors' practices | 19 |
| | Did not introduce new ways | 19 |

a. ICT = information and communications technology

b. Only exporters (n = 97) are considered when computing these percentages.

When choosing among statements related to their organization’s way of working, the statements that are most closely associated with innovation, adoption of new technology or organizational learning were generally not the most prevalent (Table 2). For instance, while many firms considered innovation to be an ongoing and central part of their strategic plan, the majority viewed their organizational capabilities as most closely geared toward maintaining and extending existing competitive advantages rather than generating new advantages. A considerable share of firms reported that their business had changed only “to some extent” in response to advances in information technology.¹¹ Regarding their use of information and organizational learning, firms described organizational structures and processes as generally set up to favour analysis over experimentation. Few firms indicated

◀ *The majority of firms viewed their organizational capabilities as most closely geared toward maintaining and extending existing competitive advantages rather than creating new ones*

¹¹ Firms were asked to characterize the extent to which their business processes, product or service design, marketing, or organizational structure had changed in response to advances in information and communications technology and increased connectivity/mobility (cloud computing, big data, etc.) over the past three years.

that they are developing capital budgets in short cycles or on a rolling basis. Many firms have introduced new metrics related to monitoring efficiency and quality, employee/management performance, or customer experience over the previous three years, yet considerably fewer have added ways to monitor competitors’ practices or consider competitors’ actions to have a strong impact on their process for formulating strategy.

The next section aggregates these strategic and organizational capital indicators with other survey indicators of investments in intangible and tangible capital to evaluate whether firms demonstrating behaviours associated with agility, growth and longer-term competitiveness perform differently than their counterparts.

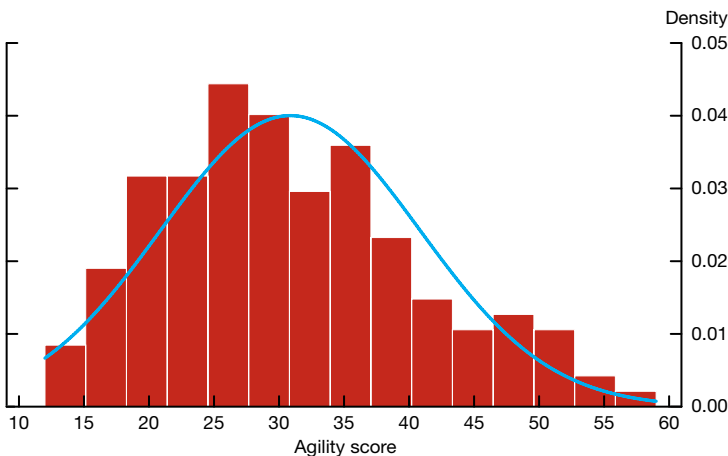
Aggregating signals of organizational agility

Agility relates to a firm’s ability to respond to unpredictable changes in a timely and profitable manner, and in a way that allows it to sustain above-average growth. At the micro level, agility can be achieved through heterogeneous strategies, but the common elements include a focus on creating demand through innovation, enhancing operating efficiency with new technology, and maximizing organizational learning through the use of knowledge, information and networks.

To construct an aggregate measure of agility using signals from the survey, firms were scored on the number of responses that correspond most closely to key features of a representative agile firm based on the theoretical and empirical literature.¹² Points were allocated to response categories for which, if selected by the firm from a series of alternatives, the balance of probabilities would indicate a greater degree of organizational agility. A histogram of the total scores is shown in **Chart 6**. The distributions of scores across sectors, firm size and other firm characteristics were also examined and statistical tests conducted to determine whether firms in the top score

Chart 6: Distribution of agility scores

All observations, maximum possible value = 100



¹² Scoring was used as a tool to facilitate analysis of a large collection of observations on a relatively small sample of firms. Response options across 22 questions were evaluated on the basis of the strength of the signal for agility. The questions selected were those that provided information on investments in innovation (technology and research and development) and other intangible assets, as well as those pertaining to organizational cultures valuing innovation, flexibility and learning. A simple two-value scoring system of one and two points was used in cases for which a specific behaviour would be consistent with situation-specific agility and unconstrained agility, respectively. No points were given if the response did not offer sufficient information to assess agility. Fifty-five response categories were identified, with a maximum achievable score of 100.

Table 3: Comparison of responses to indicators of performance by the top and bottom agility score quartiles

| Performance measure | Agility quartile | | Total sample (n = 151) % |
|--------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------|--------------------------------|
| | Bottom (n = 39) % | Top (n = 41) % | |
| Share of firms reporting strong growth over past three years ^a | 28 | 27 | 31 |
| Introduction of new or significantly improved <i>goods</i> | 23 | 59 | 40 |
| Introduction of new or significantly improved <i>services</i> | 23 | 68 | 48 |
| Introduction of new or significantly improved <i>processes</i> | 59 | 88 | 75 |
| Mean percentage change in sales from <i>goods</i> innovations | 1 | 8 | 5 |
| Mean percentage change in sales from <i>service</i> innovations | 3 | 7 | 5 |
| Mean percentage change in sales from <i>process</i> innovations | 2 | 10 | 7 |
| Balance of opinion on expectation for future productivity performance relative to the <i>domestic</i> competition ^b | 48 (15) | 70 (10) | 58 (13) |
| Balance of opinion on expectation for future productivity performance relative to the <i>global</i> competition ^b | 41 (56) | 58 (20) | 53 (32) |

a. Responses are not found to be statistically different between the bottom and top quartiles.

b. The balance of opinion equals the percentage expecting improvement minus the percentage expecting deterioration. (For the purposes of the statistical tests, the balance of opinion is calculated using only those firms that were able to evaluate how they expect their productivity to evolve relative to the competition. The percentages of firms that were unable to provide a view were excluded from the calculation and are shown in parentheses. Including firms that were unable to provide a view results in a considerably lower balance of opinion for the bottom quartile relative to the top quartile, especially in the case of the comparison with the global competition.)

quartile had different responses than those in the bottom quartile to other survey questions related to firm performance. Survey indicators of firm performance are defined as (i) the firm’s characterization of sales growth over the past three years; (ii) whether or not goods, service or process innovations were introduced, and the firm’s estimate of the sales gain resulting from these innovations; and (iii) the firm’s self-assessment of its recent and expected future productivity performance relative to the domestic and global competition.

Three interesting features emerge from the analysis. First, as expected, the distribution of organizational agility scores shows considerable dispersion across firms, with a relatively thin right tail of firms exhibiting the most agile features. Sectoral distributions vary but are generally overlapping, confirming the view that agility features are not sector-specific; firms in any sector can demonstrate high or low agility.

Second, as would be expected, relative to those in the bottom quartile, firms in the top quartile of agility scores were more likely to have innovated over the previous three years (introduced new or significantly improved goods, services or processes) and to report a higher percentage increase in sales because of those innovations (Table 3).¹³ Firms in the top quartile also had more favourable expectations regarding their forward-looking productivity performance relative to their domestic and global competition over the coming three years, and were generally more aware of global best practices (only 20 per cent of firms in the top agility score quartile could not provide a

◀ *Firms in any sector can demonstrate high or low agility*

◀ *As expected, firms in the top quartile of agility scores reported better innovation outcomes than those in the bottom quartile*

¹³ This result was robust to a range of alternative scoring methodologies.

view on the expected evolution of their productivity relative to that of the global competition, compared with 56 per cent of firms in the bottom quartile).

Studies suggest that agile firms are able to sustain above-average growth over extended periods. However, the most and least agile firms in the sample reported similar profiles of sales growth over the previous three years (in terms of the share reporting strong, moderate, weak or negative growth). This may reflect the economic environment of the period, or that a greater degree of agility than demonstrated by the top quartile of Canadian firms is required to generate sustained, strong growth. Worley and Lawler (2010), for instance, argue that “the ‘new normal’ requires organizations to have an amazing amount of agility just to survive, let alone thrive.”

Third, differences in agility scores along various firm characteristics provide interesting insights. The literature suggests that small and medium-sized firms have more scope for agile behaviour than larger firms owing to their greater flexibility and entrepreneurial orientation, but larger firms may have more access to resources needed to launch new products or expand geographically. In the survey, mean agility scores were found to rise with firm size.¹⁴ Agility scores among smaller firms may be lower than would otherwise be the case given the slow recovery in firm creation since the recession, which has resulted in limited entry of new start-ups with high entrepreneurial orientation.

The literature also suggests that exporting firms are relatively more capital-intensive, knowledge-intensive, information-intensive and productive than non-exporters. Outside of having initially entered an export market, however, exporting firms did not have statistically different organizational agility scores than domestic firms.¹⁵ This result suggests two influences. First, domestic market conditions have evolved in such a way that, with increased import competition and technological advances, domestically oriented firms have faced incentives to invest in agility to compete. Second, amid a prolonged period of uncertainty regarding the nature and timing of a strengthening in global demand in the aftermath of the recession, incentives for many exporters have favoured strengthening their ability to absorb the demand shock and survive, rather than investing in their agility.¹⁶

◀ *There are signs that a prolonged period of uncertainty regarding the nature and timing of a strengthening in global demand has led exporters to focus on resilience rather than investing in their agility*

Macroeconomic Implications of the Results

Overall, the FSS results suggest that the near-term growth expectations of Canadian firms are modest. Facing greater competitive pressures in both domestic and export markets, firms have been planning largely defensive uses for their capital budgets, aimed at further reductions in their cost structure or at ways to differentiate their product offerings. Firms following strategies to reduce their cost structure generally expect to improve their productivity performance relative to their domestic and global competitors over the next three years. Others were focusing on enhancing customer loyalty to obtain a competitive advantage, through customization or

¹⁴ Size is defined as the number of employees of the firm.

¹⁵ This is based on a test of the distributions of agility scores between exporters and domestic firms after the removal of the points given to the nature and speed of the initial entry into export markets and preferences for continuity of participation in the face of changes in demand. According to the Wilcoxon rank-sum test result, the null of no difference between distributions is not rejected at the 20 per cent level.

¹⁶ Sull (2009), for example, describes how companies can focus on agility to spot and exploit changes in the market in certain conditions or stages of their life cycle. During others, they can rely on strengthening their resilience to withstand market shifts, notably during shocks and when strategic or structural barriers to entry are perceived to be sufficient to provide some protection from competition.

differentiation of their product offerings (while acknowledging that these efforts can raise costs and lead them to forgo some productivity gains). All else being equal, these strategies should help support exports and domestic output over the short term.

A key issue for the macroeconomic outlook is determining when Canadian firms' confidence will rise to the point of shifting focus toward investments that would push the production possibility frontier outward. One can envisage two possible scenarios: (i) global growth begins to gain momentum, or (ii) a slow pace of growth persists.

In the first scenario, amid less uncertainty and improving demand, the strategic orientation of firms would be expected to shift, in aggregate, from a focus on fine-tuning existing strengths toward more entrepreneurial strategies to seek out new growth opportunities and to expand longer-term capacity to serve domestic and export markets. The FSS finds that firms that have invested the most in organizational agility generally report better innovation outcomes. At the aggregate level, investing in agility-enhancing activities can trigger a process of innovative supply that creates its own demand.

The second scenario—that a slow pace of growth will persist and uncertainty will lead to further delays in investment—may lead firms to continue to rely on more-defensive strategies, which could hold back the rotation in Canadian aggregate demand toward exports and investment. The fact that most firms perceive some or significant barriers to entry in their industry suggests that imperatives for innovation and long-term productivity enhancements may not appear that pressing. A prolonged period in which firms postpone investment and follow strategies for incremental reductions in costs that are not accompanied by investment in new technology would undermine the longer-term competitive advantages of the Canadian business sector, particularly if net firm creation remains slow to recover. A sustained failure to invest would imply a lower rate of potential output growth.

Under either scenario, the emergence of new and non-traditional competitors, more demanding consumers, the growing volume of big data, and further advances in information and communications technology are expected to continue to challenge traditional business models over the coming years (EIU 2009, 2014; McGrath 2013; PwC 2014). As firms worldwide seek ways to respond to evolving global forces and maintain or improve their market share, the nature of the agility and strategic decisions of Canadian firms will continue to be an important area of study.

◀ *A key issue for the macroeconomic outlook is determining when Canadian firms' confidence will rise to the point of shifting focus toward investments that would push the production possibility frontier outward*

Literature Cited

- Atkeson, A. and P. J. Kehoe. 2005. "Modeling and Measuring Organization Capital." *Journal of Political Economy* 113 (5): 1026–53.
- Baldwin, J. R., W. Gu and R. Macdonald. 2012. "Intangible Capital and Productivity Growth in Canada." *Canadian Productivity Review*. Statistics Canada, Cat. No. 15-206-X — No. 029 (June).
- Bloom, N. 2009. "The Impact of Uncertainty Shocks." *Econometrica* 77 (3): 623–85.

- Bloom, N., R. Lemos, R. Sadun, D. Scur and J. Van Reenen. 2014. "The New Empirical Economics of Management." *Journal of the European Economic Association* 12 (4): 835–76.
- Corrado, C., C. Hulten and D. Sichel. 2009. "Intangible Capital and U.S. Economic Growth." *Review of Income and Wealth* 55 (3): 661–85.
- de Munnik, D., M. Illing and D. Dupuis. 2013. "Assessing the Accuracy of Non-Random Business Conditions Surveys: A Novel Approach." *Journal of the Royal Statistical Society: Series A (Statistics in Society)* 176 (2): 371–88.
- de Munnik, D., J. Jacob and W. Sze. 2012. "The Evolution of Canada's Global Export Market Share." Bank of Canada Working Paper No. 2012-31.
- Economist Intelligence Unit (EIU). 2009. "Organisational Agility: How Business Can Survive and Thrive in Turbulent Times." Sponsored by EMC.
- . 2014. "Gut & Gigabytes: Capitalising on the Art & Science in Decision Making." Sponsored by PricewaterhouseCoopers International.
- Macklem, T. 2011. "Canada's Competitive Imperative: Investing in Productivity Gains." Speech to Productivity Alberta, Edmonton, Alberta, 1 February.
- Madhok, A. and R. Marques. 2014. "Towards an Action-Based Perspective on Firm Competitiveness." *Business Research Quarterly* 17 (2): 77–81.
- McGrath, R. G. 2013. *The End of Competitive Advantage: How to Keep Your Strategy Moving as Fast as Your Business*. Boston, MA: Harvard Business Review Press.
- Poloz, S. S. 2013. "Reconstruction: Rebuilding Business Confidence in Canada." Speech to the Oakville Chamber of Commerce, Burlington, Ontario, 19 June.
- PricewaterhouseCoopers International (PwC). 2014. "Fit for the Future: Capitalising on Global Trends." 17th Annual Global CEO Survey.
- Rennison, L., F. Novin and M. Verstraete. "The Firm Strategy Survey." Bank of Canada Discussion Paper (forthcoming).
- Schwab, K. 2014. *The Global Competitiveness Report 2014–2015*. World Economic Forum.
- Sherehiy, B., W. Karwowski and J. K. Layer. 2007. "A Review of Enterprise Agility: Concepts, Frameworks, and Attributes." *International Journal of Industrial Ergonomics* 37: 445–60.
- Sull, D. 2009. "How to Thrive in Turbulent Markets." *Harvard Business Review* (February).
- Worley, C. G. and E. E. Lawler III. 2010. "Agility and Organization Design: A Diagnostic Framework." *Organizational Dynamics* 39 (2): 194–204.
- Zhang, D. Z. 2011. "Towards Theory Building in Agile Manufacturing Strategies—Case Studies of an Agility Taxonomy." *International Journal of Production Economics* 131 (1): 303–12.