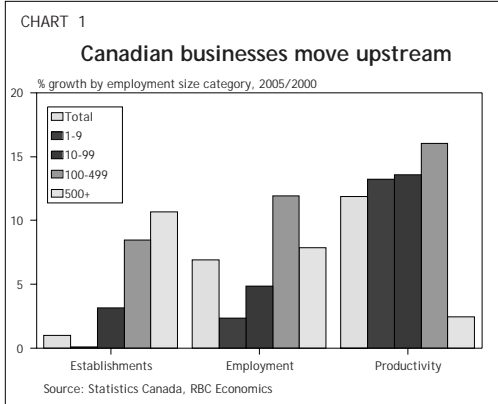


SMALL- AND MEDIUM-SIZED BUSINESSES DRIVING PRODUCTIVITY GAINS

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Whereas the 1990s brought forward a sharp rise in the number of small businesses in Canada, the current decade is shaping up to be all about their maturation to a new and more powerful growth phase. As Canada's business community restructures and reloads to meet the challenges of a changing global economy, this in turn has positive implications for the future health of Canadian businesses and for the nation's living standards.

Much of the research on the rise of small businesses during the 1990s concluded that they faced greater internal and external growth barriers to addressing lower productivity levels than their larger rivals. Using fresh, custom-ordered data from Statistics Canada, we argue that, while barriers remain, this is changing at a fairly fast pace so far this decade. Indeed, the net rates of business formations and job creation have slowed markedly for micro and small employers, while they have accelerated for medium and large employers as smaller firms have moved up the size chain. At the same time, micro-, small- and medium-sized firms are growing their productivity faster than their larger competitors with attendant benefits for future profitability and competitiveness. This shifts market opportunities away from a focus on small-business start-ups and in the direction of faster growth prospects at existing firms (chart 1).

The current tumultuous decade, which has been marked by many economic shocks and the rise of South Asian economies, has required a stronger focus on growth and productivity. Businesses are responding to the challenges of the changed market environment by consolidating and boosting productivity in an effort to make the Canadian economy more competitive.

One driving influence has been the appreciation of the Canadian dollar. It now makes more economic sense for companies to meet production targets by using more machinery and equipment that is mostly imported from the United States, while relying relatively less heavily on labour than in the past and, in the process, raising their average economies of scale and cost competitiveness. Other influences include high energy prices and tight labour markets that make it more difficult to attract and retain workers — especially for small employers.

There is broad evidence of these developments across many provinces and industries, including manufacturing. The challenge for policymakers lies in further reducing growth impediments, particularly by lowering very high rates of business taxation, especially in Ontario, rather than resisting market forces and prolonging the adjustment period. This would help to ensure that the recent small-business focus on productivity growth is part of a long-term trend instead of just a cyclical flash in the pan.

1. Businesses moving up the size chain

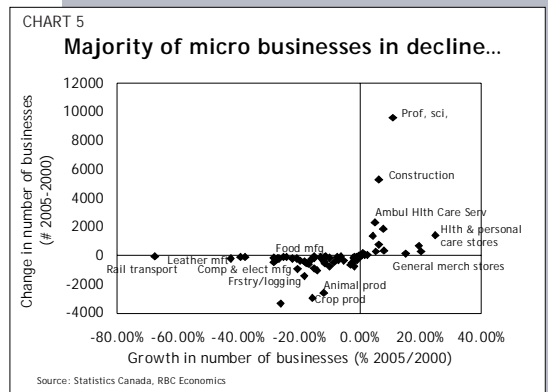
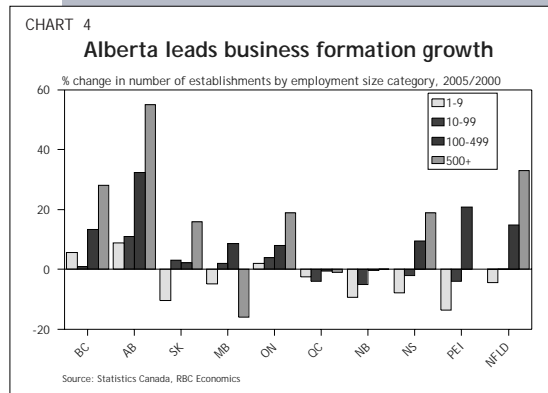
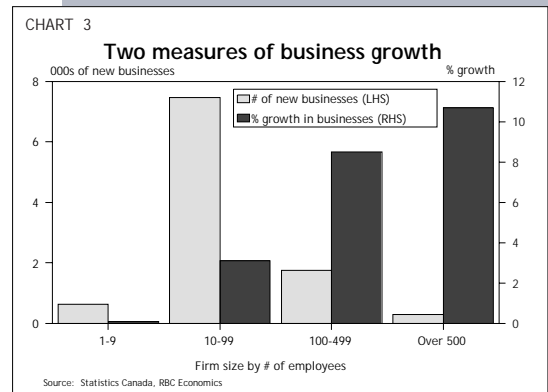
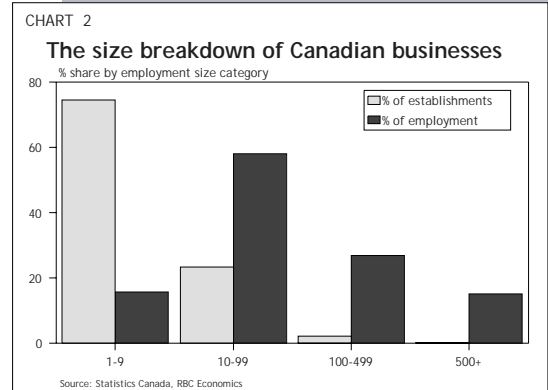
Canada has always tended to rely heavily on small businesses.¹ In fact, micro and small businesses currently make up the lion's share of businesses, accounting for roughly 98% (chart 2). The remaining 2% is split between medium (1.8%) and large (0.2%) firms. This composition is similar across the provinces. The domination by the one-to-nine employee micro-firm category is slowly changing across industries and provinces. From 2000 to 2005, the entire business register, excluding the 'indeterminate' category², showed that roughly 10,000 new establishments were created across Canada net of ones that failed or consolidated.³ Of this total, there was only a net rise of about 630 brand new businesses with under 10 employees as the pipeline of net new business creation virtually dried up, but on net there were 7,500 new small businesses, while 1800 new medium-sized and 300 new large ones were created. However, a more accurate way of looking at growth is to compare changes in the number of firms to the outstanding number of businesses beginning in 2000 and expressed in percentage terms in order to adjust for the changing size of Canada's business community over time. On that note, there was only a 1% increase in total businesses during the five-year period. Large firms, however, reported the fastest expansion at 11%, followed by medium firms at 8%, and small firms at 3% (chart 3). There was a paltry 0.1% gain in the number of micro firms. This marks a significant turning point as micro- and small-business net formation rates cool and they move up the value chain.

1. i. Alberta, British Columbia and Ontario lead business formations

The fastest growth rates in the number of businesses in the 2000-05 period have been in Alberta, British Columbia and Ontario (chart 4). Alberta has sharply outpaced everyone else in several industries, particularly those related to the oil patch. Most of Alberta's strong gains have been among large employers as economic growth lifts average firm size. British Columbia comes in second in overall establishment growth with an increase in the micro category, but near flatness in the number of small employers and big gains in the the medium- and large-sized categories. Ontario has seen above-average small business growth, but there, too, the number of larger employers has grown more rapidly. Every other province has seen an outright decline in the number of micro employers. East of Ontario, every province has also seen a decline in the number of small businesses. Overall, medium and large employers have seen more widespread growth than small and micro firms.

1. ii. Widespread consolidation across individual industries

Appendix A provides growth in the number of establishments by individual industry and size of firm. The overall growth of **micro-businesses** was virtually flat in the 2000-05 period with most industries seeing a decline in the number of micro-businesses (chart 5). Micro-business formation rates were strongest in personal care stores, couriers and messengers and general merchandise stores. The increase in the outright number of firms was dominated by the professional and construction sectors. Removing these two sectors, however, reveals an actual decline in micro businesses with widespread reductions across many industries. The strongest declines occurred in components of agriculture, manufacturing, and transportation — each challenged by high energy prices and a strong dollar.



The expansion of **small businesses** contributed to more than one-half the total increase in the number of firms, but the growth rate compared to businesses already started in the 1990s has been weak. Further, there was a nearly even split between industries showing a reduction in the number of small businesses and those with increases (chart 6). The growth of small businesses was strongest in oil and gas extraction, transit and ground passenger transportation, and hobby stores. The fastest declines in small firms were concentrated in clothing, textile and leather manufacturing, and non-store retailers. While other manufacturing firms were squeezed, their decline was not as widespread — unlike for micro manufacturers.

By far the strongest growth in **medium businesses** was in building materials and garden equipment, and couriers and messengers. Other areas of strength included general merchandise stores and real estate. The fastest declines occurred in leather and clothing manufacturing and electronic and appliance stores.

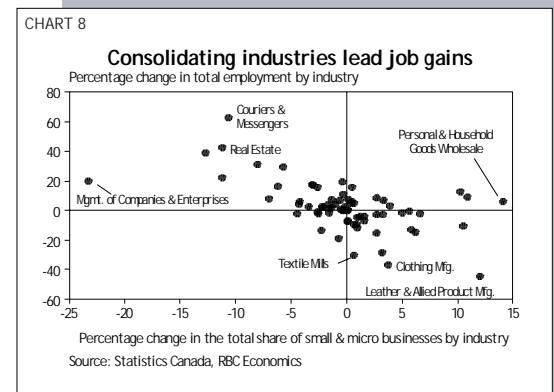
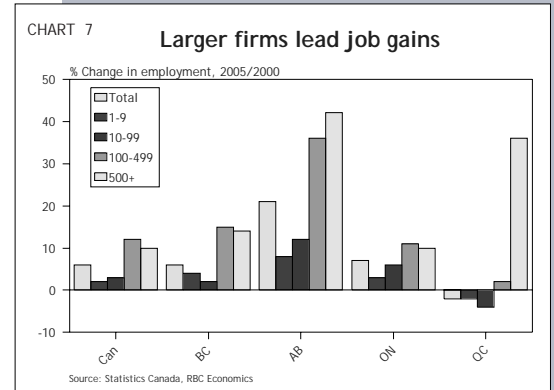
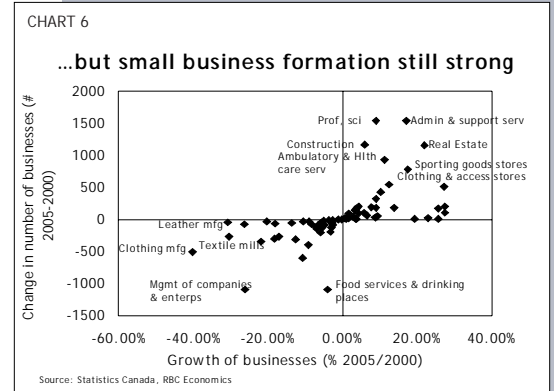
Creation among **large businesses** was strongest in sectors such as management, construction and real estate. These sectors have played a critical role in supporting the economy through solid growth in the last couple of years and lend further evidence that consolidation among the largest industries is taking place. Their growth influences, however, may well have peaked — pointing to further consolidation potential. One of the most rapid declines was in textiles, which contributed to the manufacturing sector's decline in establishments.

2. Job creation also moves upstream

Canada added roughly 1.4 million new jobs to its economy during the 2000-05 period. Although many jobs were created, they were not evenly distributed by region, industry or even size of firm. Nationwide, medium and large employers boosted payrolls by 10-12% during this period, whereas micro and small employers grew jobs by only 2-3% (chart 7). In fact, it was the very smallest firms that saw the weakest growth in employment, with many industries in this category experiencing a decline. For some industries, the trend of stronger employment growth at the larger firms and weaker growth at the smaller ones was evident. Management-related firms saw sharp job losses among smaller firms, but strong growth for larger companies. Similarly, industries such as real estate and construction experienced much stronger gains at large companies than smaller ones. Chart 8 highlights this point. An industry in the top-right quadrant indicates high employment growth overall for the industry as well as a larger share of small businesses relative to all businesses in the 2000-05 period. The general downward trend in the data, however, suggests that job losses occurred in industries where small and micro businesses grew their share of total businesses and had to cut costs to compete. Job gains occurred in industries in which small businesses decreased their share of total businesses.

2. i. Larger businesses dominate hiring across the country

British Columbia, Alberta, Ontario and Quebec account for roughly 87% of total employment. They are the only provinces we can examine in a detailed industry-by-industry manner since privacy restrictions prevent Statistics Canada from disclosing data for several individual size and industry categories in smaller provinces. Comparing employment growth by firm size, Alberta jumps out as the growth leader in every size category but especially at larger firms (chart 7). British Columbia and Ontario have also posted healthy job growth across all sizes of firms, particularly in medium and large firms. Quebec, however, has experienced a decline in overall



employment, mostly driven by small and micro businesses that outweighed large increases in employment at large-sized firms. Quebec's decline is largely due to certain challenged manufacturing sectors such as clothing, textiles and wood products — classic examples of small businesses forced offshore while larger, more capital-intensive businesses are able to survive.

2. ii. Housing and resource employment offset hit to manufacturing

Appendix B provides detailed job growth figures by industry and size of firm. The manufacturing sector has been hit hard in terms of employment with heavy representation in the industries that have suffered the worst job losses (chart 9). In particular, industries related to textiles, clothing, and accessories have felt pressures from a global influx of inexpensive clothing and textile products from China, where both labour costs and currency movements have worked in its favour. Leather, clothing and textiles manufacturers were hit the hardest, reporting job declines averaging about 37%. Other sectors rounding out the bottom 10 include non-store retailers (such as online or mail order), forestry and logging, and electrical equipment and appliance manufacturing.

Industries with solid employment growth have included those related to the housing sector including real estate firms, building material and garden equipment dealers, furniture and home furnishing stores, and construction firms. Some resource-related industries also experienced strong gains, such as oil and gas extraction, utilities, and non-metallic mineral manufacturing.

3. Widespread productivity gains, particularly in manufacturing

Using a rough productivity growth proxy we now consider which industries, regions and firm size categories are leading and lagging on productivity growth. Our chosen measure of productivity is simple, up-to-date and directly related to business performance and is also the only one that is available on a size of firm basis across many industries and regions. That measure is growth in the ratio of business revenues divided by employment levels within identically defined firm size and industry categories. We are well aware of the pros and cons associated with this measure compared to the conventional measure of labour productivity as output per hour worked or even compared to multi-factor productivity figures that are not available in the required detail. But, as chart 10 demonstrates, our proxy for productivity growth and the conventional measure reflect similar trends over time.

Appendix C shows the results by industry and firm size. The large majority of industries experienced productivity growth between 2000 and 2005. Of those that did, roughly half achieved these gains through the help of cutting employment, while the other half did so by boosting the pace of revenue growth above employment growth (chart 11). How each industry achieved these gains is telling of the different pressures faced by each industry.

3. i. Manufacturing sector cuts jobs but boosts productivity

One sector in particular that has boosted productivity by decreasing labour is the manufacturing sector, with the majority of sub-sectors falling into this category. This sector, heavily vulnerable to export trade pressures and the strong Canadian dollar,

CHART 9

Employment growth by industry: 2000 - 2005	
Top 10	Bottom 10
Couriers & messengers	Leather & allied product mfg.
Real estate	Clothing mfg.
Scenic & sightseeing transportation	Textile mills
Building material & garden dealers	Non-store retailers
Administrative & support services	Wholesale agents & brokers
General merchandise stores	Mining (except oil & gas)
Management of companies	Textile product mills
Oil & gas extraction	Forestry & logging
Furniture & home furnishings stores	Electrical equip. & appliance mfg.
Utilities	Printing & related support activities

Source: Statistics Canada, RBC Economics

CHART 10

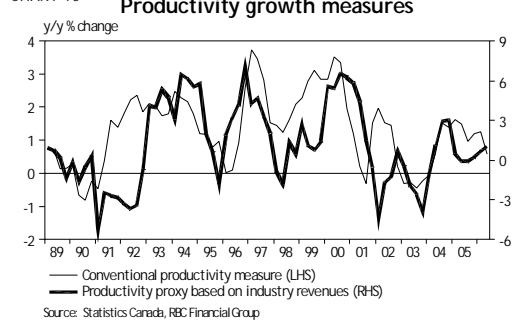


CHART 11

Top productivity gainers by industry: 2000 - 2005	
Negative employment growth	Positive employment growth
Petroleum product wholesale	Utilities
Petroleum & coal products mfg.	Gasoline stations
Information & cultural industries	Oil & gas extraction
Machinery & equip. wholesale	Rental & leasing services
Transportation equip. mfg.	Personal & household wholesale
Non-store retailers	Couriers & messengers
Motor vehicle & parts wholesale	Building material & garden dealers
Textile mills	Food, bev., & tobacco wholesale
Primary metal mfg.	Ambulatory health care services
Chemical mfg.	Water transportation

Source: Statistics Canada, RBC Economics

has faced a number of challenges in recent years, but appears to be facing these pressures head on. Auto manufacturing is an example as auto companies appear to be undertaking necessary restructuring by boosting investment and cutting jobs in order to achieve the productivity gains necessary to compete. Sectors that saw productivity increase while simultaneously growing employment include many of those related to the oil and resource sector, such as gasoline stations, oil and gas extraction, and utilities, which likely benefited from a strong revenue flow due to high resource prices. At the other end of the spectrum, industries that experienced productivity declines included many transportation-related industries, such as pipeline transportation, transit and ground passenger transportation, and motor vehicle dealers.

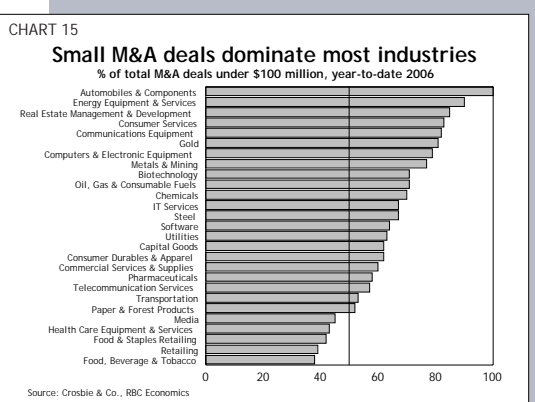
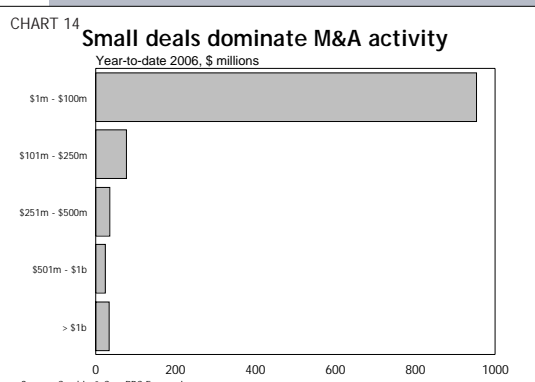
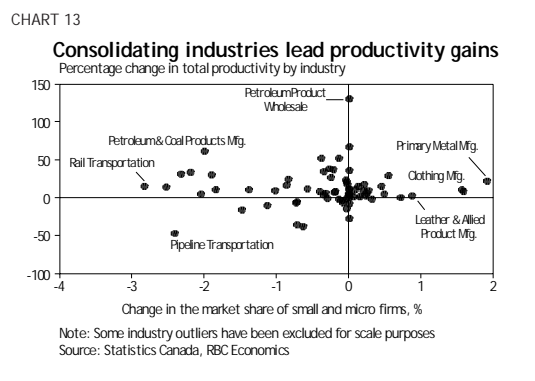
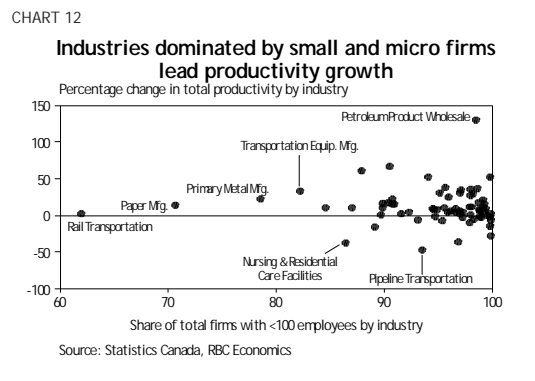
3. ii. Smaller firms have reaped larger productivity gains

Looking at productivity growth by firm size, two observations can be drawn. First, in 39 of 70 industry classifications, or 56% of industries, micro employers had faster productivity gains than the industry average. In another 12, it was small firms that had faster productivity growth than the industry average. This suggests that more often than not, relatively small firms have led bigger firms in productivity growth so far this decade. This includes industries such as plastics and rubber products manufacturing, chemical manufacturing, paper manufacturing, management of companies and enterprises, and air transportation. With many manufacturing industries represented, this supports the view that consolidation has played a key role in the search for productivity gains. Second, this view that productivity growth was likely driven by consolidation among firms is further underscored by charts 12 and 13. Industries that have seen consolidation through a lower share of small businesses have been more likely to see productivity gains than industries in which small businesses have increased their share of total businesses.

4. Future consolidation pressures

A nearly perfect storm is guiding M&A activity in Canada, including high liquidity, high profit ratios and generally low debt-to-equity ratios. Whereas we have clear evidence of restructuring so far this decade, we now need to consider the potential for a continuation of this trend. As it stands, Canada is in the midst of a mergers and acquisitions (M&A) upswing. On an annualized basis, deal flows are at the highest they have been since 2000 and, on a quarterly basis, they hit a record in the second quarter. Clearly, the lion's share of activity was on the smaller end of the spectrum, with deal values between \$1 million and \$100 million (chart 14). This underscores the consolidation trend at Canada's smaller firms.

There are many parallels to this across individual industries (chart 15). Within the highly fragmented automotive parts sector, for instance, 100% of the deals have involved transactions valued between \$1 million and \$100 million, thereby pointing to consolidation at the smaller end of the industry spectrum as auto parts firms seek out efficiency and productivity gains. In fact, within the majority of industries, more than half of the M&A transactions so far this year have involved smaller firms and smaller deal values. Whereas the big deals may be scoring media headlines, one has to go straight to mainstreet businesses of far more modest sizes for the true story on consolidation in Canadian industry. This consolidation trend will continue, but we need to look at the industries that make the likeliest candidates.



Here we turn to the role played by the gap between productivity levels of micro, small, medium and large firms. This gap is defined as the difference between revenues per employee at micro- and small-sized firms compared to the industry as a whole. Generally speaking, industries in which the productivity of smaller firms is much lower than the productivity of larger firms should experience greater pressure to consolidate, invest, innovate, reach out to different markets and trim costs than industries where all firms are on a more level playing field. Industries exhibiting a negative gap are those in which small firms are not achieving the same level of productivity as larger firms. Going forward, it is likely that pressure to achieve higher productivity gains will be most acutely felt by smaller firms in the industries with the widest negative productivity gaps.

CHART 16

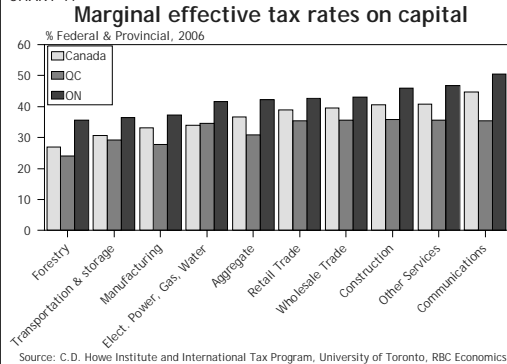
Productivity Gap, 2005	
Top 20: small firm gap as a share of productivity	
Petroleum & Coal Products Mfg.	-306.3
Transportation Equip. Mfg.	-206.6
Animal Production	-179.4
Gasoline Stations	-76.2
Arts, Entertainment & Recreation	-73.6
Crop Production	-70.2
Motor Vehicle & Parts Wholesale	-69.6
Beverage & Tobacco Product Mfg.	-68.1
Mining (except Oil & Gas)	-62.0
Farm Product Wholesale	-43.2
Wood Product Mfg.	-38.7
Paper Mfg.	-35.3
Computer & Electronic Product Mfg.	-33.6
General Merchandise Stores	-32.0
Textile Product Mills	-31.7
Pipeline Transportation	-29.1
Real Estate	-28.7
Machinery, Equip. & Supplies Wholesale	-26.1
Professional, Scientific & Technical Services	-25.5
Primary Metal Mfg.	-24.5

Source: Statistics Canada, RBC Economics

Chart 16 and Appendix D rank industries according to this labour productivity gap measure. Industries rounding out the top 20 include many manufacturers, such as transportation equipment, wood products, paper, computer and electronic manufacturers, all of which have already been actively improving their productivity performance. These are likely the industries that will be the future leaders in consolidation and productivity gains through fewer firms or outlets as Canada's small- and medium-sized businesses continue to shift into a higher growth gear.

Within the context of the developments explored in this paper are the challenges facing policymakers. With upheaval goes uncertainty and legitimate concern about the speed of adjustment and its differential effects on all types of workers and investors, but along with uncertainty goes the risk of poor policy choices. When faced with strong market forces that are reshaping the structure of Canada's business community, the best advice to policymakers is to ease the transition and quicken the adjustments by reducing growth barriers affecting small- and medium-sized businesses — not to slow it through subsidies and preferential treatment. As chart 17 demonstrates, this is best done by addressing Canada's — particularly Ontario's — very high rates of corporate taxation on productivity-enhancing capital investments, not to mention a heavy reliance on profit-insensitive levies. It may well be that raising thresholds and modest attempts at flattening tax schedules by size of business has helped to reduce disincentives to grow, but the country still has a long way to go in redesigning a tax structure that is productivity friendly.

CHART 17



Footnotes

¹ We define a business's size using the establishment concept because it does not discriminate between consolidation through fewer firms versus fewer outlets, and by the number of employees — micro businesses have fewer than 10 employees, small businesses between 10-99, medium businesses between 100-499 employees and large businesses have more than 500. The industry level analysis in this paper focuses on non-financial industries and excludes public sectors like education, certain health care sectors and public administration.

² We have excluded the so-called 'indeterminate' category of businesses from our analysis. The category collectively accounts for only 8% of total business revenues, so this is a manageable issue. An unknown share consists of businesses with no employees and, therefore, do not fall into the context in which we are examining the health of the business community. The remainder consist of the self-employed who do not maintain regular payrolls such as a landscaping company that hires seasonal workers. The self-employed who do maintain regular payrolls are, however, very much included in our analysis. Even if we could capture all of the self-employed — not just those with regular payrolls — employment data show that the total number of self-employed has grown very little this decade after a strong surge in the 1990s, so this sector has also seen cooling net start-up rates.

³ The business register includes establishments with at least \$30,000 in annual revenue, or a workforce for which they submit payroll remittances to the Canada Revenue Agency, or they are federally or provincially incorporated and have filed taxes within the past three years.

Appendix A: Changes in industry structure by firm size

ESTABLISHMENT GROWTH & CHANGE 2000-2005 (Sorted by total establishment % growth)											
Industry	Total		1-9		10-99		100-499		500 +		
	%	#	%	#	%	#	%	#	%	#	
Couriers & Messengers	20.7%	407	20.1%	307	8.8%	34	164.1%	64	15.4%	2	
Oil & Gas Extraction	18.7%	296	14.9%	166	27.5%	106	30.7%	23	7.1%	1	
Health & Personal Care Stores	15.7%	1,656	24.9%	1,453	4.4%	202	4.1%	4	-60.0%	-3	
General Merchandise Stores	14.2%	867	19.5%	685	-6.9%	-138	61.0%	339	-61.3%	-19	
Real Estate	11.1%	3,299	7.7%	1,865	22.0%	1,157	82.9%	247	120.0%	30	
Professional, Scientific & Technical Services	10.6%	11,344	10.8%	9,624	9.0%	1,543	12.4%	145	30.8%	32	
Clothing & Clothing Accessories Stores	8.8%	1,591	6.1%	807	17.4%	783	0.0%	0	4.5%	1	
Building Material & Garden Equip. & Supplies Dealers	8.8%	617	8.0%	364	4.2%	100	206.6%	157	-66.7%	-4	
Administrative & Support Services	7.4%	3,172	4.3%	1,390	17.0%	1,542	18.4%	176	62.7%	64	
Waste Management & Remediation Services	6.5%	159	-0.4%	-7	25.5%	165	7.8%	4	-60.0%	-3	
Construction	6.2%	6,767	6.1%	5,310	5.9%	1,166	20.5%	231	111.1%	60	
Ambulatory Health Care Services	6.1%	3,305	5.1%	2,325	11.2%	925	11.8%	54	3.1%	1	
Nursing & Residential Care Facilities	5.0%	327	1.5%	49	7.8%	191	9.7%	79	16.7%	8	
Electronics & Appliance Stores	4.5%	333	5.3%	313	2.9%	42	-40.0%	-18	-80.0%	-4	
Truck Transportation	2.6%	726	1.0%	231	10.2%	428	21.9%	62	41.7%	5	
Arts, Entertainment & Recreation	2.5%	442	-1.6%	-209	12.5%	548	26.3%	104	-1.7%	-1	
Furniture & Home Furnishings Stores	2.2%	155	0.5%	25	5.8%	105	43.9%	25	0.0%	0	
Sporting Goods, Hobby, Book & Music Stores	2.1%	168	-5.3%	-328	27.3%	510	-15.0%	-9	-41.7%	-5	
Motor Vehicle & Parts Dealers	1.9%	224	0.7%	49	3.2%	151	7.8%	25	-33.3%	-1	
Building Material & Supplies Wholesale	0.3%	26	0.3%	19	0.6%	19	-6.5%	-13	16.7%	1	
Furniture & Related Product Mfg.	0.0%	-2	2.5%	70	-6.4%	-90	11.0%	23	-27.8%	-5	
Personal & Laundry Services	-1.1%	-269	-3.0%	-600	9.0%	317	11.3%	12	20.0%	2	
Food, Beverage & Tobacco Wholesale	-1.2%	-84	-1.8%	-80	-2.8%	-58	20.8%	44	100.0%	10	
Repair & Maintenance	-1.3%	-472	-0.9%	-276	-3.3%	-193	-8.2%	-8	250.0%	5	
Personal & Household Goods Wholesale	-1.3%	-110	-0.1%	-7	-5.5%	-128	7.7%	16	81.8%	9	
Food & Beverage Stores	-1.8%	-441	-2.7%	-465	1.6%	99	-6.6%	-66	-29.0%	-9	
Gasoline Stations	-2.5%	-277	-1.2%	-87	-5.9%	-205	66.7%	14	100.0%	1	
Fishing, Hunting & Trapping	-2.6%	-156	-2.1%	-112	-5.6%	-40	-22.2%	-4	0.0%	0	
Information & Cultural Industries	-2.9%	-410	-0.4%	-33	-9.1%	-398	0.2%	1	27.0%	20	
Food Services & Drinking Places	-3.0%	-1,945	-1.9%	-699	-4.1%	-1,089	-15.3%	-154	-8.8%	-3	
Machinery, Equip. & Supplies Wholesale	-3.9%	-649	-0.4%	-43	-10.7%	-600	-1.9%	-6	0.0%	0	
Warehousing & Storage	-4.4%	-85	-9.9%	-129	9.3%	51	-3.6%	-2	-71.4%	-5	
Plastics & Rubber Products Mfg.	-5.1%	-139	-7.4%	-77	-6.1%	-78	5.1%	18	-7.7%	-2	
Transit & Ground Passenger Transportation	-5.4%	-291	-11.5%	-523	27.4%	202	23.1%	28	13.3%	2	
Fabricated Metal Product Mfg.	-5.6%	-506	-8.4%	-417	-2.5%	-89	0.0%	0	0.0%	0	
Paper Mfg.	-6.2%	-63	-15.2%	-49	-5.0%	-21	9.3%	20	-22.8%	-13	
Machinery Mfg.	-6.4%	-376	-11.7%	-391	-0.1%	-2	4.9%	17	0.0%	0	
Utilities	-6.6%	-89	-6.2%	-51	-8.8%	-36	-9.9%	-9	21.9%	7	
Primary Metal Mfg.	-6.7%	-54	-11.2%	-37	3.4%	10	-18.2%	-28	2.8%	1	
Chemical Mfg.	-6.7%	-169	-12.6%	-169	1.7%	16	-5.3%	-12	-20.0%	-4	
Accommodation Services	-7.5%	-904	-10.0%	-744	-3.1%	-126	-9.2%	-49	65.2%	15	
Non-Metallic Mineral Product Mfg.	-8.4%	-228	-19.7%	-309	6.5%	66	13.6%	16	-20.0%	-1	
Printing & Related Support Activities	-10.2%	-576	-7.1%	-275	-17.0%	-266	-15.9%	-33	-33.3%	-2	
Animal Production	-10.3%	-2,408	-11.8%	-2,602	13.8%	179	50.0%	14	100.0%	1	
Beverage & Tobacco Product Mfg.	-10.4%	-83	-11.7%	-62	-3.6%	-7	-26.2%	-17	30.0%	3	
Transportation Equip. Mfg.	-10.5%	-298	-15.8%	-232	-8.2%	-75	5.4%	19	-11.0%	-10	
Rental & Leasing Services	-10.5%	-987	-14.0%	-1,014	1.0%	21	1.8%	2	57.1%	4	
Wood Product Mfg.	-11.7%	-566	-17.8%	-462	-4.9%	-88	-3.0%	-13	-23.1%	-3	
Farm Product Wholesale	-11.8%	-138	-13.0%	-108	-10.5%	-34	31.3%	5	-100.0%	-1	
Crop Production	-13.1%	-2,745	-15.5%	-2,927	8.9%	184	-4.7%	-3	100.0%	1	
Motor Vehicle & Parts Wholesale	-13.3%	-692	-16.8%	-569	-7.1%	-122	-3.3%	-3	40.0%	2	
Electrical Equip., Appliance & Component Mfg.	-14.3%	-209	-22.3%	-182	1.0%	5	-18.2%	-27	-35.7%	-5	
Scenic & Sightseeing Transportation	-14.5%	-54	-25.2%	-74	23.0%	17	100.0%	3	0.0%	0	
Food Mfg.	-15.9%	-1,214	-20.4%	-924	-12.5%	-307	2.6%	15	3.3%	2	
Textile Product Mills	-16.5%	-202	-15.1%	-123	-18.1%	-66	-21.7%	-10	-100.0%	-3	
Wholesale Agents & Brokers	-16.6%	-1,233	-15.2%	-879	-21.8%	-344	-17.5%	-10	0.0%	0	
Mining (except Oil & Gas)	-17.3%	-230	-27.0%	-190	-2.6%	-13	-22.1%	-23	-16.7%	-4	
Forestry & Logging	-18.1%	-1,723	-18.2%	-1,412	-18.2%	-301	-12.9%	-12	50.0%	2	
Air Transportation	-18.2%	-205	-26.6%	-189	-1.2%	-4	-15.2%	-10	-11.1%	-2	
Petroleum Product Wholesale	-18.3%	-238	-20.7%	-184	-13.5%	-54	0.0%	0	#DIV/0!	0	
Computer & Electronic Product Mfg.	-18.5%	-477	-28.3%	-414	-5.6%	-49	-3.8%	-8	-17.1%	-6	
Water Transportation	-20.3%	-87	-24.1%	-62	-20.3%	-29	12.0%	3	33.3%	1	
Non-Store Retailers	-20.6%	-850	-17.3%	-542	-30.4%	-270	-36.9%	-31	-46.7%	-7	
Pipeline Transportation	-22.7%	-49	-37.8%	-62	25.6%	11	57.1%	4	-100.0%	-2	
Management of Companies & Enterprises	-24.6%	-4,226	-26.1%	-3,305	-26.2%	-1,095	33.7%	115	196.7%	59	
Petroleum & Coal Products Mfg.	-24.6%	-99	-39.3%	-99	3.7%	4	-11.8%	-4	0.0%	0	
Clothing Mfg.	-27.5%	-1,016	-18.3%	-400	-40.1%	-505	-44.8%	-104	-38.9%	-7	
Textile Mills	-27.6%	-241	-28.4%	-141	-26.3%	-78	-24.0%	-18	-66.7%	-4	
Rail Transportation	-32.3%	-50	-67.4%	-58	19.4%	6	5.3%	1	5.3%	1	
Leather & Allied Product Mfg.	-40.4%	-237	-42.5%	-172	-30.8%	-45	-54.5%	-18	-66.7%	-2	
Total	0.8%	7,029	0.2%	1,547	1.9%	3,862	8.2%	1,407	14.9%	213	

Note: Due to data suppression, some values could not be reported. They are listed as "n/a".

Source: Statistics Canada, RBC Economics Research

Appendix B: Industry employment changes by firm size

EMPLOYMENT GROWTH & CHANGE 2000-2005 (Sorted by total employment % growth)										
Industry	Total		1-9		10-99		100-499		500 +	
	%	#	%	#	%	#	%	#	%	#
Couriers & Messengers	62.7	23,686	19.6	672	17.9	2,046	235.2	19,426	10.5	1,542
Real Estate	42.5	118,071	9.8	6,085	24.2	32,473	95.0	48,322	101.3	31,191
Scenic & Sightseeing Transportation	38.7	1,441	-14.9	-109	24.2	458	n/a	n/a	n/a	n/a
Building Material & Garden Equip. & Supplies Dealers	31.0	29,509	13.5	2,221	17.1	8,954	n/a	n/a	n/a	n/a
Administrative & Support Services	29.5	175,779	8.4	7,755	18.5	42,404	n/a	n/a	n/a	n/a
General Merchandise Stores	22.0	44,954	21.2	2,520	-19.2	-13,058	67.4	69,482	-64.6	-13,990
Management of Companies & Enterprises	20.0	49,650	-27.2	-9,843	-24.7	-29,121	60.6	34,505	145.9	54,109
Oil & Gas Extraction	19.4	9,023	14.4	420	18.2	2,147	47.5	6,736	-1.6	-280
Furniture & Home Furnishings Stores	17.7	12,015	2.3	407	18.2	6,854	n/a	n/a	n/a	n/a
Utilities	17.3	20,138	-10.3	-275	-12.1	-1,485	-12.4	-2,461	29.8	24,359
Construction	16.1	153,081	4.0	9,634	7.7	36,581	28.8	52,834	110.9	54,032
Professional, Scientific & Technical Services	15.7	149,374	10.6	23,890	11.4	46,379	19.9	39,737	33.2	39,368
Ambulatory Health Care Services	15.4	65,108	9.9	14,071	21.2	34,259	11.0	9,684	22.0	7,094
Sporting Goods, Hobby, Book & Music Stores	12.5	9,553	5.5	1,096	40.5	14,687	-11.3	-1,168	-50.6	-5,062
Arts, Entertainment & Recreation	11.0	31,547	2.2	846	12.8	14,310	27.3	19,153	-4.2	-2,762
Waste Management & Remediation Services	9.0	2,986	8.4	419	33.9	5,361	n/a	n/a	n/a	n/a
Clothing & Clothing Accessories Stores	8.5	16,605	8.1	4,469	14.9	13,055	3.1	983	-9.0	-1,902
Water Transportation	8.2	1,204	-13.0	-93	-12.5	-592	n/a	n/a	n/a	n/a
Truck Transportation	7.2	16,186	1.8	1,014	10.3	10,708	18.6	8,930	-27.2	-4,466
Air Transportation	7.1	4,303	-19.7	-435	3.8	351	-17.4	-2,276	18.4	6,663
Health & Personal Care Stores	7.0	10,786	25.3	5,931	8.1	8,906	n/a	n/a	n/a	n/a
Non-Metallic Mineral Product Mfg.	6.5	3,754	-16.9	-915	9.4	2,744	15.3	2,990	-30.0	-1,065
Personal & Household Goods Wholesale	6.4	7,715	-1.7	-287	n/a	n/a	11.1	3,760	n/a	n/a
Motor Vehicle & Parts Dealers	6.3	13,218	2.0	501	7.9	10,539	n/a	n/a	n/a	n/a
Animal Production	5.9	4,638	-4.7	-2,126	10.6	2,852	n/a	n/a	n/a	n/a
Fishing, Hunting & Trapping	4.9	1,432	6.9	876	3.6	521	n/a	n/a	n/a	0
Nursing & Residential Care Facilities	4.8	14,024	2.3	261	7.3	6,262	8.3	12,182	-9.5	-4,681
Beverage & Tobacco Product Mfg.	4.2	1,265	-19.7	-272	-11.7	-793	n/a	n/a	n/a	n/a
Crop Production	4.1	4,088	-9.7	-4,391	16.0	6,936	n/a	n/a	n/a	n/a
Accommodation Services	3.5	8,716	-4.6	-1,114	1.1	1,271	-4.6	-4,437	75.5	12,996
Transit & Ground Passenger Transportation	2.9	2,678	-8.9	-876	25.9	5,377	29.8	6,373	-20.3	-8,196
Farm Product Wholesale	2.5	348	-8.0	-207	-0.5	-36	n/a	n/a	n/a	n/a
Machinery Mfg.	2.4	3,691	-2.5	-254	2.7	1,816	3.1	1,878	1.5	251
Gasoline Stations	2.3	2,152	1.6	503	-1.1	-624	n/a	n/a	n/a	n/a
Rental & Leasing Services	2.0	1,933	-3.1	-684	-0.2	-116	n/a	n/a	n/a	n/a
Plastics & Rubber Products Mfg.	1.7	2,256	-2.5	-91	-2.3	-1,023	9.1	5,706	-10.4	-2,336
Food, Beverage & Tobacco Wholesale	1.2	1,579	-2.9	-388	-1.6	-938	21.0	7,831	-25.2	-4,926
Fabricated Metal Product Mfg.	0.8	1,741	-2.9	-475	0.1	153	2.8	1,976	0.5	87
Furniture & Related Product Mfg.	0.7	722	6.1	509	-0.9	-379	9.4	3,663	-20.9	-3,071
Repair & Maintenance	0.4	904	0.1	62	0.0	13	n/a	n/a	n/a	n/a
Building Material & Supplies Wholesale	0.1	200	4.4	871	-1.6	-1,385	-3.9	-1,248	44.0	1,962
Petroleum Product Wholesale	-0.6	-93	-16.9	-526	n/a	n/a	n/a	n/a	n/a	0
Information & Cultural Industries	-0.8	-3,230	1.6	423	-9.8	-12,101	5.1	4,736	2.7	3,712
Computer & Electronic Product Mfg.	-1.3	-1,458	-21.7	-952	-4.6	-1,325	-0.7	-255	2.8	1,074
Pipeline Transportation	-1.6	-75	-26.9	-78	18.7	277	n/a	n/a	n/a	n/a
Food Mfg.	-2.0	-5,157	-17.4	-2,553	-7.8	-5,921	4.2	4,799	-2.8	-1,482
Warehousing & Storage	-2.1	-716	-0.2	-9	11.8	1,730	n/a	n/a	n/a	n/a
Motor Vehicle & Parts Wholesale	-2.2	-1,580	-20.1	-2,620	-4.2	-1,717	n/a	n/a	n/a	n/a
Food & Beverage Stores	-2.8	-12,706	-5.1	-2,964	4.0	7,414	-8.8	-13,312	-7.3	-3,844
Petroleum & Coal Products Mfg.	-3.0	-491	-28.2	-201	17.9	590	-2.8	-210	-14.0	-670
Food Services & Drinking Places	-3.7	-38,248	-2.5	-3,429	-2.5	-17,727	-14.9	-22,479	18.5	5,387
Chemical Mfg.	-4.1	-4,044	-10.1	-450	1.3	388	-2.4	-1,009	-13.9	-2,973
Wood Product Mfg.	-4.7	-7,277	-12.9	-1,024	-1.1	-606	-3.2	-2,564	-28.1	-3,083
Machinery, Equip. & Supplies Wholesale	-6.9	-17,468	1.7	622	-9.2	-12,880	1.3	692	-23.1	-5,902
Primary Metal Mfg.	-7.2	-7,075	-7.1	-70	5.3	575	-14.4	-4,889	-5.2	-2,691
Paper Mfg.	-7.7	-8,204	-13.8	-162	-7.5	-1,204	5.4	2,599	-22.6	-9,437
Transportation Equip. Mfg.	-9.4	-24,544	-13.1	-588	-4.3	-1,306	9.4	6,899	-19.1	-29,549
Rail Transportation	-9.5	-4,720	-55.1	-114	31.0	344	11.1	466	-12.2	-5,416
Electronics & Appliance Stores	-10.6	-6,528	14.5	2,659	-6.8	-2,070	n/a	n/a	n/a	n/a
Printing & Related Support Activities	-11.5	-11,127	-4.2	-522	-11.8	-5,219	-11.3	-4,031	-32.4	-1,355
Electrical Equip., Appliance & Component Mfg.	-12.8	-7,391	-17.8	-458	6.8	1,044	-18.1	-5,297	-24.9	-2,680
Forestry & Logging	-13.6	-10,915	-17.1	-3,433	-16.0	-6,575	-11.6	-1,876	35.7	969
Textile Product Mills	-14.8	-3,386	-7.8	-187	-4.3	-423	n/a	n/a	n/a	n/a
Mining (except Oil & Gas)	-15.4	-9,495	-25.2	-636	-4.6	-687	-23.8	-5,924	-11.7	-2,248
Wholesale Agents & Brokers	-19.0	-12,236	-14.5	-2,513	-22.2	-8,147	n/a	n/a	n/a	n/a
Non-Store Retailers	-28.5	-16,487	-11.6	-996	-29.3	-6,258	-23.8	-3,363	-42.6	-5,870
Textile Mills	-30.2	-8,993	-23.9	-353	-29.8	-3,043	n/a	n/a	n/a	n/a
Clothing Mfg.	-36.7	-37,526	-14.1	-939	-34.3	-13,332	-42.4	-17,976	-36.8	-5,279
Leather & Allied Product Mfg.	-44.7	-5,690	-30.1	-315	-27.6	-1,109	n/a	n/a	n/a	n/a
Personal & Laundry Services	n/a	n/a	n/a	n/a	n/a	n/a	10.9	2,048	n/a	n/a

Note: Due to data suppression, some values could not be reported. They are listed as "n/a".

Source: Statistics Canada, RBC Economics Research

Appendix C: Productivity growth by industry and firm size

PRODUCTIVITY GROWTH 2000-2005 (Sorted by total productivity % growth)					
Industry Class	TOTAL	1-9	10-99	100-499	500 +
Petroleum Product Wholesale	130.7	38.9	241.3	n/a	n/a
Utilities	67.3	165.3	435.7	132.0	-9.6
Petroleum & Coal Products Mfg.	61.3	22.6	14.1	74.5	21.0
Gasoline Stations	52.6	28.8	21.7	n/a	n/a
Oil & Gas Extraction	52.0	108.0	39.8	35.9	1.4
Information & Cultural Industries	38.5	-7.3	96.7	7.9	18.1
Rental & Leasing Services	36.5	137.4	24.9	n/a	n/a
Machinery, Equip. & Supplies Wholesale	35.7	1.8	8.9	17.6	661.0
Personal & Household Goods Wholesale	34.9	14.7	33.0	27.6	n/a
Transportation Equip. Mfg.	33.5	12.5	-7.9	14.3	51.7
Couriers & Messengers	30.7	9.5	13.8	50.5	19.7
Building Material & Garden Equip. & Supplies Dealers	30.2	32.3	14.4	n/a	n/a
Non-Store Retailers	29.1	-6.3	40.5	45.2	-50.1
Motor Vehicle & Parts Wholesale	27.1	34.7	75.9	n/a	n/a
Food, Beverage & Tobacco Wholesale	24.8	12.2	8.8	1.5	420.8
Textile Mills	22.7	20.1	16.0	n/a	n/a
Primary Metal Mfg.	22.6	-36.4	32.3	4.6	36.1
Ambulatory Health Care Services	21.4	32.7	18.4	2.9	41.9
Chemical Mfg.	17.8	63.2	27.6	18.9	-4.0
Food Services & Drinking Places	17.7	21.0	21.5	20.7	1.7
Wood Product Mfg.	15.8	-17.2	7.2	22.3	-10.8
Water Transportation	15.0	-2.8	26.6	n/a	n/a
Mining (except Oil & Gas)	15.0	-43.8	17.8	20.0	15.4
Health & Personal Care Stores	14.9	54.3	13.0	n/a	n/a
Paper Mfg.	13.6	34.1	21.3	11.6	13.8
Farm Product Wholesale	12.1	-4.0	38.7	n/a	n/a
Waste Management & Remediation Services	12.0	9.6	-3.7	n/a	n/a
Plastics & Rubber Products Mfg.	10.8	7.9	88.8	-19.4	5.6
Clothing & Clothing Accessories Stores	10.6	9.5	12.6	10.4	19.3
General Merchandise Stores	10.5	-50.1	-8.9	15.3	21.7
Food Mfg.	10.3	10.5	11.8	3.3	20.0
Leather & Allied Product Mfg.	10.2	11.6	-3.3	n/a	n/a
Sporting Goods, Hobby, Book & Music Stores	9.2	23.0	3.4	19.0	50.2
Printing & Related Support Activities	8.9	14.1	5.7	12.7	16.2
Non-Metallic Mineral Product Mfg.	8.8	16.3	6.6	8.0	-15.0
Furniture & Related Product Mfg.	8.0	28.2	-0.8	9.8	20.4
Construction	7.8	10.3	2.7	-10.1	-25.2
Clothing Mfg.	7.8	16.4	1.9	15.3	6.6
Truck Transportation	7.1	7.0	5.4	9.3	-1.4
Food & Beverage Stores	5.7	11.2	-1.7	6.3	37.7
Furniture & Home Furnishings Stores	5.5	16.8	9.4	n/a	n/a
Wholesale Agents & Brokers	5.1	-1.0	8.4	n/a	n/a
Arts, Entertainment & Recreation	5.0	11.0	-2.4	-24.5	36.5
Textile Product Mills	4.8	6.8	-1.1	n/a	n/a
Management of Companies & Enterprises	4.3	48.0	71.8	-24.6	-14.6
Administrative & Support Services	4.0	6.7	4.8	n/a	n/a
Air Transportation	3.8	18.7	24.8	20.8	-2.9
Warehousing & Storage	2.1	36.5	22.0	n/a	n/a
Beverage & Tobacco Product Mfg.	2.1	43.5	-2.5	n/a	n/a
Rail Transportation	1.8	119.5	-15.2	20.8	-1.0
Fishing, Hunting & Trapping	1.4	13.4	16.2	n/a	n/a
Building Material & Supplies Wholesale	0.8	-2.5	13.1	-23.6	-24.1
Electrical Equip., Appliance & Component Mfg.	0.3	15.2	-5.3	10.3	-19.3
Professional, Scientific & Technical Services	-1.4	1.8	6.5	-8.1	-36.5
Fabricated Metal Product Mfg.	-1.5	-0.4	-5.2	-0.9	9.6
Electronics & Appliance Stores	-2.1	13.9	-10.9	n/a	n/a
Motor Vehicle & Parts Dealers	-2.5	-2.4	-6.3	n/a	n/a
Forestry & Logging	-3.4	31.6	-11.0	-5.2	-57.4
Real Estate	-5.6	9.1	-10.0	-32.4	-26.4
Animal Production	-6.6	-26.3	-27.2	n/a	n/a
Machinery Mfg.	-6.9	7.9	-6.6	-5.4	-14.5
Accommodation Services	-7.5	6.2	-23.8	7.4	-8.0
Scenic & Sightseeing Transportation	-9.8	7.9	-9.8	n/a	n/a
Crop Production	-14.8	-24.3	-29.9	n/a	n/a
Computer & Electronic Product Mfg.	-15.7	-7.2	5.1	3.2	-33.0
Repair & Maintenance	-27.9	-30.8	-32.3	n/a	n/a
Transit & Ground Passenger Transportation	-36.2	-1.8	-64.2	39.9	-41.1
Nursing & Residential Care Facilities	-37.8	10.9	11.8	1.8	-80.8
Pipeline Transportation	-47.3	113.3	25.4	n/a	n/a
Personal & Laundry Services	n/a	n/a	n/a	n/a	n/a

Note: Due to data suppression, some values could not be reported. They are listed as "n/a".

Source: Statistics Canada, RBC Economics Research

Appendix D: Productivity gap by industry and firm size

GROWTH IN PRODUCTIVITY GAP 2000-2005 Productivity growth at small & micro firms vs. total productivity		
Industry	Productivity Gap 2000 (\$ revenue per employee)	Productivity Gap 2005 (\$ revenue per employee)
Utilities	43,058	1,399,386
Air Transportation	-1,956	34,520
Petroleum Product Wholesale	-167,454	712,625
Management of Companies & Enterprises	-34,630	36,966
Information & Cultural Industries	-20,307	16,305
Plastics & Rubber Products Mfg.	-52,102	38,894
Warehousing & Storage	-23,357	10,044
Building Material & Supplies Wholesale	-24,234	3,518
Rental & Leasing Services	-17,120	2,013
Nursing & Residential Care Facilities	-29,124	3,010
Health & Personal Care Stores	-4,956	-405
Water Transportation	18,132	33,515
Pipeline Transportation	-2,046,028	-349,058
Chemical Mfg.	-39,674	-7,084
Oil & Gas Extraction	170,554	263,296
Computer & Electronic Product Mfg.	-96,782	-52,033
Furniture & Home Furnishings Stores	-20,252	-12,978
Fishing, Hunting & Trapping	-12,564	-8,249
Scenic & Sightseeing Transportation	-13,748	-9,607
Food Services & Drinking Places	-2,404	-1,703
Administrative & Support Services	-2,992	-2,289
Ambulatory Health Care Services	-3,396	-2,616
Professional, Scientific & Technical Services	-23,975	-19,158
Machinery Mfg.	-26,018	-21,417
Forestry & Logging	-18,594	-15,975
Farm Product Wholesale	-477,900	-411,402
Clothing & Clothing Accessories Stores	-3,430	-2,954
Real Estate	-36,203	-32,257
Motor Vehicle & Parts Wholesale	-595,677	-552,231
Paper Mfg.	-90,226	-85,629
Food Mfg.	-27,571	-26,387
Non-Store Retailers	51,517	52,786
Electronics & Appliance Stores	-33,455	-33,880
Beverage & Tobacco Product Mfg.	-143,116	-147,707
Repair & Maintenance	-13,614	-14,066
Wholesale Agents & Brokers	-12,433	-12,920
Sporting Goods, Hobby, Book & Music Stores	-10,052	-10,785
Animal Production	-132,122	-145,282
Arts, Entertainment & Recreation	-33,400	-37,200
Truck Transportation	-18,023	-20,180
Crop Production	-42,010	-47,143
Non-Metallic Mineral Product Mfg.	-17,816	-20,022
Primary Metal Mfg.	-54,355	-61,503
Rail Transportation	1,287,155	1,100,140
Electrical Equip., Appliance & Component Mfg.	-30,332	-34,804
Personal & Household Goods Wholesale	-18,370	-21,937
Printing & Related Support Activities	-18,198	-22,054
Construction	-20,442	-24,887
Textile Product Mills	-24,102	-29,556
Fabricated Metal Product Mfg.	-13,030	-17,062
Clothing Mfg.	-11,338	-15,240
Couriers & Messengers	32,569	18,974
Mining (except Oil & Gas)	-74,914	-107,091
Food & Beverage Stores	-14,523	-21,048
Wood Product Mfg.	-36,461	-57,176
Transportation Equip. Mfg.	-185,532	-310,475
Furniture & Related Product Mfg.	-9,122	-15,669
Petroleum & Coal Products Mfg.	-664,174	-1,221,539
Textile Mills	-12,391	-22,869
Gasoline Stations	-50,483	-110,725
Leather & Allied Product Mfg.	-6,290	-15,168
Transit & Ground Passenger Transportation	24,286	-14,263
Motor Vehicle & Parts Dealers	-4,099	-12,435
Building Material & Garden Equip. & Supplies Dealers	5,274	-8,936
Food, Beverage & Tobacco Wholesale	-18,753	-79,330
Waste Management & Remediation Services	-1,627	-15,906
General Merchandise Stores	3,607	-39,682
Accommodation Services	485	-7,007
Machinery, Equip. & Supplies Wholesale	711	-81,078
Personal & Laundry Services	-13,116	n/a

Note: Due to data suppression, some values could not be reported. They are listed as "n/a".

Source: Statistics Canada, RBC Economics

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