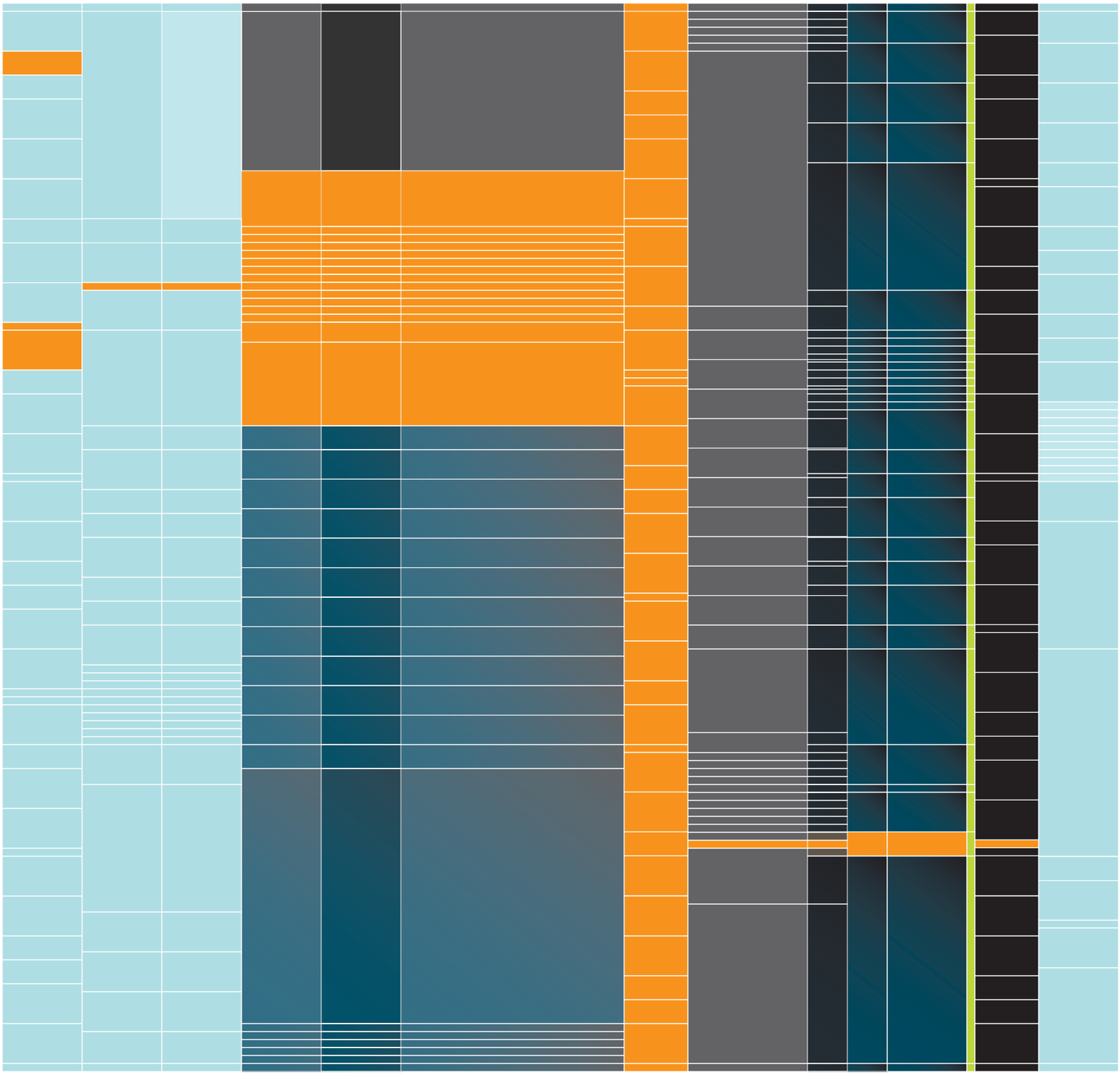
Business Innovation and Strategy: A Canadian Perspective

REPORT BASED ON THE RESULTS OF
THE *SURVEY OF INNOVATION AND BUSINESS STRATEGY* (SIBS)



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Contents

Section 1

Why is innovation important for enterprises in Canada?

Business innovation is important to the sustained growth of the Canadian economy and of Canadian living standards. Economics literature links productivity growth and business investment in innovation – which is not restricted to traditional investment in research and development (R&D) and equipment, but also to other knowledge-generating activities such as management and organizational practices, and other "intangibles."

Moreover, with the advent of globalization via advanced information and communication technologies (ICTs) and reduced international trade barriers, there are fewer obstacles to relocating or outsourcing business activities to emerging countries such as China and India. With many Canadian enterprises competing globally, innovation and innovative strategies present avenues to get ahead of the competition.

The recent appreciation of the Canadian dollar against most major currencies places further competitive pressure on enterprises in Canada to innovate and invest, while at the same time making it cheaper for domestic producers to purchase state-of-the-art machinery and equipment.

Several intertwined factors can influence the decision to choose an innovative business strategy – characteristics such as ownership structure, the state of competition, public policy incentives and the degree of entrepreneurship of enterprises. A number of recent surveys and reports assess the different factors affecting innovation and business strategy,[1,2] but there has been no comprehensive view of the issues involved from the perspective of business.

What is the *Survey of Innovation and Business Strategy*?

The *Survey of Innovation and Business Strategy* (SIBS) is a comprehensive new survey that covers the factors that influence enterprise strategies – not only explicitly related to innovation, but also to other strategies. It is a joint project, initiated in 2007–08 by Industry Canada, Foreign Affairs and International Trade Canada and Statistics Canada, to better understand the market and policy factors that encourage or discourage the adoption of growth and innovation-oriented business strategies.

SIBS provides detailed information about various business strategies and practices that determine business innovation, such as an enterprise's strategic orientation, its management practices, its use of advanced technology and its marketplace and competitive environment. The survey also provides detailed information about global value chain management practices and activities in Canada, such as which activities an enterprise will relocate to other countries and which it will outsource to external suppliers.

1 Competition Policy Review Panel, *Compete to Win – Final Report*, 2008.

2 Expert Panel on Business Innovation, *Innovation and Business Strategy: Why Canada Falls Short*, Council of Canadian Academies (CCA), 2009.

A sample of 6,233 enterprises in Canada, each with more than 20 employees and revenues above $250,000, were surveyed. These enterprises spanned 67 industries.

Structure of the report

Section 2 identifies enterprises' most important long-term business strategies and the strategic focus of their products and activities. Then, to provide a better understanding of the scope of business activities in Canada, the section describes the various activities that enterprises perform. It focuses on how an enterprise positions itself in the marketplace by looking at its main product and principal market, the type and location of business activities it performs, as well as its decision structure.

Section 3 looks at how enterprises in Canada have integrated global value chains (GVC) and international markets. This is seen as an important business strategy for enterprises in Canada as they seek new markets for their products and expand the scale of their domestic market segments.

Section 4 assesses whether enterprises in Canada operate in a competitive environment. By asking enterprises to define their own markets, SIBS findings overcome the important problem of market definition by directly measuring the competition intensity that enterprises perceive.

Section 5 looks at enterprises' technology adoption and innovation strategies. Concepts of complementarity in innovation and co-innovation are discussed to highlight the complexity of bringing new ideas to the market.

Section 6 presents the conclusions. Additionally, a survey description and more detailed tables (by industry and size of the enterprise) are provided in the appendices.

Key Findings of the Report

- Most enterprises focus on product positioning instead of cost leadership as their long-term business strategy.

- A majority of enterprises report that the principal market for their main product is local.
  - › 70 percent of non-manufacturing enterprises report that their principal market is local as opposed to 33 percent for manufacturing enterprises.

- Almost 50 percent of manufacturing enterprises in Canada undertook business activities outside of Canada between 2007 and 2009.

- During the same period, 5 percent relocated abroad and 10 percent outsourced business activities that were initially performed in Canada.
  - › Enterprises usually displaced their business activities to the United States (U.S.), China, and India. The most relocated or outsourced business activity was the production of goods.

- Contrary to the popular perception, SIBS results suggest that competition intensity in Canada is strong as enterprises report facing numerous competitors, including multinational enterprises.
  - › Manufacturing enterprises report that they primarily respond to new competition by changing prices.
  - › High-tech manufacturing enterprises are also likely to respond by adopting new technologies or by introducing new innovations.

- Two out of three enterprises in Canada, and four out of five manufacturing enterprises, report having innovated in 2007–09.

- *Co-innovation* (e.g., a product innovation that requires the introduction of a new process) is common in enterprises in Canada, illustrating the complex nature of the innovation process.

- Most manufacturing enterprises in Canada adopt advanced technologies by purchasing them off-the-shelf.
  - › User-driven innovation (customizing or developing new advanced technology) is also pervasive among large manufacturing enterprises.

- Overall, about 90 percent of manufacturing enterprises took measures to mitigate the obstacles to innovation they faced in 2007–09.
  - › Between 35 percent and 60 percent of these manufacturing enterprises report that these measures were successful.
  - › Between 10 percent and 30 percent of these manufacturing enterprises reported using government programs to overcome these obstacles.

Section 2

How do enterprises in Canada position themselves in the marketplace?

Key Findings of this Section

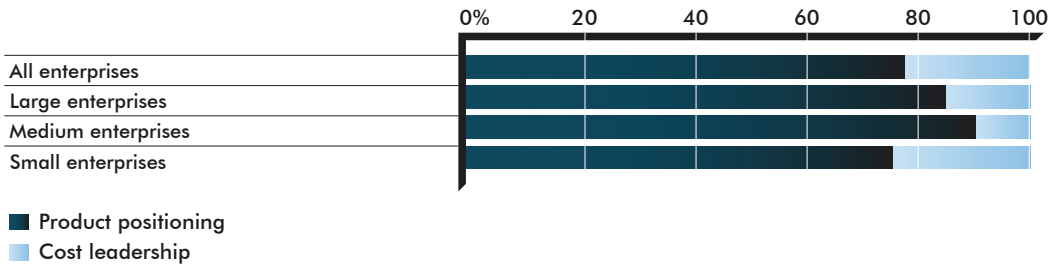
- Most enterprises focus on product positioning rather than cost leadership as their long-term business strategy.
- The strategic focus of enterprises is more often geared toward maximizing sales of existing products and optimizing current activities than introducing new products and practices.
- A majority of enterprises report that the principal market for their main product is local.
- Enterprises performed their business activities in Canada either by themselves, or by outsourcing them to other enterprises in Canada.
- Decisions about business activities are primarily made in Canada, although up to one third of large enterprises report that a foreign parent is involved in some way.

A majority of enterprises in Canada focus on product positioning rather than cost leadership.

Innovative strategies come in many different forms and will likely be influenced by the enterprise's long-term market strategy. For example, an enterprise could introduce product and marketing innovations to differentiate its main product(s), or introduce process and organizational innovations to lower costs.

A long-standing hypothesis is that enterprises in Canada derive most of their productivity gains by mass-producing commodities or low value-added goods and services. This would imply that they mainly try to innovate by minimizing their input costs to take advantage of scale economies. However, contrary to this hypothesis, SIBS results (Figure 2.1 below and Table A1 in Appendix 2) show that most enterprises report product positioning (e.g., product leadership, market segmentation, product diversification, improving quality) as the focus of their long-term strategy rather than cost leadership.

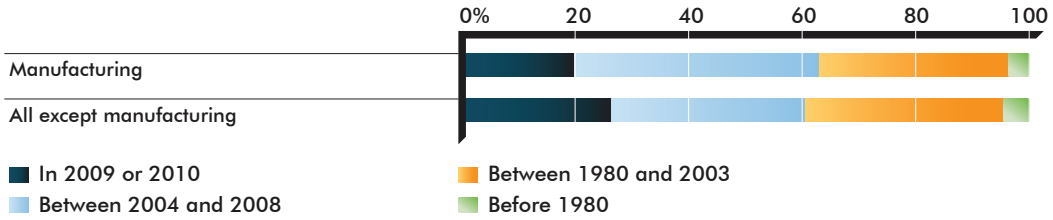
Figure 2.1: Enterprise long-term business strategy in 2009
– Percentage of enterprises



Source: *Survey of Innovation and Business Strategy*, 2009.

However, the observed focus on product positioning over cost leadership may be a recent development. Most enterprises in both the manufacturing and non-manufacturing sectors report that they had implemented their current long-term strategy within the last seven years (Figure 2.2). While this does not necessarily imply a shift from cost minimization to product differentiation, it is consistent with the hypothesis that enterprises in Canada have recently aligned their strategic focus towards product positioning to face external factors such as currency appreciation or increased pressures from globalization.

Figure 2.2: Enterprise current long-term business strategy by year of implementation
– Percentage of enterprises



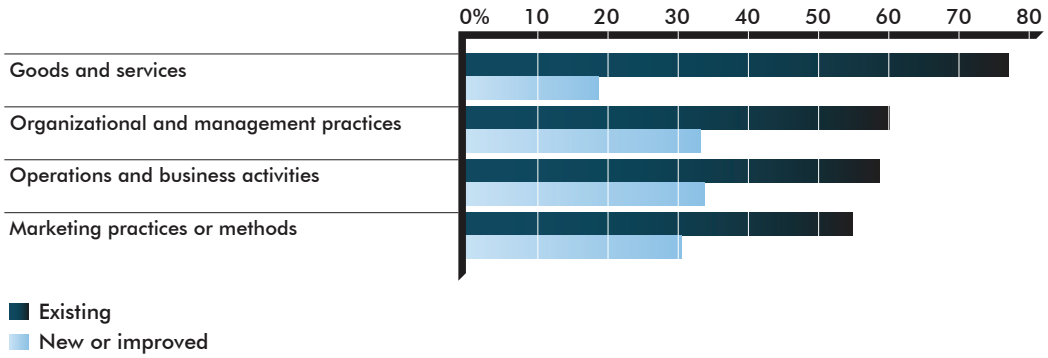
Source: *Survey of Innovation and Business Strategy*, 2009.

Enterprises' main strategic focus is on existing products or activities rather than on new ones.

While the long-term strategy of most enterprises is more geared toward product positioning than cost leadership, the strategic focus of the majority of enterprises in Canada is oriented toward exploiting current products and activities rather than developing new or significantly improved ones (Figure 2.3 below and Table A2 in Appendix 2).

A majority of enterprises report that their strategic focus is to maintain or expand the sales of existing products (77 percent), maintain or intensify existing marketing practices (55 percent), maintain or optimize current operations and business activities (59 percent) and maintain or optimize current organizational and management practices (60 percent).

Figure 2.3: Enterprise main strategic focus for different activities in 2009*
– Percentage of enterprises

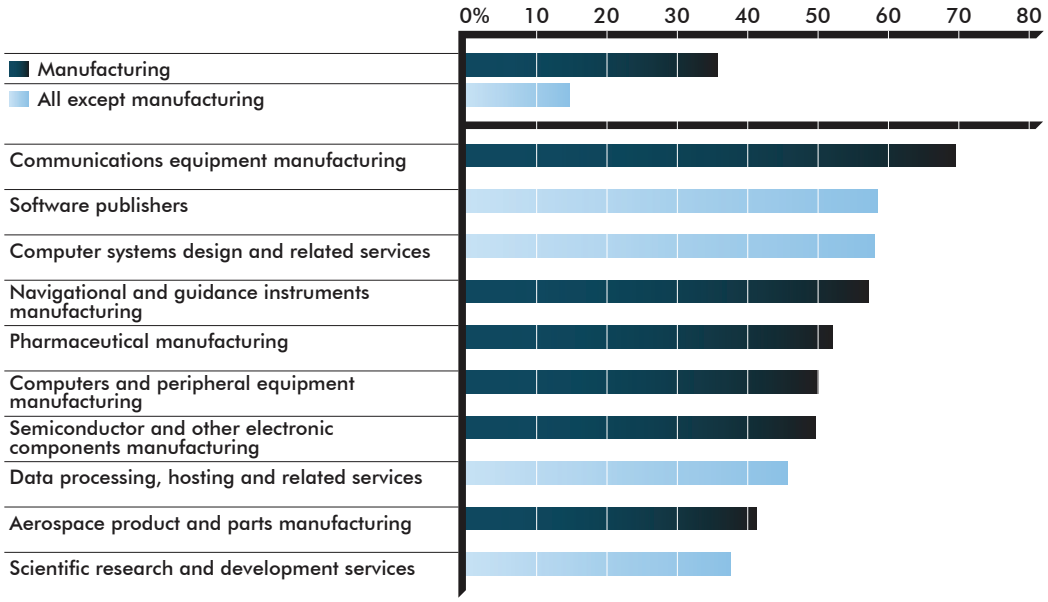


* The figures do not sum to 100 percent because the "do not know" category is not presented.

Source: *Survey of Innovation and Business Strategy*, 2009.

The percentage of enterprises reporting a strategic focus on new or significantly improved products varies by industry (Figure 2.4). Enterprises in the manufacturing sector are more likely to focus on new or significantly improved products than enterprises outside the sector. Further, a strategic focus on new or improved products is more prevalent among enterprises in high-tech industries relative to other manufacturing and non-manufacturing industries.

Figure 2.4: Enterprises with a main strategic focus on new or significantly improved products in selected industries in 2009
– Percentage of enterprises



Source: *Survey of Innovation and Business Strategy*, 2009.

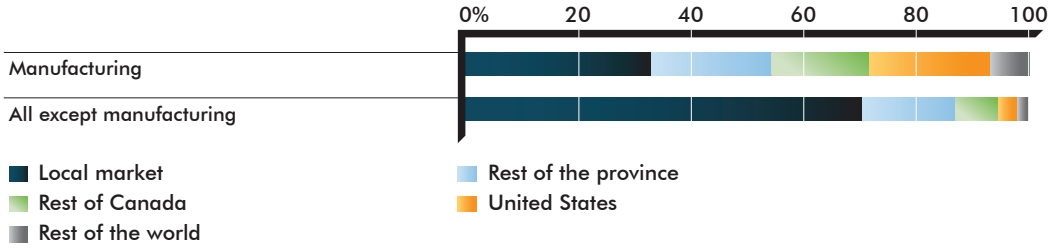
The principal market of a majority of enterprises is local.

SIBS asked questions concerning an enterprise's highest-selling goods or services (henceforth referred to as *main product*), to collect information on the variety of products offered by enterprises in Canada, to define their principal market, and to acquire information on their competitive environment.

The principal market for an enterprise's main product is defined as the geographic region from which the enterprise derives the highest percentage of its main product total sales revenue.[3] Figure 2.5 (and Table A3 in Appendix 2) shows that, the principal market for enterprises in both the manufacturing and non-manufacturing sectors was domestic in 2009, with a high share of non-manufacturing enterprises principally serving local markets (70 percent).

3 Consider, for instance, that 40 percent of a Toronto-based enterprise's main product sales revenue comes from Toronto, 30 percent from the rest of the province, 20 percent from the rest of Canada and 10 percent from the U.S. Using the SIBS definition (as in Figure 2.5), this enterprise's principal market is local.

Figure 2.5: Sales from enterprise's main product by region in 2009
– Percentage of sales



Source: *Survey of Innovation and Business Strategy*, 2009.

However, international markets are more important for manufacturing enterprises. On average, across manufacturing industries, 28 percent of revenues from main products come from abroad, of which 77 percent of revenues are from the U.S. This share is higher for large (45 percent) and medium-sized (39 percent) manufacturing enterprises compared to small (24 percent) ones.

SIBS also reveals that 60 percent of all enterprises consider their main product to be a product line (78 percent and 56 percent in the manufacturing and non-manufacturing sectors, respectively). This suggests that a majority of enterprises in many Canadian industries respond to different market segment demands by producing differentiated products.

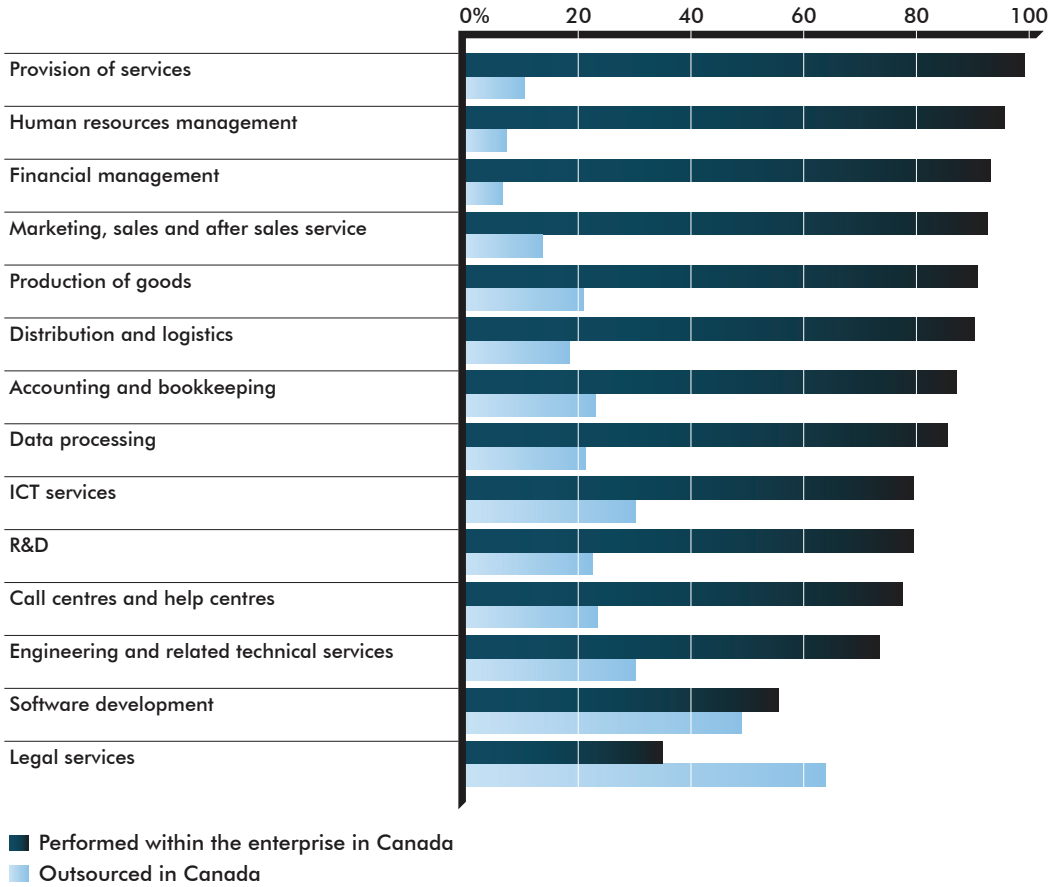
Domestic outsourcing is limited to a small number of business activities.

Depending on the nature of the enterprises and the strategy they pursue, enterprises will perform different kinds of business activities. Figure 2.6 shows that for enterprises undertaking a given business activity, that activity was performed in-house by at least 70 percent of enterprises in 2009, with the exception of legal services and software development.

Put differently, Figure 2.6 shows that activities more likely to be outsourced outside of the enterprise but still within Canada are legal services (63 percent), software development (48 percent), information and communication technology services (30 percent) and engineering and related technical services (30 percent). Section 4 presents more detail on how enterprises integrate activities into global markets.

Figure 2.6: Business activities undertaken in Canada in 2009*

– Percentage of enterprises that performed that type of business activity



* The two categories are not mutually exclusive. An enterprise can produce goods in its facility and at the same time outsource part of its production to another enterprise in Canada. The shares are recalculated to exclude the "does not apply" category.

Source: *Survey of Innovation and Business Strategy*, 2009.

Business Activities not Performed by Enterprises

The percentages in Figure 2.6 represent enterprises reporting that they undertook a given business activity, either by themselves or by outsourcing it. The SIBS questionnaire also asked which activities were not relevant for the enterprise. For instance, a majority of enterprises reported that they do not perform: engineering and related technical services (51 percent); software development (54 percent); R&D activities (57 percent); or operate call and help centres (62 percent). Figure 2.6 data points have been recalculated to exclude enterprises that do not perform a given activity.

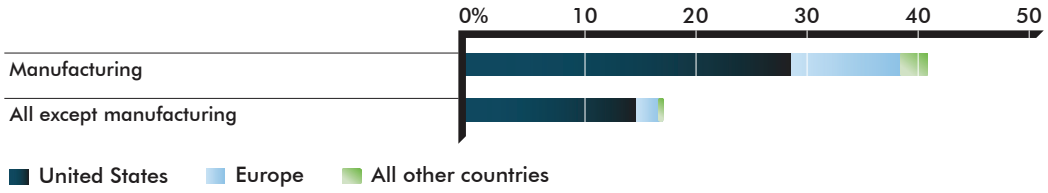
Source: *Survey of Innovation and Business Strategy*, 2009.

Overall, decisions about business activities are usually made in Canada, but the picture is more blurred for large enterprises with foreign headquarters.

Although they generally represent a small percentage of enterprises in Canada, evidence suggests that large multinational enterprises invest more in innovation and are more productive than Canadian-owned enterprises.[4] The Competition Policy Review Panel (CPRP 2008) highlighted the importance of head offices being located in Canada because they are a source of high-skilled, high-paid jobs and can attract high-value business services. In contrast, the Expert Panel on Business Innovation (CCA 2009) suggested that Canada benefits from the presence of large enterprises, irrespective of their country of control, since there is no guarantee that Canada would generate enough large Canadian enterprises to replace them.

Results from SIBS show that 41 percent of large enterprises in the manufacturing sector report that their head office is located abroad, primarily in the U.S., followed by Europe (Figure 2.7). For non-manufacturing enterprises, the share of large enterprises with a head office located abroad is lower at 17 percent, with most of those located in the U.S.

Figure 2.7: Location of enterprise head office in 2009
– Percentage of large enterprises



Source: *Survey of Innovation and Business Strategy*, 2009.

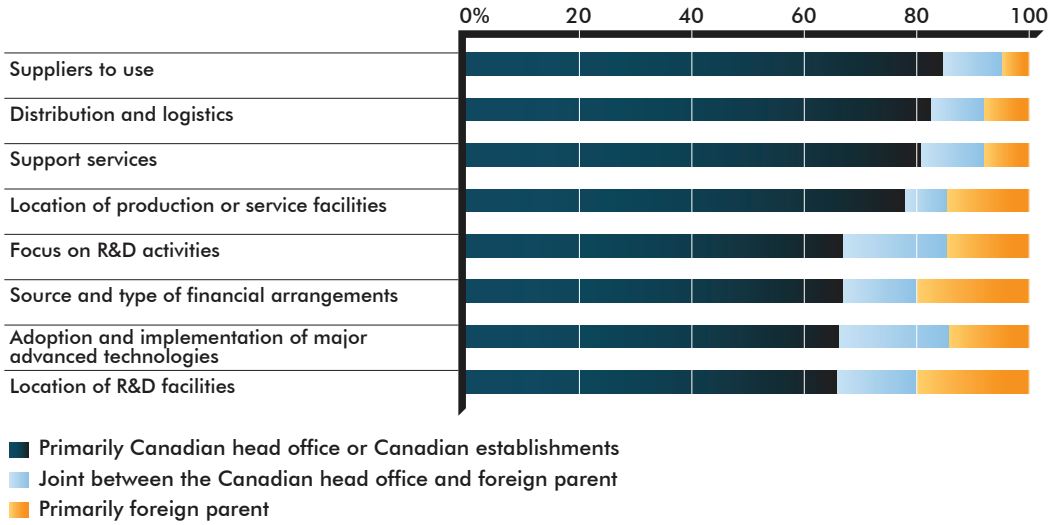
SIBS results also reveal that large enterprises report that most decisions about their business activities are taken in Canada. Overall, at least 65 percent of large enterprises report that decisions about business activities are primarily made in Canada, either at the Canadian head office or at the establishment level.[5] In comparison, between 90 percent and 95 percent of all enterprises (for all sizes and locations of head offices) report that decisions regarding business activities are made in Canada. Decisions more likely to be made primarily by foreign parents are: location of and focus on R&D; location of production facilities; and financial arrangements (Figure 2.8).

4 John Baldwin and Wulong Gu, *Global Links: Multinationals, Foreign Ownership and Productivity Growth in Canadian Manufacturing*, Statistics Canada Catalogue no. 11-622-MIE, The Canadian Economy in Transition Series. No. 009.

5 Note that large enterprises account for 5 percent of the SIBS target population.

Figure 2.8: Location of decision-making for business activities in 2009*

– Percentage of large enterprises that made that type of decision



* The shares are recalculated to exclude the "does not apply" category.

Source: *Survey of Innovation and Business Strategy*, 2009.

Section 3

How are enterprises in Canada changing the way they are connected to the world economy?

Key Findings of this Section

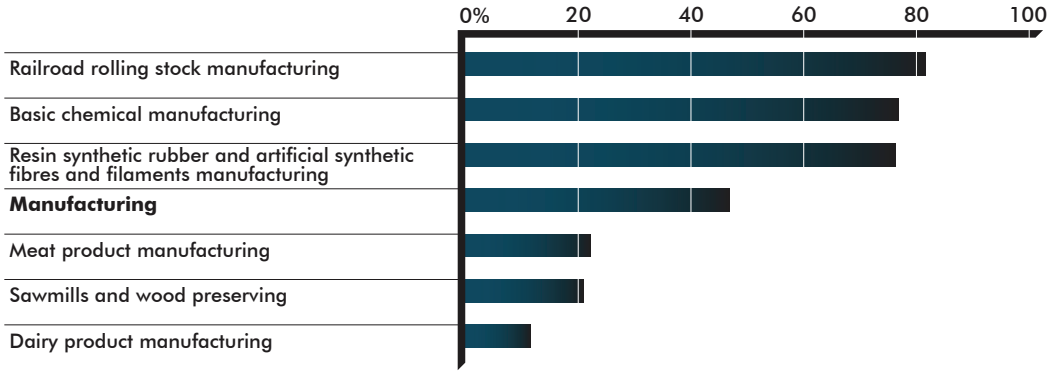
- Almost 50 percent of manufacturing enterprises in Canada were engaged in activities abroad between 2007 and 2009.
- During the same period, 5 percent relocated abroad and 10 percent outsourced business activities that were initially performed in Canada.
- Manufacturing enterprises most commonly relocated or outsourced the production of goods from Canada to another country, as compared to other business activities.
  - › Production is also the most common business activity relocated from another country into Canada.
- Manufacturing enterprises outsourced activities from Canada primarily to the U.S. and China, while activities relocated back to Canada were largely from the U.S.
- Obstacles to outsourcing or relocating (e.g., language and culture) are different than those for exporting (e.g., cost requirements, distance to consumers).

Almost 50 percent of manufacturing enterprises had business activities outside of Canada, 5 percent relocated and 10 percent outsourced business activities outside of Canada between 2007 and 2009.

Although they typically perform their business activities in Canada, integration into the global value chain is important for enterprises in Canada. Figure 3.1 (and Table A4 in Appendix 2) shows that 48 percent of manufacturing enterprises report they had conducted business activities outside of Canada between 2007 and 2009. The figure also shows that the percentage of enterprises with activities abroad varies significantly by industry.

SIBS also collected information on changes implemented by enterprises in the location of their business activities between 2007 and 2009. Questions distinguished between the relocation and outsourcing of business activities. An enterprise that relocated business activities abroad kept the activities *within* the enterprise (e.g., through a foreign subsidiary), while an enterprise that outsourced or contracted out an activity abroad moved the activity *outside* of the enterprise (e.g., to a third-party supplier).

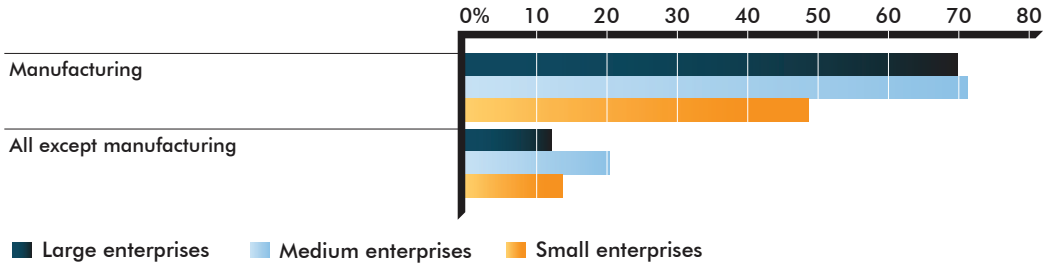
Figure 3.1: Enterprises with activities outside of Canada in selected industries in 2007–09
– Percentage of manufacturing enterprises



Source: *Survey of Innovation and Business Strategy*, 2009.

Figure 3.2 (and Table A4 in Appendix 2) shows that about 70 percent of large and medium-sized manufacturing enterprises exported or attempted to export products between 2007 and 2009. Fewer non-manufacturing enterprises did so, although the numbers vary by industry. For example, 54 percent of software publishers exported or attempted to export goods or services.

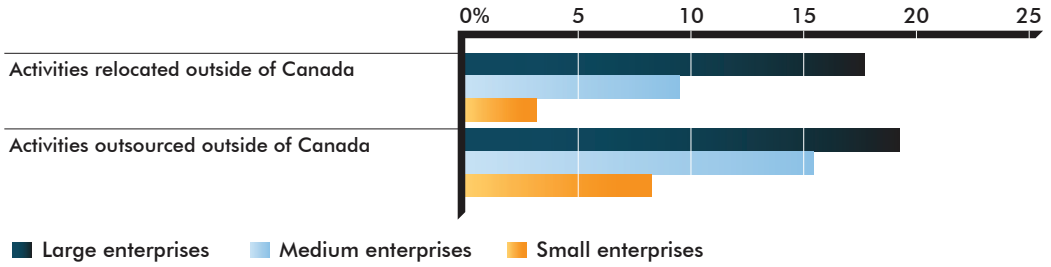
Figure 3.2: Enterprises that exported or attempted to export products in 2007–09
– Percentage of enterprises



Source: *Survey of Innovation and Business Strategy*, 2009.

Overall, 5 percent of manufacturing enterprises relocated business activities that were initially performed in Canada to another country, and 10 percent of manufacturing enterprises reported outsourcing activities abroad between 2007 and 2009. Figure 3.3 (and Table A4 in Appendix 2) shows that large manufacturing enterprises (19 percent) were more likely to outsource business activities outside of Canada compared to medium-sized (16 percent) and small enterprises (8 percent).

Figure 3.3: Enterprises that relocated or outsourced business activities abroad in 2007–09
– Percentage of manufacturing enterprises

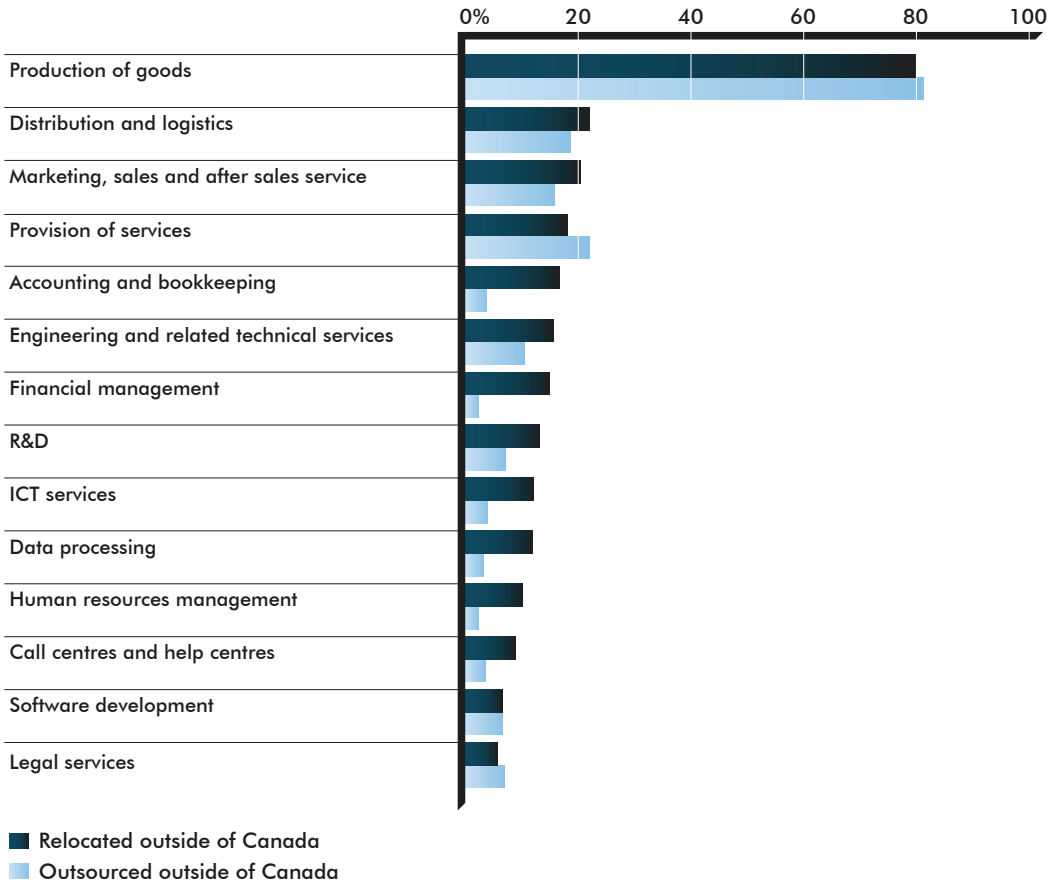


Source: *Survey of Innovation and Business Strategy*, 2009.

Business activities were mainly outsourced to the United States and China between 2007 and 2009, and the most frequently displaced business activity was the production of goods.

The production of goods was by far the most frequently relocated or outsourced activity by manufacturing enterprises between 2007 and 2009 (Figure 3.4). It was displaced by about 80 percent of manufacturing enterprises that relocated or outsourced business activities. Distribution and logistics, marketing, sales and after-sales service and the provision of services are also among the most frequently displaced business activities, although the incidence of displacing these activities (around 20 percent of manufacturing enterprises) is much lower than for the production of goods.

Figure 3.4: Business activities relocated or outsourced abroad in 2007–09
– Percentage of manufacturing enterprises*

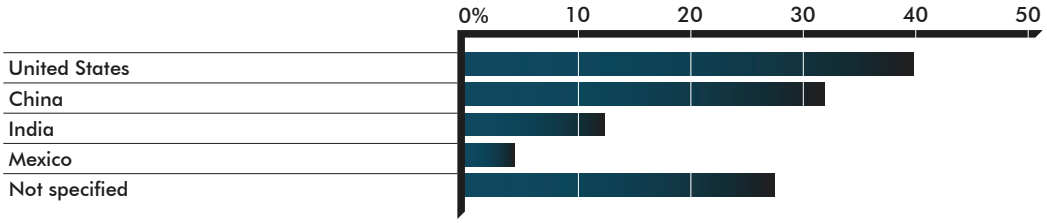


*The Dark Blue (Light Blue) bars represent the percentage of manufacturing enterprises that relocated (outsourced) business activities abroad.

Source: *Survey of Innovation and Business Strategy*, 2009.

The most often cited (39 percent) destination for outsourced business activities by manufacturing enterprises is the U.S. (Figure 3.5). China is another important destination for outsourced activities, as 31 percent of manufacturing enterprises displaced their activities abroad to that country. India and Mexico were third and fourth respectively.

Figure 3.5: Country of destination of business activities outsourced abroad in 2007–09*
– Percentage of manufacturing enterprises that outsourced business activities abroad

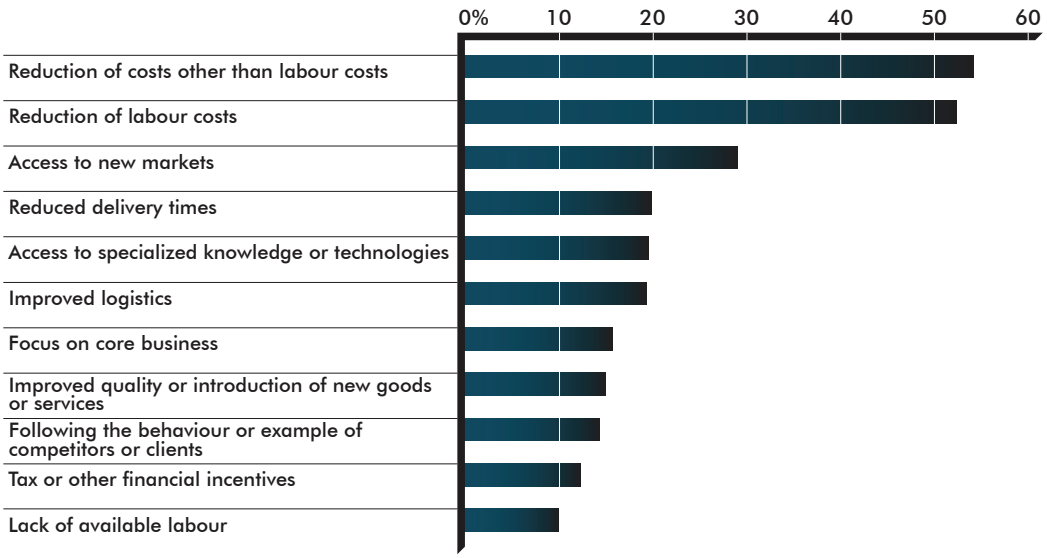


* The bars do not sum to 100 percent because the question asked respondents to list the three most important foreign countries. The "not specified" category represents enterprises for which the list was left blank.

Source: *Survey of Innovation and Business Strategy*, 2009.

Lower labour costs in emerging economies are often cited as the main reason for enterprises to outsource their business activities. This is supported by SIBS evidence, as 50 percent of manufacturing enterprises cited the reduction of labour and other costs as the most important reasons for relocating or outsourcing business activities (Figure 3.6). Access to new markets is the third most frequently cited reason for enterprises to outsource their business activities, as reported by nearly 30 percent of manufacturing enterprises.

Figure 3.6: Reasons for relocating or outsourcing business activities abroad in 2007–09
– Percentage of manufacturing enterprises that relocated or outsourced business activities abroad and reported the importance of the reason as high

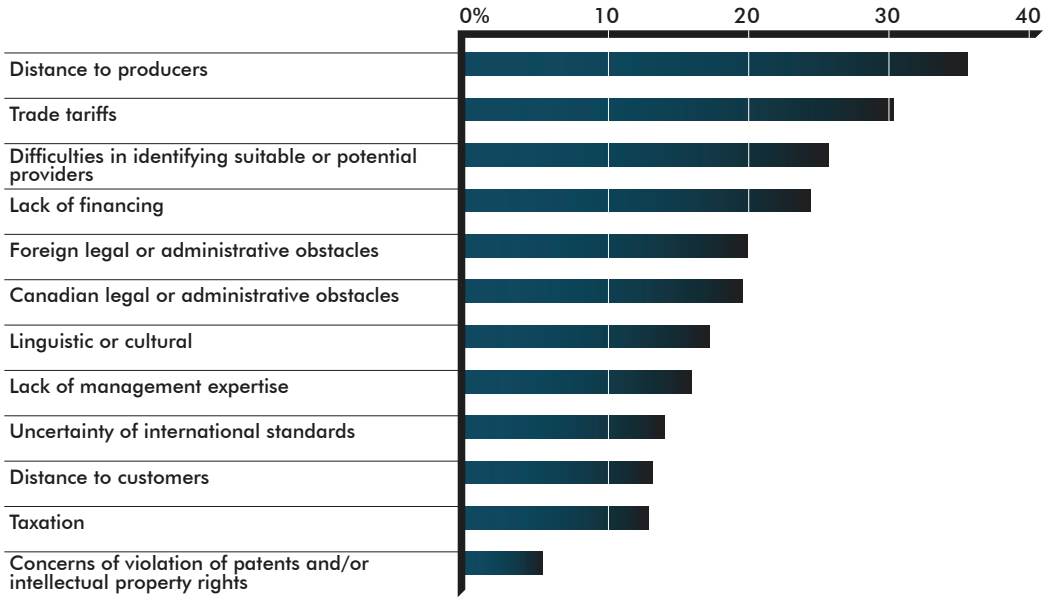


Source: *Survey of Innovation and Business Strategy*, 2009.

Enterprises in Canada face different obstacles to exporting compared to relocating or outsourcing business activities.

A comparison of Figures 3.7 and 3.8 suggests that relocating or outsourcing business activities to another country is a different process compared to exporting goods. The lack of financing, Canadian legal or administrative obstacles, and linguistic and cultural obstacles are important impediments to relocating and outsourcing business activities (Figure 3.7), but are among the least frequently cited obstacles to exporting goods (Figure 3.8). In contrast, meeting the cost requirements of customers, the distance to customers, foreign tariffs and trade barriers, and border security issues are among the most frequently reported obstacles for manufacturing exporters.

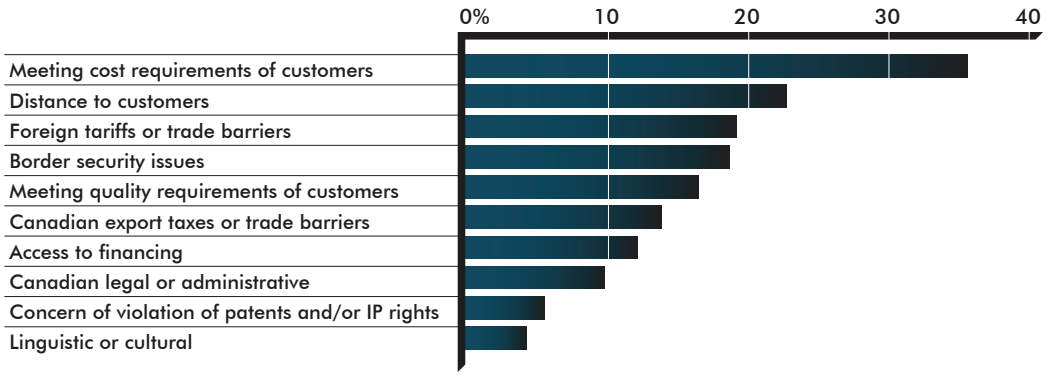
Figure 3.7: Obstacles to relocating or outsourcing business activities abroad in 2007–09
– Percentage of manufacturing enterprises that reported the importance of the obstacle as high*



* Manufacturing enterprises that relocated or outsourced business activities abroad, and reported significant obstacles that slowed down or caused problems when relocating or outsourcing these business activities.

Source: *Survey of Innovation and Business Strategy*, 2009.

Figure 3.8: Obstacles to exporting in 2007–09
– Percentage of manufacturing enterprises that exported or attempted to export products and reported the importance of the obstacle as high

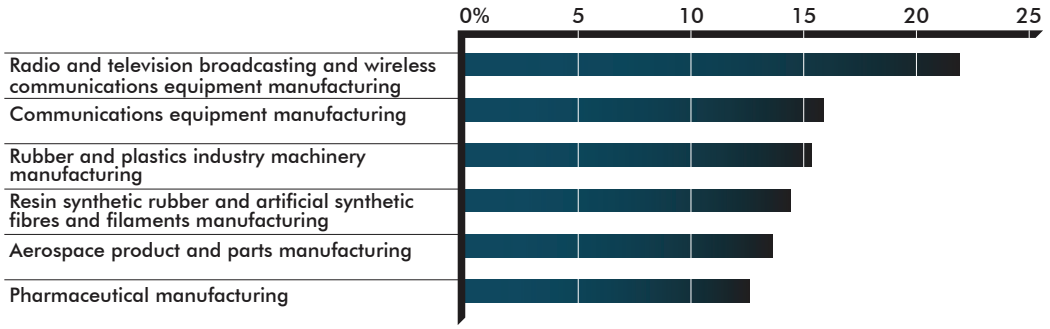


Source: *Survey of Innovation and Business Strategy*, 2009.

About 5 percent of manufacturing enterprises relocated business activities from another country into Canada between 2007 and 2009, primarily from the U.S.

In contrast with the perception that relocation or outsourcing are mainly focused abroad, 5 percent of enterprises operating in Canada returned business activities from other countries into Canada between 2007 and 2009. Figure 3.9 (and Table A4 in Appendix 2) presents the percentage of manufacturing enterprises that relocated business activities into Canada for a number of industries with the highest incidences of relocation. These are typically high-tech industries such as telecommunications, aerospace and pharmaceutical manufacturing.

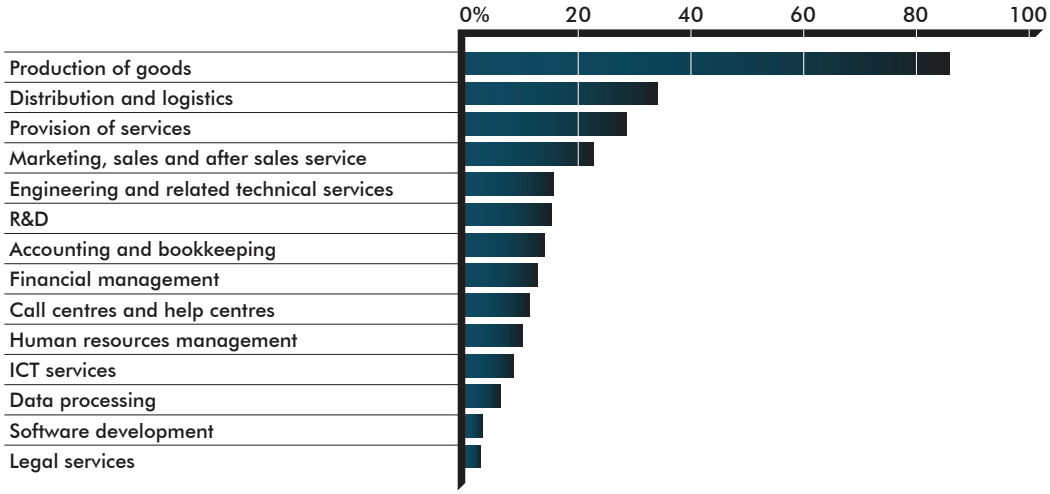
Figure 3.9: Enterprises that relocated business activities from abroad into Canada in selected manufacturing industries in 2007–09
– Percentage of manufacturing enterprises



Source: *Survey of Innovation and Business Strategy*, 2009.

About 85 percent of manufacturing enterprises that relocated business activities into Canada between 2007 and 2009 relocated the production of goods (Figure 3.10). Similar to the business activities that were relocated or outsourced from Canada abroad (Figure 3.4), distribution and logistics, marketing, sales and after-sales service and the provision of services are the next three most frequently reported business activities relocated into Canada.

Figure 3.10: Business activities relocated from abroad into Canada in 2007–09
– Percentage of manufacturing enterprises that relocated business activities into Canada

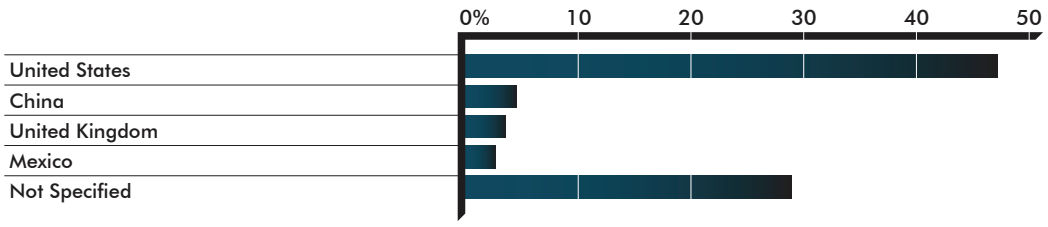


Source: *Survey of Innovation and Business Strategy*, 2009.

Finally, Figure 3.11 shows that almost half of manufacturing enterprises that relocated business activities into Canada report that they moved these activities from the U.S. followed by China, the United Kingdom, and Mexico with shares lower than 5 percent each.

Figure 3.11: Country of origin of business activities relocated from abroad into Canada in 2007–09*

– Percentage of manufacturing enterprises that relocated business activities into Canada



* The bars do not sum to 100 percent because the question asked respondents to list the three most important foreign countries. The "not specified" category represents enterprises for which the list was left blank.

Source: *Survey of Innovation and Business Strategy*, 2009.

Section 4

How do enterprises in Canada compete in the marketplace?

Key Findings of this Section

- Competition intensity in Canada appears to be strong, as enterprises report facing a large number of competitors, including multinational enterprises, and experienced entry of new competitors in 2009.
  - › This result holds across industries and enterprise size.

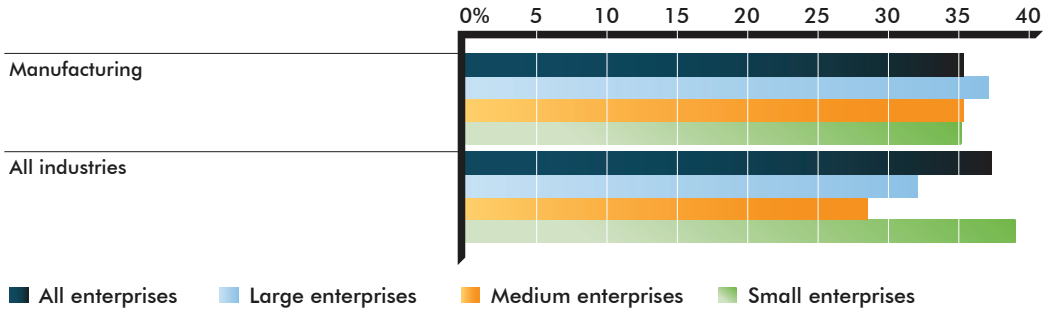
- Manufacturing enterprises in Canada primarily respond to new competition by changing product prices.
  - › There is considerable variation in responses by industry. In industries where quality or perceived quality determines market shares, enterprises respond differently (e.g., by introducing a new good or service, or by adopting new technologies).

Economics literature suggests that competition often plays an important role as a driver of productivity growth and strategic business innovation. "Weak" competition intensity and "business complacency" are often prominently featured as drivers of lagging business innovation in Canada.[6] "Weak" competition intensity in Canada is often attributed to the concentrated nature of Canadian industries and regulations governing sectors such as telecommunications or banking.

Evidence suggests that competition among enterprises is high in Canada.

Figure 4.1 shows that Canadian manufacturing enterprises reported holding, on average, 35 percent market share for their highest selling product in its principal market (note that for most enterprises, their principal market is local). Industries with enterprises reporting the highest market share are in the construction industry and in some utilities and transportation industries (e.g., rail transportation). Small enterprises in non-manufacturing industries report holding a relatively high market share, which is consistent with another SIBS finding that the reported principal market of small enterprises is usually smaller and local.

Figure 4.1: Enterprise market share for their main product in their principal market in 2009
– Market share

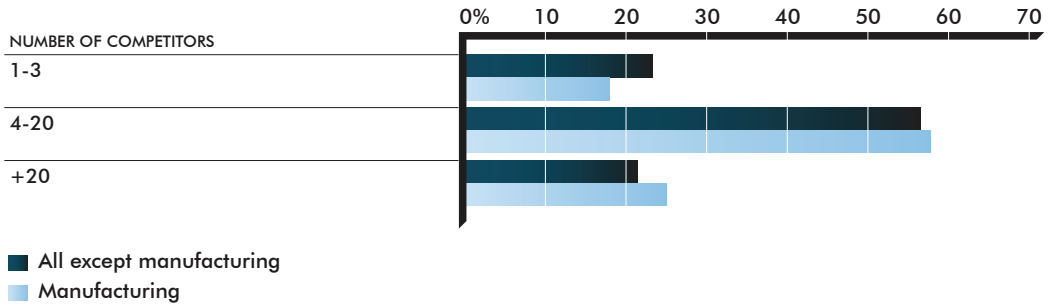


Source: *Survey of Innovation and Business Strategy*, 2009.

6 Don Drummond and Alistair Bentley, *The Productivity Puzzle: Why is the Canadian Record So Poor and What Can Be Done About It?* TD Economics Special Report, 2010.

Enterprises also reported that they face a large number of competitors in their principal market (Figure 4.2 and Table A5 in Appendix 2). Over 20 percent of manufacturing and non-manufacturing enterprises reported that they competed against at least 20 competitors in 2009, and around 80 percent reported competing against at least four competitors.[7] This result extends to industries that are generally seen as highly concentrated or non-competitive due to public policy and regulations. Wired and wireless telecommunication carriers, for example, follow the overall pattern with more than 75 percent of all enterprises reporting more than four competitors.

Figure 4.2: Number of competitors reported by the enterprise in their principal market for their main product in 2009
– Percentage of enterprises

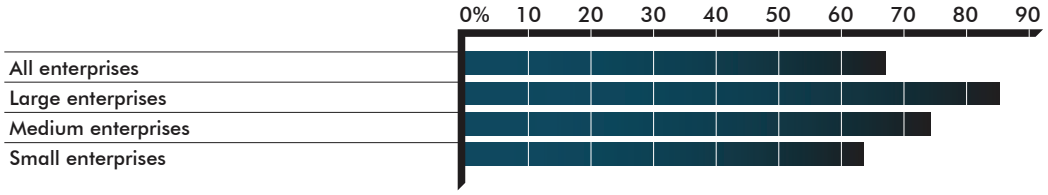


Source: *Survey of Innovation and Business Strategy*, 2009.

Following a number of free trade agreements, such as the North American Free Trade Agreement, Canada is considered to be an open economy that is highly integrated into the global value chain (as shown in Section 3). Enterprises in Canada face competition from foreign enterprises, which in turn, will affect the degree of competition intensity they experience.

A majority of Canadian manufacturing enterprises reported that they competed against multinational enterprises (MNEs) in their principal market in 2009. Specifically, 67 percent of manufacturing and 46 percent of non-manufacturing enterprises reported competing against MNEs. This result also holds across all enterprise sizes for manufacturing sector enterprises (Figure 4.3 and Table A6 in Appendix 2). Over 60 percent of small manufacturing enterprises reported facing an MNE, even though they primarily operate domestically. Exceptions to the overall trends included industries that are protected from foreign competition and industries that are highly localized – utilities, construction, and some transportation industries (not shown in figures).

Figure 4.3: Enterprises that competed against multinational enterprises in their principal market for their main product in 2009
– Percentage of manufacturing enterprises

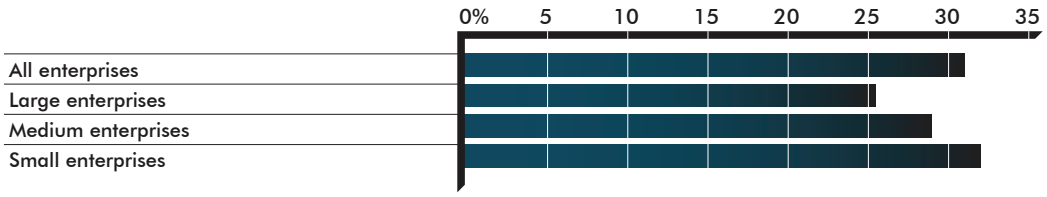


Source: *Survey of Innovation and Business Strategy*, 2009.

7 Economic theory and empirical evidence suggest that the entry of a new firm in a market does not increase competition much if there are already four or five firms in this market. See Timothy Bresnahan and Peter Reiss, *Entry and Competition in Concentrated Market*, The Journal of Political Economy, 99(5), 1991, pp. 977–1009.

One third of manufacturing enterprises in Canada faced a new entrant in their principal market in 2009 (Figure 4.4). This was less pronounced for large enterprises (26 percent) than medium (29 percent) and small (32 percent) enterprises.

Figure 4.4: Enterprises that faced entry of new competitors in their principal market for their main product in 2009
– Percentage of manufacturing enterprises



Source: *Survey of Innovation and Business Strategy*, 2009.

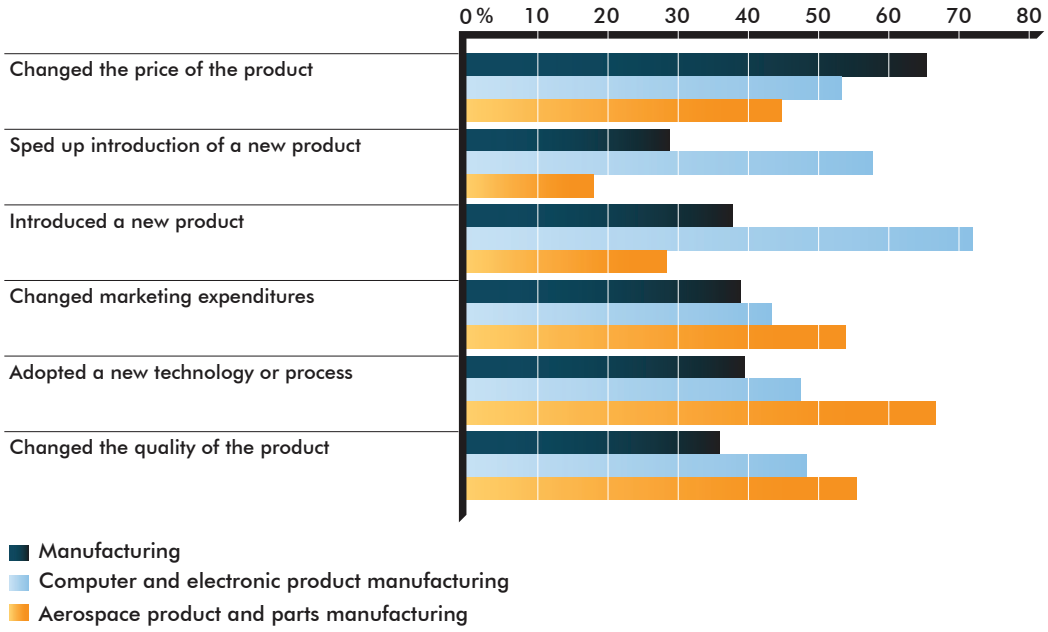
The main response of enterprises to the entry of new competitors in their principal market is to change the price of their products.

The way in which enterprises respond to new competition could be an important indicator of their innovativeness. An element of the Canadian "business complacency" argument is that enterprises in Canada do not adapt best practices under competitive pressure.

SIBS results show that, for the manufacturing sector as a whole, the majority of enterprises responded to new competitors by adjusting product prices (Figure 4.5 and Table A7 in Appendix 2). The figure also shows that the response of enterprises to new competition varied by industry. In industries where quality or perceived quality plays a role in gaining market share (e.g., aerospace, computer and electronic parts), enterprises responded in more innovative ways. For instance, nearly 70 percent of aerospace-related enterprises adopted a new technology or process in response to the entry of a new competitor, and over 70 percent of computer and electronic product manufacturing enterprises introduced a new good or service when facing a new entry.

Figure 4.5: Response of enterprises to the entry of new competitors in their principal market for their main product in 2009

– Percentage of manufacturing enterprises that faced entry



Source: *Survey of Innovation and Business Strategy*, 2009.

Section 5

How do enterprises in Canada innovate and adopt new technologies?

Key Findings of this Section

- Between 2007 and 2009, 67 percent of all enterprises in Canada introduced at least one innovation.
- Co-innovation (e.g., a product innovation that requires the introduction of a new process) is common in enterprises in Canada, illustrating the complex nature of the innovation process.
- The method most used by manufacturing enterprises to acquire advanced technologies is by purchasing them off-the-shelf, but customization and development are also important.
- Tax credits, grants and training programs were the government programs most used by enterprises to support innovation in 2007–09.
- The main obstacles to innovation faced by enterprises in Canada in 2009 were uncertainty and risk, lack of skills and internal financing.
- About 90 percent of manufacturing enterprises that faced obstacles to innovation took measures to mitigate them.
  - Between 35 percent and 60 percent of these manufacturing enterprises report that these measures were successful.
  - Between 10 percent and 30 percent of these manufacturing enterprises report that they used government programs to overcome these obstacles.

About two out of three enterprises in Canada introduced innovation between 2007 and 2009.

SIBS classifies innovation into four categories: process, organizational, product and marketing innovation.[8] These categories are based on the *Oslo Manual* to allow proper international comparison.[9] They have been designed to capture the contribution of intangible economic activities to innovation such as branding, marketing and organizational changes, in particular in the non-manufacturing sector.

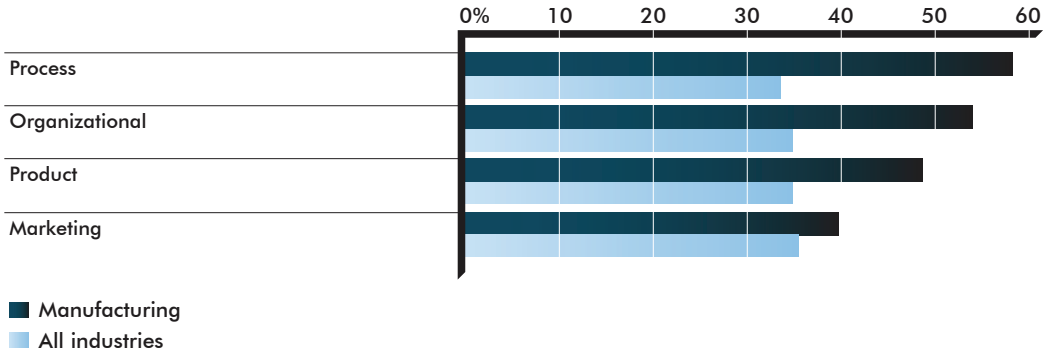
Using this broad concept of innovation, 67 percent of all enterprises in Canada introduced at least one innovation between 2007 and 2009. For the manufacturing sector, this proportion increases to 81 percent. Enterprises are as likely to introduce product or process innovations as they are to introduce marketing or organizational innovations (Figure 5.1). Manufacturing enterprises reported higher incidences of introducing any type of innovation than the other enterprises in Canada.[10]

8 See the innovation sections in the SIBS questionnaire (http://www.statcan.gc.ca/cgi-bin/imdb/p2SV.pl?Function=getInstrumentLink&SurvItem_Id=60669&Query_Id=60670&Query=instance&lang=en&db=imdb&adm=8&dis=2) for a more detailed definition of each category of innovation.

9 Organisation for Economic Co-operation and Development, Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data, 3rd Edition, 2005.

10 For more information on the different types and subtypes of innovation by industry and size, see Tables A8 and A9 in Appendix 2.

Figure 5.1: Type of innovation introduced by enterprises in 2007–09
– Percentage of enterprises



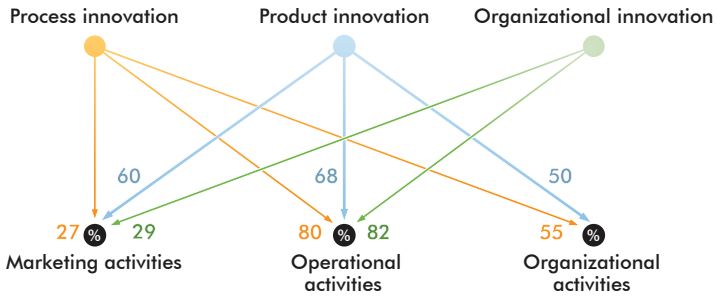
Source: *Survey of Innovation and Business Strategy*, 2009.

Further investigation suggests that innovation is a complex process and the types of innovations are interrelated. The introduction of a new production process might involve changes in the enterprise's support activities, such as organizational activities (complementarity). Moreover, the introduction of a given innovation might also require the introduction of another type of innovation (co-innovation). Using evidence from SIBS, the next subsections will illustrate these two concepts and assess their incidence within enterprises in Canada.

Evidence shows that complementarity is common in Canada.

Figure 5.2 illustrates complementarities between innovation types and required changes in other support activities between 2007 and 2009. For instance, 80 percent of all process innovators reported that introducing process innovations within their enterprises required changes to their operational activities; 27 percent reported changes in their marketing activities; and 55 percent needed to modify some organizational activities. In the same way, the figure also shows the presence of complementarities between product and marketing innovations and support activities.

Figure 5.2: Complementarity between innovation and business activities in 2007–09
– Percentage of process, product or organizational innovators



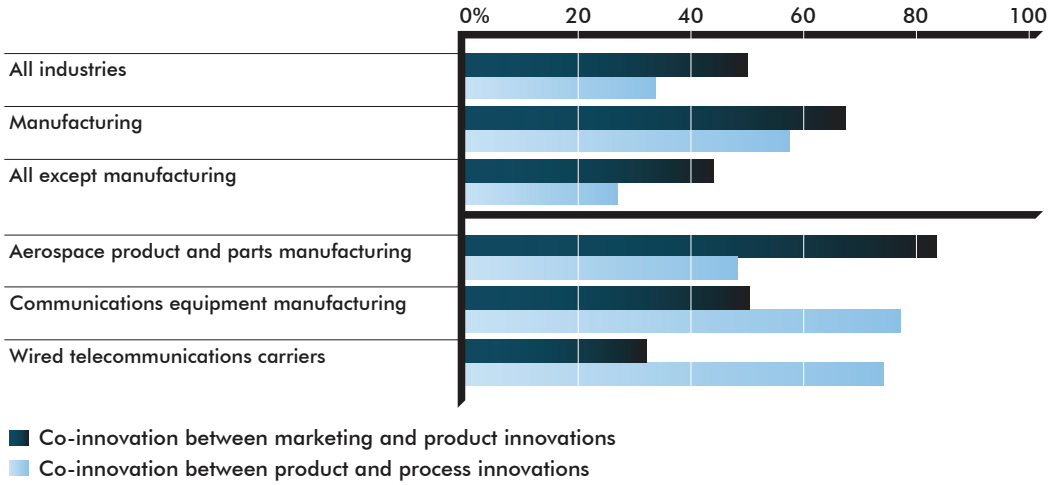
Source: *Survey of Innovation and Business Strategy*, 2009.

Although not shown, the complementarities in the manufacturing and non-manufacturing sector are similar to the ones presented for all enterprises in Figure 5.2.

Co-innovation is a more demanding condition than complementarity.

When the introduction of an innovation involves changes to other business activities that are significant enough, it can lead to another innovation. Figure 5.3 (and Table A10 in Appendix 2) shows that co-innovation regularly occurs in Canada. Overall, 34 percent of marketing innovators reported that their marketing innovations involved a new product. Likewise, 50 percent of product innovators indicated that their product innovations required the introduction of new processes. The product–process co-innovation is more prevalent than marketing–product in both manufacturing and non-manufacturing sectors, although co-innovation incidence is far from uniform across industries, as illustrated in Figure 5.3.

Figure 5.3: Co-innovation between types of innovation in 2007–09
– Percentage of marketing or product innovators*



*Dark Blue (Light Blue) bars represent the percentage of enterprises that introduced marketing (product) innovations and report that these innovations involved (required) a new product (the introduction of new production processes).

Source: *Survey of Innovation and Business Strategy*, 2009.

New products and services introduced in Canada have innovative features.

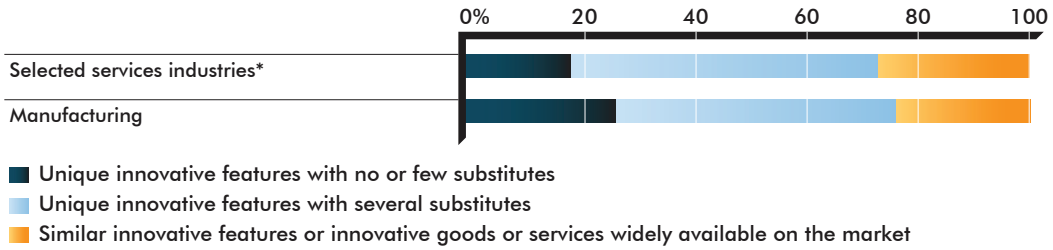
Different questions were posed in SIBS to better understand product innovation. One of those questions related to the "uniqueness" of an enterprise's most innovative product. The concept of "uniqueness" refers to the innovative features of the product and the presence, or not, of full or partial substitutes for this innovative feature.

Figure 5.4 shows that for product innovators in the manufacturing sector, 27 percent had at least one highly innovative product (unique innovative features with no or few substitutes), while the remaining 73 percent of product innovations had some unique features and substitutes (50 percent) or features that can be widely available in the market (23 percent).

Results from Figure 5.4 (and Table A11 in Appendix 2) also suggest that innovative enterprises in

the manufacturing industries were slightly more unique than the selected services industries for their most innovative product.[11]

Figure 5.4: Enterprise's most innovative product by degree of novelty in selected industries in 2007–09
– Percentage of enterprises



* Selected services industries include: wholesale trade; transportation and warehousing; information and cultural industries; finance and insurance; professional, scientific and technical services; management of companies and enterprises; and administrative and support, waste management and remediation services.

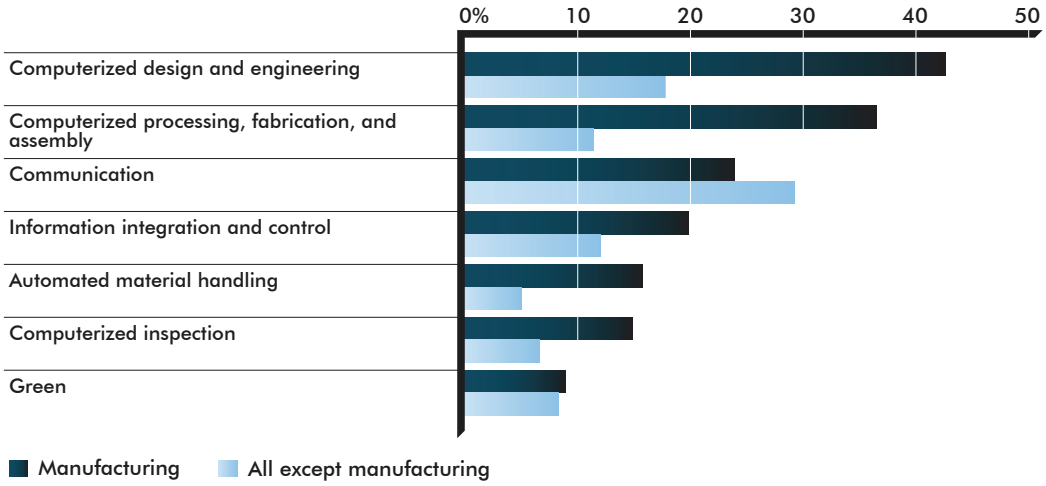
Source: *Survey of Innovation and Business Strategy*, 2009.

Although purchasing off-the-shelf technology is the most used mode of acquisition, customizing and developing advanced technologies are also important.

SIBS defined advanced technologies as new technologies (equipment or software) that perform a new function or improve some function significantly better than commonly used technologies in the industry or by competitors. This aspect of "above industry standards," combined with the information on types of advanced technologies used, allows better identification of an advanced technology because a new technology in one industry can be common practice in another one.

Figure 5.5 shows that manufacturing enterprises were more likely than non-manufacturing enterprises to adopt advanced technologies in 2009. One exception is advanced communication technologies where a higher percentage of non-manufacturing enterprises used these advanced technologies compared to manufacturing enterprises.

Figure 5.5: Use of selected advanced technologies in 2009
– Percentage of enterprises



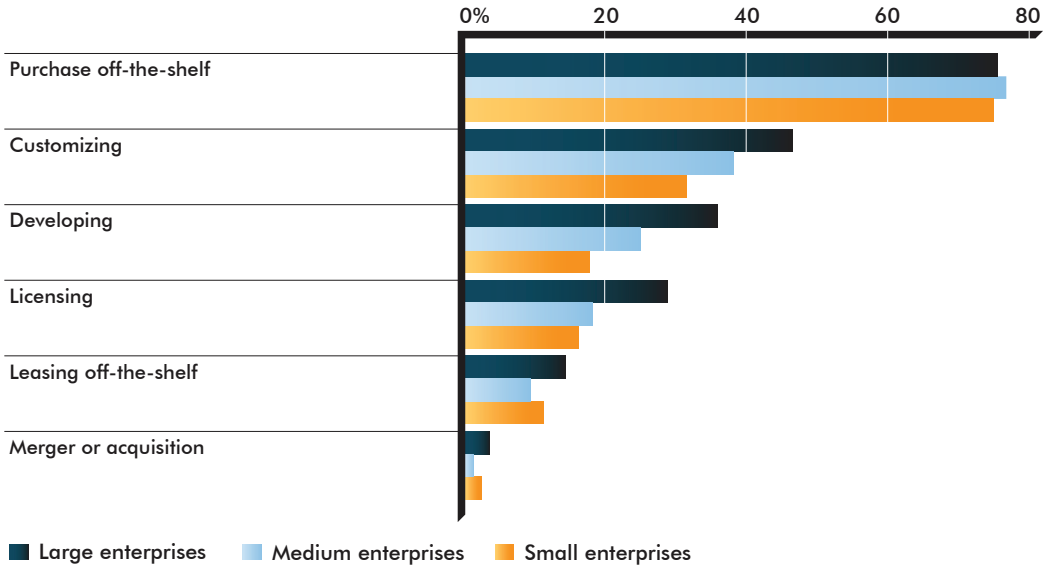
Source: *Survey of Innovation and Business Strategy*, 2009.

11 Note that the definition of product innovation includes new products that are new to the market or new to the enterprise. However, a product new to an enterprise is not necessarily a product new to the market, because another enterprise might have already introduced a similar product in the market.

Enterprises acquire new technologies by different means (e.g., purchasing them, leasing them or through licences). Those advanced technologies would then be integrated in the production of goods and services. Enterprises can go a step further and transform these new technologies by customizing them or developing new ones to better reflect their production needs.

About 75 percent of manufacturing enterprises using at least one advanced technology reported purchasing it off-the-shelf (Figure 5.6 and Table A12 in Appendix 2). Customizing and developing new technologies are also pervasive among manufacturing enterprises, more so for large ones compared to small and medium-sized enterprises.

Figure 5.6: Mode of acquisition of advanced technologies in 2009
– Percentage of manufacturing enterprises that used advanced technologies



Source: *Survey of Innovation and Business Strategy*, 2009.

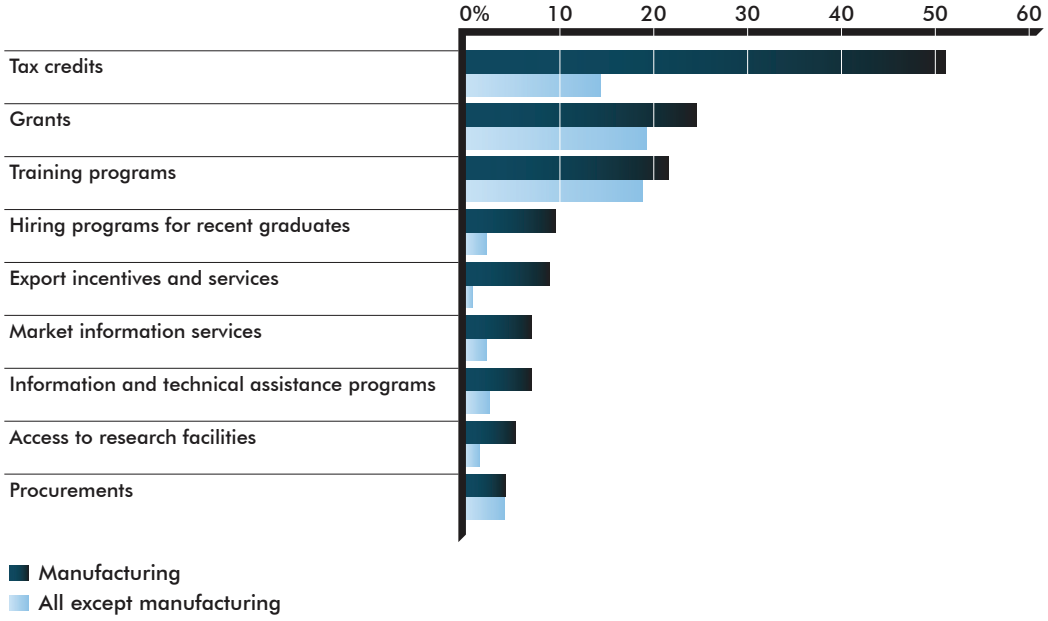
The main government programs used by enterprises in Canada to support their innovation-related activities are tax credits, grants and training programs.

Government programs support innovation activities in Canada both directly and indirectly in order to stimulate private investments in innovation.

Tax credits, grants and training programs were the most commonly used government support programs in 2009 (Figure 5.7).[12] When combining federal, provincial and municipal program supports, 51 percent of manufacturing enterprises reported using tax credits, 25 percent grants and 22 percent training programs. The use of the other government support programs for innovation-related activities was markedly smaller, especially in non-manufacturing industries.

12 A key example of federal support programs is the Scientific Research and Experimental Development tax incentive program.

Figure 5.7: Use of government support programs for innovation-related activities in 2007–09
– Percentage of enterprises

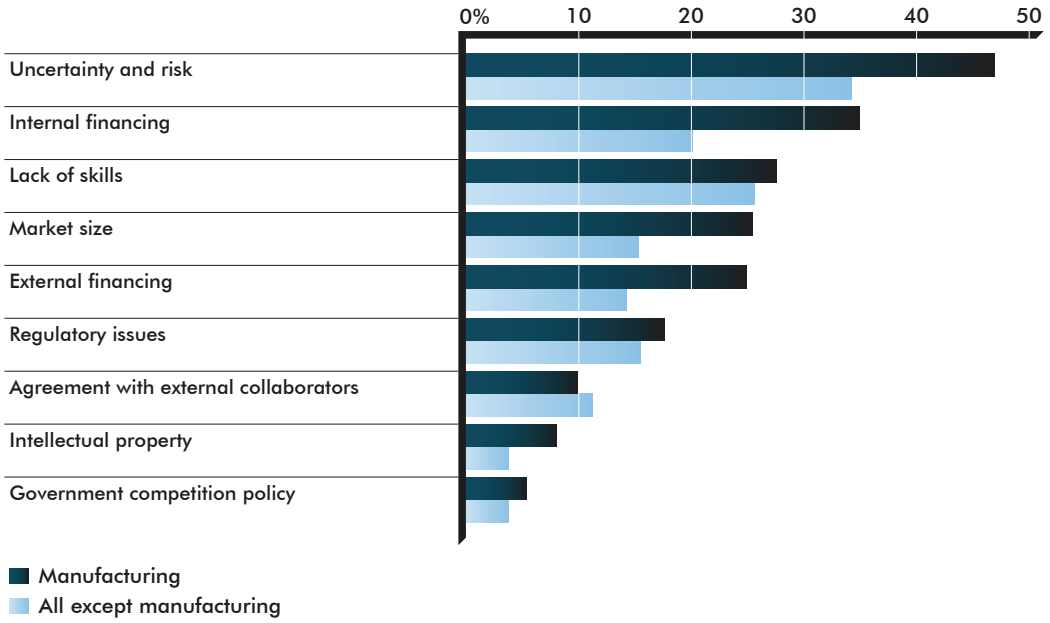


Source: *Survey of Innovation and Business Strategy*, 2009.

The main obstacles to innovation faced by enterprises in Canada are uncertainty and risk, lack of skills and internal financing. Only a few enterprises use government programs to mitigate obstacles to innovation.

In their effort to innovate, enterprises reported a range of obstacles. Some were financial; others were related to the structure of the market or to the enterprise's level of risk aversion. Overall, the three main obstacles to innovation were: risk and uncertainty (37 percent), lack of skills within the enterprise (26 percent) and internal financing (23 percent). In contrast, intellectual property protection (5 percent) and government competition policy (4 percent) were the two least reported obstacles to innovation as reported by all enterprises (Figure 5.8 and Table A13 in Appendix 2).

Figure 5.8: Obstacles to innovation faced by enterprises in 2009
– Percentage of enterprises



Source: *Survey of Innovation and Business Strategy*, 2009.

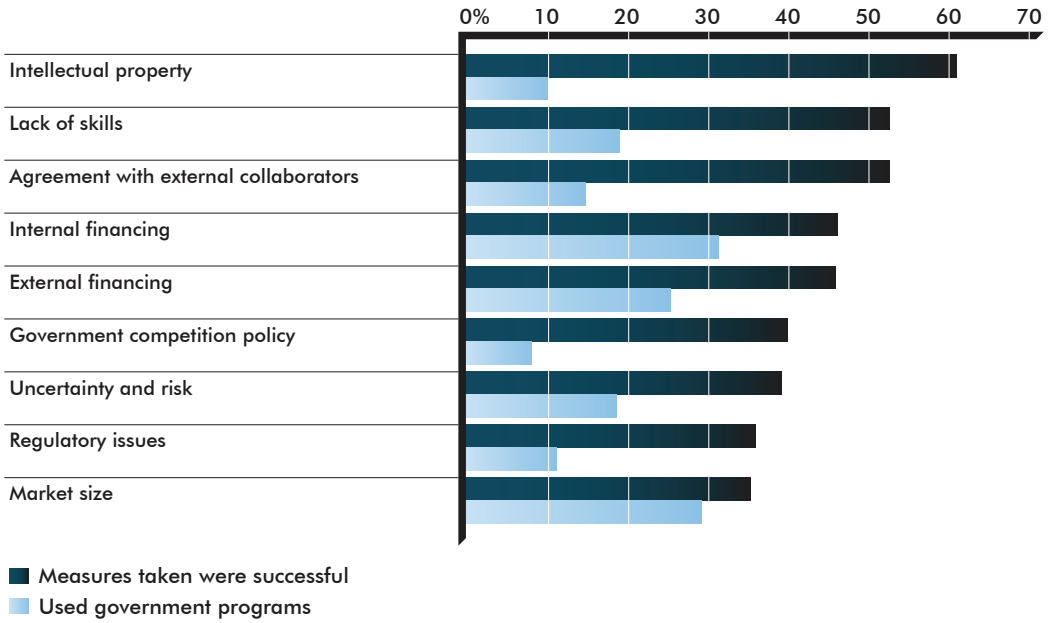
Once enterprises have recognized the obstacles to innovation, SIBS asked whether they try to overcome them by their own means or by taking advantage of government support programs. The percentage of enterprises taking measures to mitigate obstacles to innovation is high.

About 90 percent of manufacturing enterprises reported that they have taken measures to mitigate the effects of identified obstacles to innovation. Among these enterprises, the success rate of these measures ranges from 35 percent to 60 percent depending on the obstacle (Figure 5.9). While few enterprises identified intellectual property (IP) protection as an obstacle, more than 60 percent of enterprises facing IP-related obstacles reported being successful in mitigating this particular issue. In contrast, enterprises facing market size obstacles were less likely (35 percent) to report being successful in mitigating this obstacle. Figure 5.9 also shows that between 10 percent and 30 percent of manufacturing enterprises that took measures to mitigate obstacles to innovation used government programs.

It is noteworthy that the success rate of measures to mitigate uncertainty and risk, which is the most important obstacle to innovation, is among the lowest, but that the success rates for lack of skills and internal financial obstacles are among the highest.

Figure 5.9: Success rate of measures taken and use of government support programs to mitigate the obstacles to innovation in 2009

– Percentage of manufacturing enterprises that faced that type of obstacle and took measures to mitigate it



Source: *Survey of Innovation and Business Strategy*, 2009.

Section 6

Conclusion

SIBS provides a rich environment for the analysis of different factors that influence the innovative behaviour and performance of enterprises in Canada, including business strategies and activities, enterprise structure, and the competitiveness of the market environment. A better understanding of the drivers of business innovation and enterprise growth will inform policy design in Canada.

Enterprises report that they are more likely to focus on product positioning than cost leadership for their long-term business strategies. Many enterprises also report adjusting their strategic focus in the late 2000s, when external pressures on businesses included currency appreciation and increased pressure from globalization.

The report also shows that innovation is a complex process. Over 2007–09, many enterprises in Canada introduced different forms of innovation (product, process, marketing or organizational), which often required significant changes to other business and innovation-related activities within the enterprise. Moreover, enterprises – in particular, those in the high-tech sector – reported introducing a product innovation or adopting a new technology to face increased competition, suggesting that technology and innovation are important strategic assets that enterprises in Canada employ to remain competitive in the changing marketplace.

The production of the SIBS has established an extensive dataset that will allow researchers and academics to conduct relevant studies on the innovative activities and strategic decisions of enterprises in Canada. Further, it will assist the policy community in the development of evidence-based policy by addressing critical data gaps in our understanding of the drivers and barriers of business innovation in Canada.

Appendix 1

Survey description[13]

Target population

The target population was defined to ensure relevant coverage of business in Canada to meet informational needs on strategies and tactical decisions, innovation, and GVCs. To lower the response burden for small enterprises in Canada, the target population was limited to enterprises with 20 or more employees that collected revenues of at least $250,000 in 2009. In addition, several industries were not included due to either low levels of business R&D or a high presence of public sector activities.[14] The resulting target population consisted of 67,686 enterprises,[15] which represents approximately 10 percent of all enterprises in Canada with at least one employee within the in-scope sectors.

Although the size threshold limits the focus of the survey to a relatively small portion of the total number of enterprises in Canada, it comprises a substantial proportion of Canadian employment. As shown in Box A1, enterprises with 20 or more employees cover approximately 77 percent of employment in Canada and 87 percent of employment within the manufacturing sector.

Box A1: SIBS target population as a percentage of enterprises and employment within the in-scope sectors

	Percentage of enterprises*	Percentage of employees**
All industries	10%	77%
Manufacturing	25%	87%

* Among the SIBS in-scope population of enterprises with at least one employee.
** Data exclude self-employed workers who are not on a payroll and employees in agriculture, fishing and trapping, public utilities, postal services and public transportation.

Sources: Statistics Canada, Business Registry, December 2009.
Statistics Canada, Survey of Employment, Payrolls and Hours, April 2010.

Sample

From a population of 67,686 enterprises, 6,233 were sampled using a random sample methodology stratified by industry and enterprise size.

Enterprise size classes

The SIBS survey is stratified by three enterprise size classes, which are based on the number of employees. The enterprise size classes include small enterprises, which have 20–99 employees; medium enterprises, which have 100–249 employees; and large enterprises, which have at least 250 employees.

13 For more information on the survey, go to the Statistics Canada webpage (http://www.statcan.gc.ca/cgi- bin/imdb/p2SV.pl?Function=getSurvey&SDDS=5171&lang =en&db=imdb&adm=8&dis=2).

14 The following industries were omitted: educational services; health care and social assistance; arts, entertainment and recreation; accommodation and food services; other services (except public administration); public administration.

15 Drawn from Statistics Canada's Business Registry (October 2009 version).

The selected size classes are somewhat different from the small and medium-sized taxonomy traditionally used for enterprises in Canada.[16] This reflects, at least in part, a desire to be comparable to other national innovation surveys. However, two of the most relevant national innovation surveys, the European Community Innovation Survey (CIS) and the U.S. Business R&D and Innovation Survey (BRDIS), use different employee thresholds in their sample selection[17] (See Box A2). While direct comparison with these two surveys cannot be performed without some adjustments, international comparison of Canadian results with European or U.S. surveys is still possible.[18]

Box A2: Enterprise size classes by innovation survey, number of employees

SIBS	CIS	BRDIS
20–99	10–49	5–24
		25–49
100–249	50–249	50–99
		100–249
250+	250+	250–499
		500–999
		1,000–4,999
		5,000–24,999
		25,000+

Industry detail

Overall, the sample spans 133 industries and industry groupings from the two- to six-digit level of aggregation, according to the North American Industry Classification System (NAICS 2007). These industry categories were selected based on the level of industry R&D expenditure as identified in Statistics Canada's *Industrial Research and Development: Intentions 2008*, as well as consultations with Industry Canada and Foreign Affairs and International Trade Canada.

The sampling strategy was designed to achieve the greatest potential for empirical research at the enterprise level to support policy analysis. The resulting sample varies considerably across industries. For example, the sampling for the manufacturing sector (34 percent of the manufacturing enterprises' target population) was high relative to most sectors, and was necessary to achieve the desired industry detail given the number of R&D intensive industries within manufacturing, see Box A3.

16 Traditionally, small enterprises are defined as having 1–99 employees, while medium enterprises are defined as having 100–499 employees, and large enterprises as having 500 or more employees.

17 The CIS uses a threshold of 10 employees, while the BRDIS uses a threshold of 5 employees.

18 See Pierre Therrien and Pierre Mohnen, *How innovative are Canadian firms compared to some European firms? A comparative look at innovation surveys,* Technovation, 23(4), 2003, pp. 359–369.

Box A3: Sample size and target population by industry, NAICS (2007)

NAICS	Industry description	Total sample size after stratification	Target population
11	Agriculture, forestry, fishing and hunting	15	2,276
21	Mining, quarrying, and oil and gas extraction	142	988
22	Utilities	102	172
23	Construction	22	9,559
31–33	Manufacturing	4,394	12,846
41	Wholesale trade	54	7,219
44–45	Retail trade	26	13 280
48–49	Transportation and warehousing	426	3,664
51	Information and cultural industries	340	1,344
52	Finance and insurance	152	2,541
53	Real estate and rental and leasing	15	2,033
54	Professional, scientific and technical services	514	5,397
55	Management of companies and enterprises	15	1,019
56	Administrative and support, waste management and remediation services	16	5,348
All industries		**6,233**	**67,686**

Response rate and data quality

The survey was considered complete if six mandatory questions were answered. These six questions covered various issues such as: enterprise strategic decisions, whether the enterprise introduced a product or process innovation, and whether the enterprise had business activities outside of Canada. Of the 6,233 enterprises sampled, 4,249 returned completed questionnaires resulting in a 71 percent response rate.

Overall, the response rates by question among completed questionnaires vary between 68 percent and 100 percent and the response rates for the last questions are not systematically lower than for the first questions.

The estimates for a given industry aggregate are weighted by the appropriate enterprise population count, making the results representative of the target population.

Appendix 2

Selected SIBS tables

The full set of tables is available from Statistics Canada or Industry Canada.

To obtain statistical tables, for more information on statistical outputs of this survey, or to enquire about the concepts, methods or data quality of this release, contact Antoine Rose 613-951-5582; (**bsstsdinfo@statcan.gc.ca**), Business Special Surveys and Technology, Statistics Division.

For more information about policy analysis related to business strategies and innovation, contact Pierre Therrien 613-957-3404; (**Pierre.Therrien@ic.gc.ca**), Industry Canada.

Legend			
Symbol	Meaning	Coefficient of variation[1]	Standard error (SE)
A	Very reliable	<= 5 %	<= 2.5
B	Reliable	> 5 % and <= 15 %	> 2.5 and <=7.5
E	Use with caution	> 15 % and <= 30 %	> 7.5 and <=15
F	Too unreliable to be published	> 30 %	> 15
X	Suppressed to meet the confidentiality requirements of the Statistics Act		
...	Not applicable		

[1] The coefficient of variation is used as the quality indicator for questions requiring a value (number) response from the enterprise; all other questions use the standard error as the quality indicator.

Table A1: Percentage of enterprises indicating their most important long-term strategy in 2009

By industry	Product positioning		Cost leadership	
All surveyed industries	78.6	B	21.4	B
Agriculture, forestry, fishing and hunting		F		F
Mining, quarrying, and oil and gas extraction	80.8	B	19.2	B
Utilities	72.3	B	27.7	B
Construction	56.1	E	43.9	E
Manufacturing	86.1	A	13.9	A
Food	81.2	B	18.8	B
Beverage and tobacco product	88.2	B	11.8	B
Textile mills	91.4	A	8.6	A
Textile product mills	83.8	B	16.2	B
Clothing	79.5	B	20.5	B
Leather and allied product	85.9	A	14.1	A
Wood product	81.2	B	18.8	B
Paper	71.3	B	28.7	B
Printing and related support activities	78.7	B	21.3	B
Petroleum and coal product	73.1	B	26.9	B
Chemical manufacturing except pharmaceutical	90.2	A	9.8	A
Pharmaceutical	84.2	B	15.8	B
Plastics and rubber products	94.6	A	5.4	A
Motor vehicle plastic parts	90.9	B	9.1	B
Non-metallic mineral product	87.6	B	12.4	B
Primary metal	84.2	A	15.8	A
Fabricated metal product	84.6	B	15.4	B
Machinery	91.2	A	8.8	A
Computer and electronic product	89.9	A	10.1	A
Electrical equipment, appliance and component	91.3	A	8.7	A
Transportation equipment	88.0	A	12.0	A
Motor vehicle	94.4	B	5.6	B
Motor vehicle body and trailer	90.3	B	9.7	B
Motor vehicle parts	84.5	B	15.5	B
Aerospace product and parts	90.3	A	9.7	A
Furniture and related product	89.5	B	10.5	B
Miscellaneous	89.2	B	10.8	B
All surveyed industries except manufacturing	77.0	B	23.0	B
Wholesale Trade	90.3	B	9.7	B
Retail Trade		F		F
Transportation and warehousing	81.9	B	18.1	B
Information and cultural industries	87.7	B	12.3	B
Finance and insurance	93.0	A	7.0	A
Real estate and rental and leasing	46.1	E	53.9	E
Professional, scientific, and technical services except scientific research and development services	94.8	A	5.2	A
Scientific research and development services	96.9	B	3.1	B
Management of companies and enterprises		F		F
Administrative and support, waste management and remediation services	96.8	E	3.2	E

By firm size					
All industries	Large Enterprises	85.3	E	14.7	E
	Medium Enterprises	90.9	B	9.1	B
	Small Enterprises	76.3	B	23.7	B
Manufacturing	Large Enterprises	86.1	A	13.9	A
	Medium Enterprises	87.6	A	12.4	A
	Small Enterprises	85.8	A	14.2	A
All Except Manufacuring	Large Enterprises		F		F
	Medium Enterprises	91.8	B	8.2	B
	Small Enterprises	74.3	B	25.7	B

Table A2: Percentage of enterprises indicating their main strategic focus by type of activity in 2009

By industry

	Goods or services*		Marketing practices or methods*		Operations and business activities*		Organizational and management practices*	
	Existing	New or improved	Existing	New or improved	Existing	New or improved	Existing	New or improved
All surveyed industries	77.1 B	18.8 B	54.6 B	30.5 B	58.5 B	33.7 B	59.9 B	33.2 B
Agriculture, forestry, fishing and hunting	F	F	F	F	F	F	F	F
Mining, quarrying, and oil and gas extraction	78.4 B	12.7 B	55.6 B	26.9 B	58.3 B	37.2 B	53.1 B	40.8 B
Utilities	66.0 B	26.2 B	43.2 B	35.3 B	55.1 B	41.9 B	67.4 B	28.8 B
Construction	89.4 E	8.1 E	40.5 E	16.3 E	56.1 E	25.2 E	54.4 E	37.5 E
Manufacturing	60.2 A	35.8 A	54.3 A	35.9 A	51.7 A	44.0 A	56.2 A	39.2 A
Food	67.1 B	28.0 B	56.0 B	32.6 B	53.6 B	42.9 B	58.8 B	36.8 B
Beverage and tobacco product	80.1 B	10.8 B	44.9 E	36.1 B	61.4 B	34.7 B	58.0 B	32.9 B
Textile mills	46.6 B	48.3 B	57.0 B	37.9 B	51.8 B	39.6 B	55.0 B	38.2 B
Textile product mills	61.7 B	34.3 B	58.8 B	35.1 B	58.7 B	33.2 B	59.6 B	36.3 B
Clothing	71.4 B	23.9 B	64.2 B	21.6 B	66.3 B	22.1 B	65.6 B	24.2 B
Leather and allied product	52.5 B	44.7 B	50.3 B	44.1 B	60.9 B	33.9 B	55.4 B	39.4 B
Wood product	70.7 B	24.7 B	52.7 B	35.9 B	58.4 B	34.7 B	67.4 B	28.2 B
Paper	66.3 B	31.9 B	53.9 B	34.1 B	55.7 B	41.3 B	61.8 B	34.4 B
Printing and related support activities	62.3 B	34.0 B	51.1 B	39.1 B	50.3 B	46.2 B	55.3 B	39.2 B
Petroleum and coal product	69.2 B	27.0 B	57.5 B	30.9 B	53.8 B	46.2 B	61.4 B	38.6 B
Chemical manufacturing except pharmaceutical	53.8 B	43.2 B	55.3 B	35.5 B	51.1 B	46.1 B	60.3 B	35.3 B
Pharmaceutical	45.9 B	52.1 B	45.7 B	41.7 B	47.7 B	50.3 B	41.6 B	56.5 B
Plastics and rubber products	50.9 B	46.3 B	51.4 B	41.5 B	49.7 B	47.5 B	60.3 B	37.1 B
Motor vehicle plastic parts	53.4 B	40.2 B	55.7 B	32.4 B	38.7 B	55.0 B	51.4 B	42.3 B
Non-metallic mineral product	71.3 B	26.0 B	59.6 B	35.9 B	55.8 B	41.9 B	52.4 B	42.6 B
Primary metal	70.1 B	25.0 B	55.0 B	33.8 B	61.6 B	36.5 B	57.2 B	38.5 B
Fabricated metal product	70.6 B	25.0 B	60.5 B	29.7 B	49.6 B	44.8 B	54.3 B	40.2 B
Machinery	46.2 B	50.4 B	51.0 B	38.9 B	48.5 B	48.6 B	54.2 B	42.6 B
Computer and electronic product	41.2 B	55.4 B	49.5 B	42.1 B	43.0 B	55.0 B	49.0 B	48.5 B
Electrical equipment, appliance and component	42.6 B	51.3 B	49.5 B	42.1 B	45.6 B	48.9 B	43.7 B	49.0 B
Transportation equipment	60.7 A	36.3 A	53.5 A	35.2 A	50.1 A	46.7 A	53.9 A	41.2 A
Motor vehicle	66.7 B	33.3 B	38.9 B	50.0 B	38.9 B	61.1 B	22.2 B	77.8 B
Motor vehicle body and trailer	62.1 B	34.4 B	52.1 B	38.6 B	60.1 B	36.4 B	58.6 B	36.2 B
Motor vehicle parts	59.1 B	39.7 B	58.1 B	31.8 B	49.6 B	49.1 B	54.8 B	40.9 B
Aerospace product and parts	52.5 B	41.3 B	52.0 B	32.5 B	34.5 B	60.8 B	48.9 B	46.4 B
Furniture and related product	51.4 B	42.9 B	51.4 B	37.8 B	50.1 B	40.7 B	52.4 B	40.9 B
Miscellaneous	57.0 B	41.0 B	50.1 B	44.8 B	47.9 B	51.6 B	51.4 B	46.5 B

Table A2: Percentage of enterprises indicating their main strategic focus by type of activity in 2009 (continued)

		Goods or services*		Marketing practices or methods*		Operations and business activities*		Organizational and management practices*	
		Existing	New or improved	Existing	New or improved	Existing	New or improved	Existing	New or improved
By industry									
All surveyed industries except manufacturing		80.9 B	14.9 B	54.6 B	29.2 B	60.0 B	31.4 B	60.7 B	31.8 B
Wholesale Trade		66.8 E	29.9 E	60.3 E	34.0 E	57.1 E	42.9 E	68.5 E	31.5 E
Retail Trade		83.6 E	13.2 E	F	F	F	18.8 E	F	19.6 E
Transportation and warehousing		78.5 B	13.3 A	55.9 B	21.9 B	62.3 B	31.9 B	59.3 B	33.3 B
Information and cultural industries		49.6 B	45.4 B	41.3 B	45.9 B	53.5 B	43.1 B	64.9 B	29.9 B
Finance and insurance		73.1 B	18.9 B	52.2 B	39.9 B	63.2 B	29.7 B	63.1 B	31.6 B
Real estate and rental and leasing		93.7 E	3.1 E	92.0 E	0.0 A	34.9 E	F	F	4.8 E
Professional, scientific, and technical services except scientific research and development services		68.5 B	30.8 B	49.7 B	47.5 B	59.0 B	39.4 B	58.4 B	40.7 B
Scientific research and development services		51.2 B	37.8 B	39.0 B	49.5 B	46.6 B	47.2 B	52.3 B	44.6 B
Management of companies and enterprises		F	0.0 A	F	F	F	F	F	F
Administrative and support, waste management and remediation services		100.0 A	0.0 A	F	F	F	F	32.7 E	61.7 E
By firm size									
All industries	Large Enterprises	74.5 E	20.9 E	F	F	F	F	F	F
	Medium Enterprises	70.7 B	19.0 B	49.8 E	36.0 E	48.5 E	42.6 E	39.7 B	49.7 E
	Small Enterprises	78.2 B	18.6 B	54.9 B	29.3 B	60.1 B	31.8 B	63.6 B	29.6 B
Manufacturing	Large Enterprises	58.2 A	39.7 A	55.3 A	36.0 A	47.3 A	50.3 A	50.8 A	46.2 A
	Medium Enterprises	58.7 A	38.6 A	49.7 A	41.6 A	51.5 A	45.8 A	55.8 A	41.2 A
	Small Enterprises	60.7 A	34.9 A	55.1 A	34.9 A	52.1 A	43.0 A	56.8 A	38.1 A
All Except Manufacuring	Large Enterprises	F	F	F	F	F	F	F	F
	Medium Enterprises	74.0 E	13.7 B	49.9 E	34.4 E	47.7 E	41.7 E	35.2 E	52.0 E
	Small Enterprises	82.0 B	15.1 B	54.9 B	28.2 B	61.8 B	29.4 B	65.1 B	27.8 B

* The percentages of "existing" and "new or improved" do not sum to 100% because the "do not know" category is not reported.

Table A3: Percentage of revenues from enterprise's main product by region in 2009

By industry

	Local	Rest of the province	Rest of Canada	United States	Europe	Asia Pacific	Rest of the world
All surveyed industries	63.4 A	17.9 B	9.5 B	6.6 B	1.1 E	0.7 B	0.8 B
Agriculture, forestry, fishing and hunting	75.4 E	F	F	F	F	0.0 A	0.0 A
Mining, quarrying, and oil and gas extraction	36.3 B	30.2 B	12.6 E	8.4 E	F	F	F
Utilities	64.5 B	22.5 B	9.2 E	3.2 E	F	F	F
Construction	77.8 B	F	F	0.0 A	0.0 A	0.0 A	0.0 A
Manufacturing	33.1 A	21.6 A	17.5 A	21.2 A	2.3 B	2.1 B	2.1 B
Food	44.8 B	20.2 B	15.9 B	13.1 B	1.8 E	2.9 E	F
Beverage and tobacco product	40.3 B	29.6 B	18.0 E	4.6 E	0.2 E	F	F
Textile mills	16.4 B	13.7 B	24.5 B	32.8 B	5.1 E	F	4.7 E
Textile product mills	36.1 B	20.9 B	22.5 B	16.8 E	F	F	2.8 E
Clothing	34.0 B	17.6 E	29.7 B	15.3 E	F	F	F
Leather and allied product	18.8 B	27.5 B	28.5 B	18.7 B	3.9 E	F	F
Wood product	36.1 B	28.5 B	13.0 B	18.2 E	F	1.6 E	F
Paper	34.1 B	18.9 B	17.1 B	24.8 B	F	3.4 E	0.6 E
Printing and related support activities	58.5 B	22.2 B	11.2 E	7.7 E	F	0.0 A	F
Petroleum and coal product	36.6 B	28.5 B	19.8 B	10.6 E	F	F	F
Chemical manufacturing except pharmaceutical	21.8 B	22.3 B	24.8 B	22.0 B	2.9 E	F	1.9 E
Pharmaceutical	12.5 E	10.7 E	38.1 B	24.1 B	6.7 E	3.2 E	F
Plastics and rubber products	24.0 B	19.7 B	23.9 B	26.2 B	F	F	2.7 E
Motor vehicle plastic parts	31.0 E	15.8 E	22.6 E	28.6 B	F	F	F
Non-metallic mineral product	60.8 B	17.4 B	9.2 E	11.6 E	F	0.3 E	0.4 E
Primary metal	23.9 B	21.3 B	16.7 B	29.8 B	2.7 B	2.0 E	3.7 E
Fabricated metal product	37.8 B	23.4 B	15.7 B	18.9 B	F	F	1.8 E
Machinery	21.5 B	23.0 B	13.9 B	31.5 B	2.6 E	3.2 E	4.3 E
Computer and electronic product	17.2 B	17.1 B	12.4 B	32.8 B	8.7 B	6.7 E	5.1 E
Electrical equipment, appliance and component	14.3 B	19.7 B	27.1 B	30.2 B	2.5 E	3.2 E	2.9 E
Transportation equipment	20.6 B	17.0 B	20.1 B	33.3 A	3.5 B	2.4 B	3.0 E
Motor vehicle	32.2 B	24.1 B	26.0 E	17.0 E	F	F	0.0 A
Motor vehicle body and trailer	24.3 B	26.9 B	30.5 B	15.5 E	0.1 A	0.2 E	F
Motor vehicle parts	15.6 B	14.3 B	13.1 B	49.6 B	2.5 E	F	3.3 E
Aerospace product and parts	22.0 B	5.8 E	19.4 B	30.9 B	9.8 B	9.6 E	2.6 E
Furniture and related product	36.4 B	27.1 B	18.6 B	15.8 B	F	F	F
Miscellaneous	25.0 E	17.2 E	24.4 B	23.8 B	5.0 E	F	2.1 E

Table A3: Percentage of revenues from enterprise's main product by region in 2009 (continued)

By industry	Local	Rest of the province	Rest of Canada	United States	Europe	Asia Pacific	Rest of the world
All surveyed industries except manufacturing	70.2 A	17.0 B	7.7 E	3.3 B	F	0.4 E	0.5 E
Wholesale Trade	48.2 E	29.9 E	14.6 E	F	F	F	F
Retail Trade	94.8 A	F	0.0 A	0.0 A	0.0 A	0.0 A	0.0 A
Transportation and warehousing	46.0 B	23.6 B	17.7 B	10.9 E	F	F	0.8 E
Information and cultural industries	49.7 B	10.5 E	15.7 B	16.6 B	4.2 E	1.0 E	2.3 E
Finance and insurance	68.5 A	16.2 B	11.4 E	F	F	F	F
Real estate and rental and leasing	53.2 E	37.3 E	F	0.0 A	0.0 A	0.0 A	0.0 A
Professional, scientific, and technical services except scientific research and development services	54.4 A	16.4 B	12.7 B	9.9 B	F	1.1 E	F
Scientific research and development services	25.2 E	29.4 E	F	20.3 E	F	2.2 E	F
Management of companies and enterprises	83.1 E	F	F	F	F	0.0 A	0.0 A
Administrative and support, waste management and remediation services	72.4 E	F	F	F	F	F	F

By firm size		Local	Rest of the province	Rest of Canada	United States	Europe	Asia Pacific	Rest of the world
All industries	Large Enterprises	F	F	F	11.7 E	1.5 E	1.3 E	1.0 E
	Medium Enterprises	43.4 E	24.1 E	F	10.1 E	F	1.5 E	1.4 E
	Small Enterprises	68.2 A	17.1 B	6.8 B	5.7 B	0.9 E	0.5 E	0.7 E
Manufacturing	Large Enterprises	15.2 A	15.1 A	24.3 A	34.2 A	4.3 B	4.2 B	2.7 B
	Medium Enterprises	20.1 A	18.1 A	22.4 A	27.6 A	4.1 B	4.2 E	3.5 B
	Small Enterprises	37.4 A	23.0 A	15.9 A	18.6 A	1.7 B	1.5 B	1.8 B
All Except Manufacuring	Large Enterprises	F	F	F	F	F	F	F
	Medium Enterprises	49.8 E	25.8 E	F	F	F	F	F
	Small Enterprises	74.7 A	15.9 B	4.9 B	3.0 B	0.7 E	0.3 E	0.5 E

Table A4: Percentage of enterprises indicating their involvement in international markets in 2007–09

By industry

	Had business activities outside of Canada	Relocated business activities outside of Canada*	Outsourced business activities outside of Canada*	Relocated business activities from another country into Canada	Exported or attemped to export
All surveyed industries	24.7 A	7.8 B	16.8 B	1.8 A	21.8 A
Agriculture, forestry, fishing and hunting	F	X	X	0.0 A	F
Mining, quarrying, and oil and gas extraction	34.3 B	8.5 B	18.1 E	2.1 A	21.5 B
Utilities	21.1 B	14.1 B	21.8 B	1.8 A	18.1 B
Construction	8.1 E	X	X	0.0 A	0.0 A
Manufacturing	47.5 A	11.0 A	21.2 A	5.0 A	53.7 A
Food	34.3 B	6.3 A	7.8 A	1.7 A	40.7 B
Beverage and tobacco product	29.1 B	26.6 E	4.4 A	5.6 A	36.8 B
Textile mills	69.1 B	12.5 B	25.3 B	10.5 A	75.7 B
Textile product mills	46.2 B	23.8 B	23.8 B	8.0 B	49.4 B
Clothing	48.1 B	13.1 B	29.5 B	0.9 A	42.6 B
Leather and allied product	40.6 B	19.7 B	32.2 B	2.3 A	68.9 B
Wood product	28.0 B	1.1 A	13.3 B	0.5 A	44.8 B
Paper	56.9 B	9.4 A	16.3 B	6.4 A	64.6 B
Printing and related support activities	31.5 B	1.7 A	11.8 B	2.8 A	40.1 B
Petroleum and coal product	53.7 B	7.1 B	21.4 B	11.5 B	61.6 B
Chemical manufacturing except pharmaceutical	58.6 B	12.8 B	18.2 B	7.0 A	60.3 B
Pharmaceutical	59.6 B	13.4 B	37.0 B	12.7 B	70.9 B
Plastics and rubber products	53.4 B	13.4 B	17.2 B	7.7 A	71.0 B
Motor vehicle plastic parts	62.6 B	30.3 B	47.2 E	7.1 B	69.0 B
Non-metallic mineral product	32.9 B	20.5 B	20.9 B	0.5 A	34.8 B
Primary metal	52.4 B	17.2 B	23.4 B	5.0 A	64.8 B
Fabricated metal product	45.4 B	5.7 A	18.4 B	3.5 A	44.2 B
Machinery	65.2 B	15.1 B	28.3 B	7.9 A	69.3 B
Computer and electronic product	64.5 B	9.8 A	22.0 B	10.7 A	76.3 B
Electrical equipment, appliance and component	62.6 B	21.1 B	24.9 B	6.5 A	74.2 B
Transportation equipment	54.8 A	14.7 A	29.1 A	8.2 A	63.9 A
Motor vehicle	66.7 B	0.0 A	41.7 E	11.1 B	44.4 B
Motor vehicle body and trailer	49.2 B	6.9 B	21.1 B	2.4 A	55.5 B
Motor vehicle parts	53.5 B	19.1 B	28.7 B	10.2 A	72.7 B
Aerospace product and parts	63.5 B	18.3 B	45.2 B	13.8 B	75.0 B
Furniture and related product	43.0 B	7.6 B	24.8 B	1.7 A	51.4 B
Miscellaneous	55.2 B	11.8 B	28.2 B	13.0 B	50.6 B

Table A4: Percentage of enterprises indicating their involvement in international markets in 2007–09 (continued)

		Had business activities outside of Canada	Relocated business activities outside of Canada*	Outsourced business activities outside of Canada*	Relocated business activities from another country into Canada	Exported or attemped to export
By industry						
All surveyed industries except manufacturing		19.5 B	6.1 B	14.3 B	1.0 A	14.5 A
Wholesale Trade		32.8 E	9.9 E	19.8 E	0.0 A	28.0 E
Retail Trade		0.7 A	X	X	0.0 A	0.0 A
Transportation and warehousing		31.7 B	1.1 A	14.4 B	1.0 A	11.8 B
Information and cultural industries		37.4 B	7.7 B	22.9 B	2.6 A	24.5 B
Finance and insurance		12.9 B	14.3 E	32.5 E	0.0 A	6.8 A
Real estate and rental and leasing		30.1 E	X	X	0.0 A	0.0 A
Professional, scientific, and technical services except scientific research and development services		34.2 B	6.0 A	22.6 B	2.8 A	31.2 B
Scientific research and development services		53.0 B	6.8 B	27.3 B	5.1 A	43.8 B
Management of companies and enterprises		0.0 A	...	...	0.0 A	F
Administrative and support, waste management and remediation services		F	F	F	5.6 E	35.1 E
By firm size						
All industries	Large Enterprises	F	F	F	4.3 A	27.0 E
	Medium Enterprises	35.5 E	6.8 A	14.4 B	7.2 B	31.5 B
	Small Enterprises	21.4 A	5.7 A	15.7 B	0.8 A	19.9 A
Manufacturing	Large Enterprises	69.7 A	25.2 A	27.4 A	12.1 A	69.8 A
	Medium Enterprises	60.0 A	15.7 A	25.8 A	9.1 A	71.3 A
	Small Enterprises	42.9 A	7.3 A	19.0 A	3.5 A	48.8 A
All Except Manufacuring	Large Enterprises	F	F	F	1.6 A	12.3 B
	Medium Enterprises	28.8 E	1.6 A	8.0 B	6.6 B	20.6 E
	Small Enterprises	16.8 A	4.8 B	13.9 B	0.2 A	13.8 A

* Percentage of enterprises with business activities outside of Canada in 2007-09.

Table A5: Percentage of enterprises indicating the number of competitors for their main product in their principal market in 2009

By industry

	1	2	3	4-5	6-10	11-20	+20
All surveyed industries	3.1 A	5.8 B	13.0 A	12.5 A	27.9 B	16.0 B	21.8 B
Agriculture, forestry, fishing and hunting	0.0 A	0.0 A	F	0.0 A	0.0 A	F	F
Mining, quarrying, and oil and gas extraction	2.0 A	3.6 A	3.2 A	13.2 B	23.4 B	11.5 B	43.1 B
Utilities	14.8 B	16.9 B	7.6 B	17.5 B	9.2 A	11.7 B	22.3 B
Construction	8.1 E	8.1 E	10.6 E	3.2 A	4.8 A	40.7 E	24.4 E
Manufacturing	3.9 A	4.9 A	9.0 A	24.4 A	23.2 A	9.8 A	24.8 A
Food	2.6 A	6.0 A	10.6 A	22.5 B	23.7 B	13.4 A	21.3 B
Beverage and tobacco product	7.8 B	3.1 A	19.6 B	15.6 B	13.1 B	1.3 A	39.5 E
Textile mills	6.7 A	5.2 A	15.7 B	22.6 B	32.5 B	8.6 A	8.6 A
Textile product mills	5.0 A	17.2 B	13.2 B	25.2 B	24.2 B	8.1 B	7.1 B
Clothing	5.2 B	5.0 B	5.2 A	14.5 B	25.1 B	6.3 B	38.7 B
Leather and allied product	0.0 A	5.7 A	14.2 A	27.7 B	16.7 A	2.8 A	32.9 B
Wood product	3.3 A	1.4 A	8.7 B	17.5 B	23.4 B	13.9 B	31.7 B
Paper	1.3 A	7.1 A	9.4 A	24.3 B	27.9 B	13.0 B	17.1 B
Printing and related support activities	2.5 A	0.3 A	7.7 B	12.8 B	23.1 B	10.3 B	43.2 B
Petroleum and coal product	0.0 A	3.8 A	15.5 B	30.8 B	19.2 B	3.8 A	26.9 B
Chemical manufacturing except pharmaceutical	4.8 A	6.9 A	12.3 A	34.4 B	20.5 B	5.9 A	15.2 B
Pharmaceutical	10.5 B	6.6 B	8.0 B	13.9 B	33.9 B	6.1 A	21.1 B
Plastics and rubber products	5.4 A	7.0 A	5.9 A	32.4 B	16.6 B	16.8 B	16.0 B
Motor vehicle plastic parts	9.1 B	0.0 A	12.0 B	27.4 B	13.4 B	9.1 B	28.9 B
Non-metallic mineral product	4.6 A	12.2 B	12.0 B	16.1 B	33.0 B	6.7 A	15.3 B
Primary metal	5.2 A	6.1 A	10.3 A	26.7 B	31.3 B	4.8 A	15.6 A
Fabricated metal product	5.0 A	3.7 A	7.6 A	27.1 B	20.1 B	10.8 A	25.6 B
Machinery	0.6 A	4.1 A	7.4 A	30.5 B	23.3 B	5.0 A	29.2 B
Computer and electronic product	6.2 A	5.1 A	12.6 B	27.4 B	20.9 B	4.6 A	23.1 B
Electrical equipment, appliance and component	4.6 A	7.2 A	14.9 A	27.7 B	24.0 B	7.5 A	14.1 A
Transportation equipment	11.5 A	5.8 A	10.2 A	25.8 A	25.3 A	8.4 A	13.1 A
Motor vehicle	0.0 A	5.6 B	11.1 B	16.7 B	44.4 B	22.2 B	0.0 A
Motor vehicle body and trailer	8.0 B	6.2 A	1.7 A	26.1 B	38.0 B	13.2 B	6.8 A
Motor vehicle parts	12.6 B	7.6 A	13.3 A	26.8 B	19.1 B	2.7 A	18.0 B
Aerospace product and parts	16.0 B	4.7 A	9.7 A	20.4 B	16.7 B	14.2 A	18.3 B
Furniture and related product	0.3 A	1.9 A	4.0 A	20.4 B	23.4 B	10.8 B	39.3 B
Miscellaneous	2.9 A	5.4 B	10.9 B	23.6 B	27.3 B	8.7 A	21.2 B

Table A5: Percentage of enterprises indicating the number of competitors for their main product in their principal market in 2009 (continued)

By industry

	1	2	3	4-5	6-10	11-20	+20
All surveyed industries except manufacturing	2.9 A	6.1 B	13.9 A	9.8 A	28.9 B	17.4 B	21.1 B
Wholesale Trade	1.1 A	0.0 A	1.1 A	20.6 B	42.2 E	13.0 B	22.0 B
Retail Trade	0.0 A	12.5 E	0.0 A	0.0 A	F	12.5 E	6.4 A
Transportation and warehousing	8.2 A	10.3 A	3.4 A	12.6 B	18.3 B	6.5 A	40.8 B
Information and cultural industries	7.7 B	4.5 B	5.5 A	23.7 B	20.8 B	4.8 A	33.0 B
Finance and insurance	4.5 A	0.0 A	8.6 A	8.8 B	16.8 B	17.1 B	44.1 B
Real estate and rental and leasing	0.0 A	1.7 E	0.0 A	57.1 E	6.3 E	27.0 E	8.0 E
Professional, scientific, and technical services except scientific research and development services	1.9 A	5.2 B	4.5 A	19.9 B	19.4 B	14.9 B	34.1 B
Scientific research and development services	23.0 B	10.5 B	11.5 B	25.6 B	12.9 B	5.7 B	10.8 B
Management of companies and enterprises	0.0 A	0.0 A	F	0.0 A	0.0 A	F	F
Administrative and support, waste management and remediation services	0.0 A	0.0 A	62.1 E	3.2 E	5.6 E	8.9 E	F

By firm size

All industries	Large Enterprises	4.4 B	2.8 B	11.4 E	19.1 E	26.9 E	F	24.0 E
	Medium Enterprises	1.7 A	1.9 A	6.6 A	13.1 B	32.2 E	8.2 B	36.3 E
	Small Enterprises	3.2 A	6.7 B	14.0 A	11.9 A	27.3 B	17.4 B	19.5 A
Manufacturing	Large Enterprises	4.7 A	3.6 A	8.2 A	26.0 A	28.9 A	10.4 A	18.1 A
	Medium Enterprises	2.4 A	4.3 A	10.9 A	30.1 A	22.2 A	9.4 A	20.7 A
	Small Enterprises	4.1 A	5.2 A	8.7 A	23.2 A	22.8 A	9.8 A	26.3 A
All Except Manufacuring	Large Enterprises	4.3 B	2.5 B	F	F	26.2 E	F	F
	Medium Enterprises	1.5 A	1.2 A	5.4 A	8.4 B	35.0 E	7.9 B	40.6 E
	Small Enterprises	3.0 A	7.0 B	15.2 A	9.5 A	28.2 B	19.1 B	18.0 B

Table A6: Percentage of enterprises that competed against multinational enterprises in their principal market for their main product in 2009

By industry		
All surveyed industries	50.2	B
Agriculture, forestry, fishing and hunting		F
Mining, quarrying, and oil and gas extraction	80.1	B
Utilities	41.7	B
Construction	33.3	E
Manufacturing	66.9	A
Food	66.5	B
Beverage and tobacco product	81.8	B
Textile mills	74.6	B
Textile product mills	61.4	B
Clothing	63.3	B
Leather and allied product	66.1	B
Wood product	48.2	B
Paper	80.8	B
Printing and related support activities	62.0	B
Petroleum and coal product	69.2	B
Chemical manufacturing except pharmaceutical	81.4	B
Pharmaceutical	82.3	B
Plastics and rubber products	69.2	B
Motor vehicle plastic parts	81.8	B
Non-metallic mineral product	66.1	B
Primary metal	65.0	B
Fabricated metal product	63.4	B
Machinery	75.5	B
Computer and electronic product	78.4	B
Electrical equipment, appliance and component	82.0	B
Transportation equipment	67.7	A
Motor vehicle	88.9	B
Motor vehicle body and trailer	53.4	B
Motor vehicle parts	79.2	B
Aerospace product and parts	65.9	B
Furniture and related product	63.1	B
Miscellaneous	60.0	B

Table A6: Percentage of enterprises that competed against multinational enterprises in their principal market for their main product in 2009 (continued)

By industry			
All surveyed industries except manufacturing		46.4	B
Wholesale Trade		63.1	E
Retail Trade			F
Transportation and warehousing		48.9	B
Information and cultural industries		63.6	B
Finance and insurance		61.7	B
Real estate and rental and leasing			F
Professional, scientific, and technical services except scientific research and development services		68.2	B
Scientific research and development services		53.9	B
Management of companies and enterprises			F
Administrative and support, waste management and remediation services			F
By firm size			
All industries	Large Enterprises		F
	Medium Enterprises	62.0	E
	Small Enterprises	46.8	B
Manufacturing	Large Enterprises	85.1	A
	Medium Enterprises	74.1	A
	Small Enterprises	63.7	A
All Except Manufacuring	Large Enterprises		F
	Medium Enterprises	58.7	E
	Small Enterprises	43.2	B

Table A7: Percentage of enterprises indicating their response to the entry of new competitors in their principal market for their main product in 2009*

By industry

	Changed the quality of the product	Adopted a new technology or process	Changed marketing expenditures	Introduced a new product	Speeded up the introduction of a new product	Changed the price of the product	Other action	Took no action
All surveyed industries	37.7 E	17.6 B	33.3 B	40.1 B	18.1 B	69.5 B	19.0 E	20.5 B
Agriculture, forestry, fishing and hunting	X	X	X	X	X	X	X	X
Mining, quarrying, and oil and gas extraction	26.2 E	22.7 B	22.8 B	28.5 E	11.4 B	40.2 E	2.8 A	33.3 E
Utilities	9.9 B	13.5 B	24.7 B	23.5 E	6.8 B	36.5 E	2.9 A	42.6 E
Construction	1.7 B	1.7 B	1.7 B	0.0 A	0.0 A	F	0.0 A	F
Manufacturing	35.7 A	39.2 A	38.6 A	37.4 A	28.6 A	64.8 A	9.9 A	15.5 A
Food	30.4 B	33.0 B	50.6 B	51.6 B	28.8 B	67.3 B	4.2 A	13.6 B
Beverage and tobacco product	26.1 E	13.9 B	70.5 E	64.7 E	35.9 E	31.1 E	23.0 E	22.1 E
Textile mills	54.1 E	22.6 B	38.5 E	46.7 E	38.9 E	46.7 E	23.3 B	22.9 B
Textile product mills	14.8 E	0.0 A	50.3 E	20.1 E	0.0 A	65.1 E	4.8 B	0.0 A
Clothing	42.6 E	21.5 E	20.4 E	47.8 E	34.8 E	55.0 E	12.1 B	24.2 E
Leather and allied product	55.6 B	56.0 B	44.4 B	55.6 B	55.6 B	66.8 B	0.0 A	10.8 B
Wood product	52.5 E	39.3 E	39.0 E	16.7 B	22.0 B	83.4 B	9.7 B	7.4 B
Paper	24.3 B	28.3 E	55.2 E	21.5 B	15.1 B	74.9 E	4.3 B	15.9 B
Printing and related support activities	40.0 E	46.5 E	33.1 E	34.4 E	25.1 E	60.9 E	0.7 A	29.8 E
Petroleum and coal product	16.6 E	33.8 E	0.0 A	33.1 E	16.6 E	50.3 E	0.0 A	33.1 E
Chemical manufacturing except pharmaceutical	33.4 B	33.4 B	25.2 B	34.2 B	23.4 B	41.7 B	4.9 B	16.4 B
Pharmaceutical	32.6 B	48.5 B	37.7 B	51.8 E	44.9 B	58.3 E	0.0 A	18.9 B
Plastics and rubber products	44.5 E	52.1 E	40.1 E	55.8 E	37.3 E	66.8 E	25.5 B	16.4 B
Motor vehicle plastic parts	35.9 E	74.3 E	51.3 E	51.3 E	51.3 E	61.5 E	51.3 E	25.7 E
Non-metallic mineral product	30.1 E	34.2 E	44.8 E	35.2 E	23.1 B	44.7 E	13.6 B	17.8 B
Primary metal	32.6 B	39.8 B	22.9 B	29.2 B	29.1 B	63.0 B	2.9 A	19.3 B
Fabricated metal product	21.0 B	36.3 B	30.5 B	17.6 B	12.4 B	80.2 B	4.6 A	15.2 B
Machinery	38.0 B	38.3 B	33.4 B	27.3 B	22.0 B	49.9 B	27.9 B	26.1 B
Computer and electronic product	48.0 B	47.1 B	43.0 B	71.4 B	57.2 B	53.0 B	2.7 A	12.7 B
Electrical equipment, appliance and component	47.3 B	50.4 B	50.3 B	47.3 B	36.1 B	73.9 B	13.8 B	5.4 A
Transportation equipment	53.0 B	58.7 B	46.3 B	35.3 B	35.8 B	61.8 B	6.5 B	6.1 A
Motor vehicle	X	X	X	X	X	X	X	X
Motor vehicle body and trailer	59.7 E	58.6 E	65.5 E	29.0 B	29.0 B	71.9 B	5.5 B	2.0 A
Motor vehicle parts	46.1 E	57.7 E	28.1 E	36.5 E	42.9 E	57.8 E	11.5 B	5.1 A
Aerospace product and parts	54.9 B	66.1 B	53.5 B	28.3 B	17.8 B	44.5 B	0.0 A	5.3 B
Furniture and related product	20.6 B	24.3 E	32.6 E	38.6 E	39.0 E	77.1 E	5.0 B	8.1 B
Miscellaneous	36.1 E	62.4 E	54.4 E	70.6 E	55.0 E	56.9 E	0.0 A	3.9 B

Table A7: Percentage of enterprises indicating their response to the entry of new competitors in their principal market for their main product in 2009* (continued)

By industry		Changed the quality of the product	Adopted a new technology or process	Changed marketing expenditures	Introduced a new product	Speeded up the introduction of a new product	Changed the price of the product	Other action	Took no action
All surveyed industries except manufacturing		38.2 E	13.0 B	32.2 E	40.7 E	15.8 E	70.5 B	21.0 E	21.6 B
Wholesale Trade		F	12.5 E	F	12.5 E	12.5 E	F	0.0 A	F
Retail Trade		X	X	X	X	X	X	X	X
Transportation and warehousing		44.0 E	20.1 B	32.1 E	19.6 B	16.0 B	71.8 B	11.8 B	17.4 B
Information and cultural industries		49.9 E	54.3 E	44.2 B	50.6 E	43.9 E	46.4 E	7.6 B	21.5 B
Finance and insurance		27.8 B	18.9 B	37.0 E	18.6 B	15.9 B	42.1 E	2.8 B	32.3 B
Real estate and rental and leasing		X	X	X	X	X	X	X	X
Professional, scientific, and technical services except scientific research and development services Scientific research and development services		41.7 E	42.3 E	45.8 E	44.5 E	20.9 B	46.2 E	4.4 A	25.1 E
Management of companies and enterprises		X	X	X	X	X	X	X	X
Administrative and support, waste management and remediation services		X	X	X	X	X	X	X	X
By firm size									
All industries	Large Enterprises	F	F	F	F	13.1 E	F	F	F
	Medium Enterprises	F	F	F	F	20.0 E	F	6.5 B	F
	Small Enterprises	36.3 E	14.3 B	34.2 E	40.0 E	18.3 E	71.4 B	20.7 E	20.3 B
Manufacturing	Large Enterprises	40.6 A	41.8 A	42.1 A	48.2 A	43.1 A	67.6 A	10.4 A	11.5 A
	Medium Enterprises	42.9 B	40.0 B	38.7 B	39.7 B	35.9 B	71.3 B	11.0 A	11.7 A
	Small Enterprises	34.1 A	38.8 A	38.4 A	36.1 A	26.1 A	63.5 A	9.7 A	16.4 A
All Except Manufacuring	Large Enterprises	F	F	F	F	5.7 B	F	F	F
	Medium Enterprises	F	F	F	F	12.5 E	F	4.3 B	F
	Small Enterprises	36.8 E	9.5 A	33.4 E	40.8 E	16.7 E	73.0 B	22.8 E	21.0 B

* Percentage of enterprises that faced entry of competitors in 2009.

Table A8: Percentage of enterprises indicating they introduced product or process innovations in 2007–09

By industry

	Product innovation		Process innovation		
	Goods	Services	Methods of manufacturing or producing	Logistics, delivery or distribution methods	Supporting activities for processes
All surveyed industries	18.1 A	24.5 B	17.3 A	12.0 A	25.5 B
Agriculture, forestry, fishing and hunting	0.0 A	F	F	F	F
Mining, quarrying, and oil and gas extraction	18.1 B	18.3 B	19.2 B	8.0 B	19.1 B
Utilities	11.0 A	16.6 B	10.3 A	14.3 B	23.9 B
Construction	0.0 A	17.8 E	8.9 E	16.3 E	46.4 E
Manufacturing	42.6 A	21.7 A	49.7 A	15.7 A	31.4 A
Food	36.5 B	14.4 A	45.0 B	17.7 A	25.8 B
Beverage and tobacco product	55.9 B	21.6 B	56.4 E	26.0 B	32.9 B
Textile mills	55.3 B	25.7 B	60.3 B	19.0 B	32.5 B
Textile product mills	40.4 B	19.3 B	44.4 B	13.2 B	24.2 B
Clothing	34.7 B	16.5 B	18.4 B	8.1 B	11.9 B
Leather and allied product	61.7 B	17.0 B	45.2 B	22.1 B	27.4 B
Wood product	34.3 B	21.7 B	51.6 B	13.8 B	27.0 B
Paper	33.8 B	17.8 B	50.7 B	15.4 B	32.9 B
Printing and related support activities	29.1 B	29.6 B	52.1 B	18.4 B	41.2 B
Petroleum and coal product	50.1 B	11.6 B	26.9 B	11.6 B	23.0 B
Chemical manufacturing except pharmaceutical	48.4 B	24.2 B	50.2 B	19.3 B	34.4 B
Pharmaceutical	59.0 B	25.8 B	50.3 B	27.1 B	41.7 B
Plastics and rubber products	57.8 B	31.7 B	58.9 B	14.6 B	32.3 B
Motor vehicle plastic parts	61.9 B	37.3 B	69.0 B	20.4 B	57.1 B
Non-metallic mineral product	37.6 B	14.8 B	46.8 B	14.0 B	26.8 B
Primary metal	41.9 B	22.5 B	56.1 B	16.5 A	34.1 B
Fabricated metal product	30.0 B	23.4 B	50.1 B	14.1 B	34.4 B
Machinery	57.1 B	24.2 B	50.9 B	13.6 B	36.6 B
Computer and electronic product	61.8 B	28.9 B	49.2 B	20.8 B	29.5 B
Electrical equipment, appliance and component	56.3 B	20.3 B	56.0 B	16.5 A	35.1 B
Transportation equipment	43.8 A	19.3 A	53.6 A	17.1 A	33.2 A
Motor vehicle	44.4 B	22.2 B	72.2 B	27.8 B	50.0 B
Motor vehicle body and trailer	47.9 B	15.1 B	41.5 B	6.8 A	33.4 B
Motor vehicle parts	39.3 B	16.9 B	59.9 B	19.8 B	29.9 B
Aerospace product and parts	48.4 B	32.2 B	61.1 B	33.2 B	47.5 B
Furniture and related product	37.8 B	9.6 B	44.0 B	10.7 B	26.6 B
Miscellaneous	52.6 B	27.5 B	57.0 B	21.6 B	34.0 B

Table A8: Percentage of enterprises indicating they introduced product or process innovations in 2007–09 (continued)

By industry		Product innovation		Process innovation		
		Goods	Services	Methods of manufacturing or producing	Logistics, delivery or distribution methods	Supporting activities for processes
All surveyed industries except manufacturing		12.6 A	25.1 B	9.9 A	11.1 B	24.2 B
Wholesale Trade		29.9 E	21.0 B	17.7 B	19.8 B	24.2 E
Retail Trade		0.7 A	F	0.7 A	0.0 A	13.9 E
Transportation and warehousing		8.7 A	29.1 B	8.4 A	24.0 B	25.1 B
Information and cultural industries		31.4 B	46.2 B	22.8 B	16.2 B	22.9 B
Finance and insurance		17.4 B	27.0 B	12.0 B	9.0 B	22.8 B
Real estate and rental and leasing		1.7 E	3.1 E	0.0 A	27.0 E	28.7 E
Professional, scientific, and technical services except scientific research and development services		20.8 B	41.6 B	22.5 B	11.6 B	33.0 B
Scientific research and development services		41.1 B	39.5 B	31.2 B	10.4 B	39.0 B
Management of companies and enterprises		0.0 A	0.0 A	0.0 A	0.0 A	0.0 A
Administrative and support, waste management and remediation services		38.3 E	F	12.1 E	8.9 E	12.1 E
By firm size						
All industries	Large Enterprises	29.3 E	F	F	16.0 E	F
	Medium Enterprises	24.1 B	23.4 E	24.3 E	14.1 B	28.0 E
	Small Enterprises	16.4 A	23.6 B	14.8 A	11.3 A	24.3 B
Manufacturing	Large Enterprises	52.2 A	21.0 A	54.0 A	24.5 A	38.4 A
	Medium Enterprises	49.6 A	20.9 A	53.3 A	16.6 A	32.9 A
	Small Enterprises	40.3 A	21.9 A	48.6 A	14.5 A	30.3 A
All Except Manufacuring	Large Enterprises	F	F	F	F	F
	Medium Enterprises	17.1 E	24.1 E	16.3 E	13.4 E	26.6 E
	Small Enterprises	11.3 A	24.0 B	7.7 A	10.7 B	23.1 B

Table A9: Percentage of enterprises indicating they introduced organizational or marketing innovations in 2007–09

By industry

	Organizational innovation			Marketing innovation			
	Business practices for organizing procedures	Methods of organizing work responsabilities procedures	Methods of organizing external relations	Aesthetic design or packaging	Methods or techniques for promotion	Methods for product placement	Methods of pricing
All surveyed industries	23.5 A	27.4 B	15.0 A	11.3 A	23.9 B	14.0 B	15.8 B
Agriculture, forestry, fishing and hunting	F	F	F	F	F	F	F
Mining, quarrying, and oil and gas extraction	36.7 B	38.7 B	16.9 B	10.1 B	14.9 B	4.6 A	16.7 B
Utilities	32.3 B	44.8 B	24.8 B	9.9 B	17.1 B	5.5 A	6.3 A
Construction	16.3 E	16.3 E	10.6 E	0.8 A	0.0 A	0.0 A	0.0 A
Manufacturing	44.9 A	38.6 A	19.8 A	17.0 A	20.4 A	13.6 A	17.5 A
Food	38.3 B	35.5 B	18.4 B	30.8 B	20.2 B	16.3 B	13.1 A
Beverage and tobacco product	38.8 B	33.9 B	17.3 B	44.8 B	21.8 B	25.2 B	9.5 B
Textile mills	45.0 B	31.3 B	17.4 B	12.2 B	5.2 A	8.8 A	20.7 B
Textile product mills	33.3 B	27.2 B	18.1 B	25.3 B	21.2 B	11.0 B	20.1 B
Clothing	24.6 B	22.4 B	7.5 B	21.3 B	13.8 B	15.3 B	15.1 B
Leather and allied product	33.3 B	17.0 B	14.0 A	24.5 B	16.0 A	19.6 B	11.4 A
Wood product	41.3 B	33.5 B	14.8 B	14.8 B	19.2 B	12.5 B	21.6 B
Paper	53.4 B	45.6 B	20.5 B	14.1 B	9.8 A	9.5 A	9.4 A
Printing and related support activities	49.2 B	49.2 B	29.9 B	7.4 B	26.2 B	16.4 B	22.5 B
Petroleum and coal product	46.2 B	42.5 B	19.2 B	11.5 B	15.3 B	3.8 A	3.8 A
Chemical manufacturing except pharmaceutical	39.9 B	47.1 B	15.8 B	13.8 A	16.8 B	12.9 A	17.7 B
Pharmaceutical	60.5 B	52.6 B	23.4 B	25.8 B	29.9 B	19.4 B	20.6 B
Plastics and rubber products	52.4 B	46.3 B	22.0 B	16.7 B	24.1 B	14.4 B	18.6 B
Motor vehicle plastic parts	58.4 B	52.1 B	20.4 B	19.7 B	10.5 B	14.1 B	14.1 B
Non-metallic mineral product	41.9 B	43.7 B	17.2 B	12.4 B	22.8 B	15.0 B	18.3 B
Primary metal	38.6 B	37.9 B	24.9 B	6.8 A	16.3 A	5.9 A	17.8 A
Fabricated metal product	45.3 B	37.9 B	21.4 B	11.9 A	15.6 B	8.9 A	14.9 B
Machinery	47.0 B	37.1 B	19.2 B	12.6 B	16.0 B	12.5 B	19.1 B
Computer and electronic product	61.8 B	42.2 B	24.3 B	24.9 B	34.1 B	19.0 B	21.8 B
Electrical equipment, appliance and component	55.5 B	39.4 B	22.6 B	24.6 B	24.2 B	18.2 A	22.0 B
Transportation equipment	48.9 A	40.4 A	19.8 A	18.6 A	21.2 A	11.1 A	16.2 A
Motor vehicle	61.1 B	50.0 B	16.7 B	11.1 B	38.9 B	33.3 B	16.7 B
Motor vehicle body and trailer	47.8 B	31.3 B	11.3 B	19.5 B	26.3 B	10.9 B	20.9 B
Motor vehicle parts	45.0 B	41.1 B	23.3 B	25.0 B	18.7 B	10.8 B	13.0 B
Aerospace product and parts	70.6 B	62.7 B	32.7 B	4.6 A	17.9 B	6.2 A	19.5 B
Furniture and related product	37.3 B	29.0 B	11.7 B	14.8 B	25.1 B	15.0 B	17.5 B
Miscellaneous	49.9 B	45.8 B	30.4 B	16.3 B	27.0 B	18.4 B	20.9 B

Table A9: Percentage of enterprises indicating they introduced organizational or marketing innovations in 2007–09 (continued)

		Organizational innovation			Marketing innovation			
		Business practices for organizing procedures	Methods of organizing work responsabilities procedures	Methods of organizing external relations	Aesthetic design or packaging	Methods or techniques for promotion	Methods for product placement	Methods of pricing
By industry								
All surveyed industries except manufacturing		18.6 B	24.8 B	13.9 A	10.0 A	24.7 B	14.1 B	15.4 B
Wholesale Trade		34.0 E	32.4 E	10.9 B	25.2 E	33.2 E	8.0 B	24.2 E
Retail Trade		0.0 A	15.7 E	0.0 A	2.5 A	F	15.7 E	14.9 E
Transportation and warehousing		23.7 B	29.3 B	19.7 B	7.3 A	16.3 B	6.7 A	18.8 B
Information and cultural industries		32.0 B	44.6 B	19.1 B	17.0 B	31.4 B	19.2 B	23.2 B
Finance and insurance		29.1 B	40.2 B	26.2 B	11.3 B	28.4 B	13.4 B	11.5 B
Real estate and rental and leasing		0.0 A	0.0 A	0.0 A	0.0 A	1.7 E	1.7 E	0.0 A
Professional, scientific, and technical services except scientific research and development services		39.5 B	51.6 B	25.2 B	15.6 B	31.2 B	18.2 B	23.2 B
Scientific research and development services		45.7 B	50.3 B	24.9 B	21.8 B	23.9 B	10.3 B	7.2 B
Management of companies and enterprises		0.0 A	0.0 A	0.0 A	0.0 A	0.0 A	0.0 A	0.0 A
Administrative and support, waste management and remediation services		F	F	F	8.9 E	F	38.3 E	F
By firm size								
All industries	Large Enterprises	F	F	F	16.0 E	F	19.0 E	F
	Medium Enterprises	34.2 E	40.8 E	25.0 E	17.1 B	30.2 E	16.4 B	22.4 E
	Small Enterprises	20.4 A	23.8 B	12.4 A	10.1 A	23.0 B	13.3 B	14.3 B
Manufacturing	Large Enterprises	59.0 A	49.9 A	28.9 A	25.2 A	25.3 A	15.2 A	18.4 A
	Medium Enterprises	52.3 A	41.1 A	22.1 A	18.1 A	21.9 A	14.2 A	18.7 A
	Small Enterprises	42.1 A	36.9 A	18.4 A	15.9 A	19.6 A	13.3 A	17.2 A
All Except Manufacuring	Large Enterprises	F	F	F	F	F	F	F
	Medium Enterprises	29.3 E	40.7 E	25.8 E	16.8 E	32.4 E	17.0 E	23.4 E
	Small Enterprises	15.7 B	21.0 B	11.2 A	8.9 A	23.8 B	13.2 B	13.7 B

Table A10: Percentage of enterprises reporting co-innovation in their enterprise in 2007–09

By industry

	Product innovations that required the introduction of new production processes*		Marketing innovations that involved new or significantly improved products**	
All surveyed industries	49.9	B	33.5	B
Agriculture, forestry, fishing and hunting	X		X	
Mining, quarrying, and oil and gas extraction	42.6	E	52.2	E
Utilities	31.8	B	54.8	E
Construction	X		X	
Manufacturing	67.2	A	57.4	A
Food	75.7	B	70.3	B
Beverage and tobacco product	39.5	E	24.3	B
Textile mills	73.7	B	41.1	B
Textile product mills	59.9	E	71.0	B
Clothing	39.5	E	33.7	E
Leather and allied product	77.2	B	54.9	B
Wood product	76.8	B	49.8	B
Paper	70.3	B	59.9	B
Printing and related support activities	74.1	E	56.6	E
Petroleum and coal product	57.2	B	83.3	E
Chemical manufacturing except pharmaceutical	59.4	B	54.5	B
Pharmaceutical	57.7	B	53.6	E
Plastics and rubber products	73.3	B	61.7	B
Motor vehicle plastic parts	78.8	B	55.8	E
Non-metallic mineral product	63.5	B	69.4	B
Primary metal	62.3	B	54.4	B
Fabricated metal product	71.8	B	39.4	B
Machinery	52.5	B	49.0	B
Computer and electronic product	63.6	B	76.4	B
Electrical equipment, appliance and component	64.1	B	64.1	B
Transportation equipment	66.8	B	56.8	B
Motor vehicle	66.7	E	87.5	B
Motor vehicle body and trailer	59.6	B	46.3	B
Motor vehicle parts	67.3	B	66.2	B
Aerospace product and parts	83.0	B	47.7	B
Furniture and related product	78.7	B	54.6	E
Miscellaneous	76.1	B	85.9	B

Table A10: Percentage of enterprises reporting co-innovation in their enterprise in 2007–09 (continued)

By industry	Product innovations that required the introduction of new production processes*	Marketing innovations that involved new or significantly improved products**
All surveyed industries except manufacturing	43.8 E	27.1 B
Wholesale Trade	57.6 E	48.9 E
Retail Trade	X	1.5 B
Transportation and warehousing	8.7 A	38.6 B
Information and cultural industries	40.2 B	74.4 B
Finance and insurance	32.3 B	43.9 E
Real estate and rental and leasing	X	X
Professional, scientific, and technical services except scientific research and development services	41.9 B	48.3 B
Scientific research and development services	49.2 E	21.3 E
Management of companies and enterprises	...	...
Administrative and support, waste management and remediation services	F	F

By firm size			
All industries	Large Enterprises	F	F
	Medium Enterprises	52.0 E	45.9 E
	Small Enterprises	49.0 B	28.5 B
Manufacturing	Large Enterprises	68.4 A	63.2 A
	Medium Enterprises	67.8 A	64.3 B
	Small Enterprises	67.0 A	55.3 A
All Except Manufacuring	Large Enterprises	F	F
	Medium Enterprises	F	F
	Small Enterprises	43.2 E	21.6 B

* Percentage of product innovators in 2007-09.

** Percentage of marketing innovators in 2007-09.

Table A11: Percentage of enterprises reporting the uniqueness of their most innovative product in 2007–09*

By industry

	Unique innovative features with no or few substitutes	Unique innovative features with several substitutes	Similar innovative features or innovative goods or services widely available on the market
All surveyed industries	15.9 B	50.0 B	34.1 B
Agriculture, forestry, fishing and hunting	X	X	X
Mining, quarrying, and oil and gas extraction	19.8 E	45.1 E	35.2 E
Utilities	36.7 E	24.1 B	39.2 E
Construction	X	X	X
Manufacturing	26.6 A	50.3 A	23.1 A
Food	25.4 B	50.4 B	24.3 B
Beverage and tobacco product	13.9 B	34.1 E	52.0 E
Textile mills	17.7 B	55.8 B	26.5 B
Textile product mills	33.6 E	59.3 E	7.1 B
Clothing	25.9 B	47.3 E	26.8 E
Leather and allied product	23.0 B	26.8 B	50.2 B
Wood product	24.6 B	27.8 B	47.6 B
Paper	34.8 B	29.7 B	35.5 B
Printing and related support activities	11.4 B	54.0 E	34.7 E
Petroleum and coal product	14.3 B	78.4 B	7.2 B
Chemical manufacturing except pharmaceutical	45.9 B	45.6 B	8.4 B
Pharmaceutical	40.8 B	48.9 B	10.3 B
Plastics and rubber products	27.9 B	55.8 B	16.3 B
Motor vehicle plastic parts	30.8 E	58.5 E	10.6 B
Non-metallic mineral product	22.6 B	62.2 B	15.1 B
Primary metal	29.3 B	47.1 B	23.6 B
Fabricated metal product	20.8 B	52.7 B	26.5 B
Machinery	25.0 B	63.9 B	11.1 B
Computer and electronic product	45.2 B	47.7 B	7.2 A
Electrical equipment, appliance and component	34.5 B	41.0 B	24.5 B
Transportation equipment	24.3 A	55.1 B	20.6 A
Motor vehicle	11.1 B	44.4 E	44.4 E
Motor vehicle body and trailer	32.6 B	46.2 B	21.2 B
Motor vehicle parts	20.4 B	59.6 B	20.0 B
Aerospace product and parts	16.2 B	70.3 B	13.5 B
Furniture and related product	14.0 B	37.7 E	48.4 E
Miscellaneous	34.6 B	44.7 B	20.7 B

Table A11: Percentage of enterprises reporting the uniqueness of their most innovative product in 2007–09* (continued)

By industry	Unique innovative features with no or few substitutes	Unique innovative features with several substitutes	Similar innovative features or innovative goods or services widely available on the market
All surveyed industries except manufacturing	12.2 B	49.9 E	38.0 E
Wholesale Trade	12.0 E	51.3 E	36.6 E
Retail Trade	X	X	X
Transportation and warehousing	25.4 B	26.1 B	48.5 E
Information and cultural industries	24.8 B	45.0 B	30.2 B
Finance and insurance	7.8 B	57.6 E	34.6 E
Real estate and rental and leasing	X	X	X
Professional, scientific, and technical services except scientific research and development services	29.6 B	34.0 B	36.4 B
Scientific research and development services	49.4 E	41.0 E	9.7 B
Management of companies and enterprises	...	...	...
Administrative and support, waste management and remediation services	F	F	0.0 A

By firm size				
All industries	Large Enterprises	F	F	F
	Medium Enterprises	28.0 E	44.9 E	27.2 E
	Small Enterprises	13.4 A	51.1 E	35.5 E
Manufacturing	Large Enterprises	27.1 A	57.6 A	15.3 A
	Medium Enterprises	28.7 A	48.5 A	22.9 A
	Small Enterprises	26.0 A	49.8 A	24.2 A
All Except Manufacuring	Large Enterprises	F	F	F
	Medium Enterprises	F	F	29.3 E
	Small Enterprises	9.3 A	51.5 E	39.2 E

* Percentage of product innovators in 2007-09.

Table A12: Percentage of enterprises indicating the mode of acquisition of their advanced technologies in 2009*

By industry

	Purchase off-the-shelf	Leasing off-the-shelf	Licensing	Customizing	Developing	Merger or acquisition
All surveyed industries	83.4 A	10.1 A	12.9 B	23.0 B	16.3 B	1.0 A
Agriculture, forestry, fishing and hunting	X	X	X	X	X	X
Mining, quarrying, and oil and gas extraction	77.1 B	10.3 B	27.8 B	12.2 B	23.9 B	0.0 A
Utilities	71.8 B	15.9 B	25.8 B	38.6 B	28.9 B	2.6 A
Construction	100.0 A	1.4 B	5.8 B	5.8 B	15.9 E	0.0 A
Manufacturing	74.8 A	11.1 A	17.5 A	33.7 A	20.5 A	2.2 A
Food	74.3 B	4.2 A	13.5 B	38.7 B	15.8 B	0.9 A
Beverage and tobacco product	88.0 E	3.9 A	3.9 A	26.5 E	8.3 B	0.0 A
Textile mills	54.6 B	2.9 A	3.2 A	24.2 B	33.1 B	0.0 A
Textile product mills	83.1 B	8.6 B	10.6 B	29.8 B	14.9 B	0.0 A
Clothing	69.5 E	11.6 B	27.6 E	31.7 B	5.8 B	4.8 B
Leather and allied product	63.3 B	14.7 B	14.7 B	42.8 B	7.3 B	0.0 A
Wood product	64.1 B	7.5 B	10.3 B	47.2 B	18.1 B	3.2 A
Paper	65.1 B	14.1 B	21.5 B	33.5 B	21.3 B	1.1 A
Printing and related support activities	56.4 E	15.8 B	21.3 B	34.6 B	15.1 B	5.0 B
Petroleum and coal product	66.9 B	16.7 B	41.9 E	25.0 B	0.0 A	0.0 A
Chemical manufacturing except pharmaceutical	52.7 B	4.3 A	24.3 B	40.1 B	36.0 B	3.9 A
Pharmaceutical	80.4 B	17.2 B	18.4 B	38.7 B	12.7 B	2.0 A
Plastics and rubber products	75.7 B	9.2 B	12.6 B	39.9 B	37.9 B	0.3 A
Motor vehicle plastic parts	74.7 B	22.3 B	8.7 B	30.9 B	51.5 E	3.9 A
Non-metallic mineral product	70.3 B	13.2 B	16.6 B	26.1 B	21.3 B	4.6 B
Primary metal	80.1 B	19.6 B	15.2 A	21.3 B	19.4 B	0.0 A
Fabricated metal product	83.4 B	9.0 B	14.1 B	21.9 B	13.7 A	1.4 A
Machinery	77.4 B	14.7 B	26.4 B	31.2 B	24.1 B	2.7 A
Computer and electronic product	82.3 B	12.3 A	20.6 A	40.0 B	32.1 B	3.9 A
Electrical equipment, appliance and component	71.0 B	8.9 A	25.3 B	41.2 B	29.3 B	2.1 A
Transportation equipment	74.7 A	9.8 A	20.0 A	37.6 A	20.6 A	4.7 A
Motor vehicle	75.0 B	25.0 B	43.8 B	25.0 B	37.5 B	6.3 B
Motor vehicle body and trailer	84.1 B	6.7 B	12.4 B	10.5 B	5.0 A	5.7 B
Motor vehicle parts	70.8 B	7.6 A	19.8 B	52.7 B	25.7 B	5.5 A
Aerospace product and parts	80.3 B	18.1 B	22.7 B	44.9 B	25.8 B	0.0 A
Furniture and related product	78.3 B	14.8 B	18.6 B	30.1 B	11.7 B	0.3 A
Miscellaneous	78.6 B	16.8 B	10.6 B	38.7 B	19.3 B	1.6 A

Table A12: Percentage of enterprises indicating the mode of acquisition of their advanced technologies in 2009* (continued)

By industry		Purchase off-the-shelf	Leasing off-the-shelf	Licensing	Customizing	Developing	Merger or acquisition
All surveyed industries except manufacturing		86.0 A	9.8 B	11.5 B	19.8 B	15.0 B	0.6 A
Wholesale Trade		79.1 E	9.9 B	12.0 E	35.7 E	3.1 B	0.0 A
Retail Trade		X	X	X	X	X	X
Transportation and warehousing		73.1 B	12.0 B	11.5 B	30.3 B	24.5 B	3.9 A
Information and cultural industries		51.8 B	20.4 B	38.7 B	49.6 B	42.3 B	3.4 A
Finance and insurance		50.7 E	14.9 B	27.4 B	38.2 B	27.8 B	0.0 A
Real estate and rental and leasing		X	X	X	X	X	X
Professional, scientific, and technical services except scientific research and development services		55.9 B	24.0 B	23.8 B	37.2 B	31.9 B	2.1 A
Scientific research and development services		66.9 E	6.7 B	15.8 B	26.2 E	43.3 E	1.6 A
Management of companies and enterprises		X	X	X	X	X	X
Administrative and support, waste management and remediation services		100.0 A	F	F	F	F	0.0 A
By firm size							
All industries	Large Enterprises	76.4 E	F	F	F	26.6 E	2.1 A
	Medium Enterprises	84.3 B	23.7 E	24.7 E	45.5 E	28.0 E	1.1 A
	Small Enterprises	83.9 A	6.4 A	8.7 A	17.4 A	13.4 B	0.9 A
Manufacturing	Large Enterprises	75.0 A	14.1 A	28.6 A	46.2 A	35.5 A	3.9 A
	Medium Enterprises	76.3 A	9.4 A	18.0 A	37.8 A	24.7 A	1.4 A
	Small Enterprises	74.5 A	11.1 A	16.0 A	31.2 A	17.6 A	2.2 A
All Except Manufacuring	Large Enterprises	F	F	F	F	F	1.1 A
	Medium Enterprises	87.3 B	F	F	F	F	1.0 A
	Small Enterprises	86.4 B	5.1 A	6.6 A	13.6 B	12.3 B	0.6 A

* Percentage of enterprises that used advanced technologies in 2009.

Table A13: Percentage of enterprises indicating they faced obstacles to innovation in 2009

By industry

	Market size	Internal financing	External financing	Lack of skills	Agreements with external collaborators	Uncertainty and risk	Regulatory issues	Intellectual property protection	Government competition policy
All surveyed industries	17.2 A	22.8 B	16.2 B	26.0 B	11.0 A	36.6 B	15.9 A	4.5 A	3.9 A
Agriculture, forestry, fishing and hunting	F	F	F	F	F	F	F	F	F
Mining, quarrying, and oil and gas extraction	28.6 B	31.5 B	28.1 B	33.3 B	20.4 B	50.4 B	25.1 B	3.4 A	7.4 B
Utilities	9.1 A	24.9 B	12.0 B	23.1 B	8.5 B	37.4 B	38.8 B	7.2 B	3.6 A
Construction	16.3 E	25.2 E	32.6 E	52.1 E	25.2 E	41.5 E	17.0 E	8.1 E	0.0 A
Manufacturing	25.5 A	35.1 A	24.9 A	27.6 A	9.8 A	47.2 A	17.7 A	8.0 A	5.3 A
Food	21.2 B	27.9 B	22.8 B	26.4 B	14.3 A	40.3 B	27.9 B	7.4 A	5.5 A
Beverage and tobacco product	17.4 B	27.8 B	17.7 B	16.0 B	14.7 B	40.8 B	29.5 B	6.9 A	13.4 B
Textile mills	42.7 B	24.3 B	17.2 B	33.0 B	14.0 B	60.5 B	17.0 B	8.5 A	15.5 B
Textile product mills	17.0 B	19.2 B	20.2 B	21.2 B	7.0 A	29.2 B	13.2 B	16.3 B	2.0 A
Clothing	14.1 B	31.2 B	19.5 B	18.2 B	5.9 B	36.1 B	8.2 A	2.1 A	8.7 B
Leather and allied product	25.4 B	39.0 B	27.9 B	27.7 B	14.0 A	41.0 B	16.5 A	14.2 A	5.7 A
Wood product	33.3 B	36.6 B	32.8 B	25.0 B	10.4 B	56.9 B	14.1 B	3.3 A	5.6 A
Paper	28.5 B	31.3 B	20.3 B	25.1 B	3.1 A	46.2 B	9.1 A	4.4 A	2.3 A
Printing and related support activities	20.5 B	28.8 B	15.9 B	24.7 B	5.5 B	36.0 B	6.1 B	2.0 A	2.0 A
Petroleum and coal product	7.7 B	23.0 B	11.6 B	11.6 B	7.7 B	19.2 B	15.5 B	7.7 B	7.7 B
Chemical manufacturing except pharmaceutical	24.7 B	31.0 B	20.5 B	24.1 B	8.7 A	44.7 B	31.6 B	15.9 B	6.5 A
Pharmaceutical	11.2 B	35.7 B	20.4 B	27.3 B	15.2 B	33.8 B	47.1 B	24.4 B	2.0 A
Plastics and rubber products	37.8 B	41.3 B	30.7 B	37.5 B	11.0 B	57.5 B	18.0 B	14.6 B	7.3 A
Motor vehicle plastic parts	39.5 B	65.5 B	36.0 B	21.1 B	19.7 B	73.3 B	14.1 B	10.5 B	3.5 A
Non-metallic mineral product	24.6 B	38.3 B	24.0 B	27.8 B	10.6 B	47.0 B	24.7 B	3.8 A	5.2 A
Primary metal	29.4 B	43.8 B	27.4 B	21.0 B	5.3 A	51.0 B	17.7 A	3.5 A	6.3 A
Fabricated metal product	21.4 B	29.9 B	19.2 B	20.2 B	6.5 A	38.9 B	14.6 A	4.1 A	4.3 A
Machinery	23.2 B	43.9 B	29.1 B	39.4 B	11.1 B	60.4 B	20.2 B	13.6 B	4.1 A
Computer and electronic product	33.1 B	42.6 B	30.9 B	39.7 B	12.3 A	56.7 B	23.1 B	16.7 A	4.9 A
Electrical equipment, appliance and component	31.1 B	35.2 B	21.9 B	34.7 B	17.6 B	46.5 B	20.4 A	19.5 B	6.0 A
Transportation equipment	31.5 A	39.5 A	33.9 A	23.7 A	11.4 A	52.0 A	14.1 A	7.7 A	6.2 A
Motor vehicle	22.2 B	38.9 B	27.8 B	22.2 B	5.6 B	38.9 B	0.0 A	11.1 B	16.7 B
Motor vehicle body and trailer	33.0 B	29.9 B	35.4 B	27.2 B	12.1 B	58.9 B	10.2 A	4.7 A	4.1 A
Motor vehicle parts	32.2 B	41.6 B	32.4 B	16.8 B	8.7 A	48.0 B	17.0 B	6.6 A	4.3 A
Aerospace product and parts	24.1 B	43.4 B	34.0 B	28.2 B	12.8 A	56.3 B	19.3 B	8.3 A	5.0 A
Furniture and related product	25.9 B	38.6 B	29.5 B	26.1 B	7.3 B	47.6 B	8.3 B	3.6 A	5.2 B
Miscellaneous	22.3 B	36.7 B	20.7 B	28.4 B	9.9 B	43.5 B	15.0 B	7.3 A	6.0 A

Table A13: Percentage of enterprises indicating they faced obstacles to innovation in 2009 (continued)

		Market size	Internal financing	External financing	Lack of skills	Agreements with external collaborators	Uncertainty and risk	Regulatory issues	Intellectual property protection	Government competition policy
By industry										
All surveyed industries except manufacturing		15.3 B	20.0 B	14.2 B	25.6 B	11.2 B	34.3 B	15.5 B	3.6 A	3.6 A
Wholesale Trade		30.7 E	26.3 E	13.3 B	40.7 E	14.1 B	37.8 E	18.3 B	4.4 B	5.7 B
Retail Trade		2.5 A	1.4 A	0.7 A	12.5 E	0.0 A	F	3.2 A	0.7 A	0.0 A
Transportation and warehousing		23.5 B	25.3 B	17.7 B	17.6 B	4.3 A	30.7 B	24.2 B	3.2 A	9.9 A
Information and cultural industries		25.5 B	41.5 B	31.9 B	32.5 B	20.6 B	38.9 B	21.9 B	18.9 B	6.3 B
Finance and insurance		16.7 B	12.7 B	11.8 B	21.4 B	10.1 B	30.0 B	30.8 B	2.7 A	3.5 A
Real estate and rental and leasing		27.0 E	0.0 A	0.0 A	0.0 A	27.0 E	53.9 E	53.9 E	0.0 A	27.0 E
Professional, scientific, and technical services except scientific research and development services		18.2 B	27.7 B	14.1 A	25.9 B	7.9 A	43.0 B	17.2 B	5.5 A	7.7 B
Scientific research and development services		25.4 B	43.7 B	34.4 B	32.4 B	18.2 B	39.5 B	21.8 B	6.2 B	5.2 B
Management of companies and enterprises		0.0 A	0.0 A	0.0 A	0.0 A	0.0 A	0.0 A	0.0 A	0.0 A	0.0 A
Administrative and support, waste management and remediation services		12.1 E	F	F	14.5 E	12.1 E	F	11.3 E	0.0 A	0.0 A
By firm size										
All industries	Large Enterprises	F	F	F	19.7 E	F	F	20.2 E	10.5 E	3.6 E
	Medium Enterprises	22.2 E	22.2 E	18.7 E	26.7 E	8.7 B	44.4 E	27.8 E	3.2 A	3.9 A
	Small Enterprises	16.0 A	22.1 B	15.2 B	26.3 B	10.8 A	35.0 B	13.8 A	4.2 A	4.0 A
Manufacturing	Large Enterprises	21.5 A	36.2 A	23.1 A	29.3 A	10.2 A	52.8 A	20.3 A	12.3 A	6.0 A
	Medium Enterprises	27.3 A	35.2 A	26.8 A	30.3 A	11.9 A	50.1 A	21.7 A	9.6 A	6.0 A
	Small Enterprises	25.6 A	35.0 A	24.7 A	26.9 A	9.4 A	46.0 A	16.7 A	7.3 A	5.1 A
All Except Manufacuring	Large Enterprises	F	F	F	F	F	F	F	9.8 E	2.7 E
	Medium Enterprises	20.8 E	18.6 E	16.5 E	25.7 E	7.8 E	42.9 E	29.4 E	1.5 A	3.3 A
	Small Enterprises	14.0 B	19.3 B	13.2 B	26.2 B	11.0 B	32.7 B	13.2 B	3.5 A	3.7 A