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Exporting Matters: Job Creation Performance of Exporters, 1993–2002

Further Results from the Growth Firms Project



Small Business Policy Branch

Industry Canada

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SUMMARY

As part of the multi-year Growth Firms Project, the Small Business Policy Branch investigated the job creation performance of exporters in the most recent phase of work.¹ Results from tabulations covering 1993 to 2002 demonstrate that firms engaged in exporting were much more likely to be hyper or strong growth firms than those that did not export. In addition, exporters were found to contribute far more than their proportional share to job creation. Firms that exported in 2002 accounted for nearly 6 percent of continuing firms that operated over the 1993–2002 period, but were responsible for 47 percent of all jobs created by continuing firms between 1993 and 2002.

1. For more results from Phase III, please refer to David Halabisky, “Growth Firms Project: Key Findings of Phase III.” Ottawa: Industry Canada, in preparation.

INTRODUCTION

This study is part of the Small Business Policy Branch's Growth Firms Project, which examines job creation by high growth firms and small businesses in the private sector. This is a multi-year project, involving a research consortium that includes Statistics Canada's Science Innovation and Electronic Information Division, National Research Council Canada's Industrial Research Assistance Program and the Government of Ontario. Earlier studies in the Growth Firms Project found that small businesses and high growth firms are important engines of growth, which have created disproportionate shares of net jobs between 1985 and 1999,² and 1993 and 2002.³

Exporting is very important to Canada's economy, accounting for 41 percent of the gross domestic product (GDP) in 2002⁴ and one in three jobs in Canada.⁵ Given the relatively small size of Canada's domestic economy, exporting can be a key driver of Canada's economic growth. Furthermore, exporting has many indirect benefits for the economy: more efficient resource allocation, greater capacity utilization, exploitation of economies of scale and stimulation of technological improvement, resulting from foreign market competition.⁶

The goal of this study is to examine the job creation performance of exporters, and investigate the number of high growth firms that export, as well as the role that exporting has in their success. At the economy level, it is unclear if exporting leads to overall economic growth and hence job creation, or if economic growth causes increased exporting activity. However, evidence suggests that exporting leads to direct economic

2. Chris Parsley and Erwin Dreessen, "Growth Firms Project: Key Findings." Ottawa: Industry Canada, 2004. (www.strategis.gc.ca/sbresearch/growthfirms/highlights)

3. David Halabisky, "Growth Firms Project: Key Findings of Phase III." Ottawa: Industry Canada, in preparation.

4. Statistics Canada, CANSIM, Table 380-0002 and Catalogue No. 13-001-XIB.

5. Export Development Canada, "Why Trade is Crucial to Canada." Ottawa: Export Development Canada, 2005. (www.edc.ca/corpinfo/whoweare/why_trade_e.htm)

6. Titus O. Awokuse, "Is the Export-led Growth Hypothesis Valid for Canada?" *Canadian Journal of Economics*, February 2003, Vol. 36(1).

benefits, such as increased job creation, at the firm level.⁷ This study covers the 1993 to 2002 period, and seeks to answer the following questions:

- What proportion of firms that continued over the 1993–2002 period participated in exporting?
- Are exporters more likely than non-exporters to be high growth firms?
- Do exporters create more jobs than non-exporters?
- Do wages grow faster in exporting firms than in non-exporting firms?

This paper begins with a discussion of the data and methodology used in the study. The presentation and discussion of results follow, and the conclusions highlight the main results and provide some ideas for future work. Additional detailed results are provided in the Appendix.

DATA AND METHODOLOGY

This study uses a recently updated version of the Longitudinal Employment Analysis Program/Small Area File (LEAP/SAF) database,⁸ which is a longitudinal universe file (hence, there are no sampling issues) that covers all employer firms in the Canadian economy over the 1993–2002 period. The annual data can report on employment and wage levels by firm size and at various levels of industry and geographical detail.

The main difference between the updated version of the file and that used in the two previous phases of this project is in the industrial classification system. The first two studies used a file based on the Standard Industry Classification (SIC) System; the updated version uses the North American Industrial Classification System (NAICS). Consequently, the time period covered is limited by the backcasting of the new classification system on the old data.

7. Élisabeth Lefebvre and Louis A. Lefebvre, “SMEs, Exports and Job Creation: A Firm-Level Analysis.” Ottawa: Industry Canada, 2000, Occasional Paper Number 26.

8. The LEAP/SAF file was created by linking the Longitudinal Employment Analysis Program (LEAP) file with the Small Area File (SAF). This is an updated version of the file that was used in previous studies. For more information, please refer to Chris Parsley and Erwin Dreessen, “Growth Firms Project: Key Findings.” Ottawa: Industry Canada, 2004. (www.strategis.gc.ca/sbresearch/growthfirms/highlights)

As in the earlier studies, the employment unit used is the Individual Labour Unit (ILU).⁹ An ILU is defined as a person who receives a T4 slip; if a person receives more than one T4 in a year, their “unit” is distributed among employers in proportion to their earnings. It is important to recognize that an ILU does not vary according to the number of hours worked. For example, a student who works part-time during the summer and an employee who works two full-time jobs will both be assigned one ILU each. A firm’s employment level is the sum of its ILUs. Furthermore, the ILU cannot account for owner-operators unless they are on their own payroll. Therefore, it is likely that a portion of self-employed persons are not recognized in these data.

The LEAP/SAF file was used as the base for tabulations in this phase of work, and export data from the Exporter Registry were linked to the LEAP/SAF file for 2002. The methodology to identify the target population and measure growth is the same used in previous studies.¹⁰ From the universe of Canadian businesses, those that operated in the private sector and survived from 1993 to 2002 were identified, and their employment creation over this period was measured. The private sector was identified as firms operating outside of public administration, health and education industries; Canada Post was also excluded. To be included in the study, firms had to have at least one full year of operation; therefore, firms that started up in 1993 were excluded, but firms that existed in 1992 were included. Firm growth was tracked between 1993 and 2002, and firms were categorized over the first four years of the period according to the following criteria:

- **Hyper growth firms:** those with at least 150 percent growth in employment;
- **Strong growth firms:** those with between 50 and 150 percent growth in employment;
- **Slow growth firms:** those with between 0 and 50 percent growth in employment; or
- **Declining firms:** those with negative employment growth.

9. An ILU is different in many respects from the well-known Average Labour Unit (ALU). An ALU relies on industry averages in its derivation and, as a result, if a firm deviates from the industry average in wage level, hours worked, share of part-time employees or share of seasonal employees, the ALU will be biased. Similar to the ILU, the ALU does not account for hours worked.

10. David Halabisky, “Growth Firms Project: Key Findings of Phase III.” Ottawa: Industry Canada, in preparation.

In addition to tabulating the data by firm size and growth category, the study created the following exporter categories based on the value of exports per firm in 2002: non-exporters, less than \$1000 in exports, between \$1000 and \$1 million, between \$1 million and \$25 million, and over \$25 million. In order to avoid confidentiality restrictions, data were not tabulated by industry.

The Exporter Registry is an administrative data file that covers merchandise (goods) exports¹¹ and captures approximately 95 percent of all goods leaving Canada. In 2002, there were 39 854 firms in the Exporter Registry; an initial automated match using Business Register Identifiers resulted in 16 420 matches between the Exporter Registry and LEAP/SAF for that year. A second matching process, undertaken using business names, resulted in approximately 9000 more matches and brought the total number of matches to slightly more than 25 000. However, because the tabulations measured growth over the 1993–2002 period, the addition of this “survival” condition reduced the final number of exporters used in this study to 18 030.

Although the success rate of matching was 63 percent, there are reasons why a firm would not be expected to match between the two files. For example, non-employer firms are contained in the Exporter Registry, but are not included in LEAP/SAF. It is also possible that firms may have different names and business identifiers in each data file, which cannot be matched. The legal name of a business may be different from its common operating name, and firms may report different names for tax purposes and in export records, which would lead to matching difficulties. It is also possible to report tax and export information at different levels of the business (establishment and enterprise), which could also lead to difficulty in matching records from the two files.

11. Research at the Department of Foreign Affairs and International Trade (DFAIT) reveals that service exports accounted for 12.7 percent of all exports in 2004. Services were defined as travel, transportation, government services and commercial services (i.e. accounting, legal, insurance, engineering, architecture and consulting). For more information, please refer to DFAIT, “Sixth Annual Report on Canada’s State of Trade.” Ottawa: Department of Foreign Affairs and International Trade, 2005. (www.dfait-maeci.gc.ca/eet/trade/sot_2005/sot_2005-en.asp)

RESULTS

Distribution of Exporters and Non-Exporters

The distribution of exporters and non-exporters, as well as the value of exports, is presented in Table 1. Exporters tended to be larger businesses than non-exporters: 28 percent of exporters had more than 50 employees, whereas less than 4 percent of non-exporters were of this size. Conversely, only 48 percent of exporters had fewer than 20 employees, compared with 89 percent of non-exporters. The distribution of exporters by firm size in this file was very similar to that in earlier export studies¹² despite the file-matching process and the 1993–2002 survival condition. Earlier work examined exporters at fixed points in time and found that approximately 85 percent of exporters had fewer than 100 employees. This study added a 10-year survival condition, but still found that 85 percent of exporters had fewer than 100 employees. Furthermore, this study found a distribution of exporters across all firm-size categories similar to that observed in earlier studies.

Table 1: Distribution of Exporters and Non-Exporters that Survived from 1993 to 2002, by Size of Firm (in 1993)

Size of Firm	Non-Exporters		Exporters				
	Number of Firms		Number of Firms		Value of Exports		Average Value of Exports per Firm
	No.	%	No.	%	\$	%	\$
All Firms	307 119	100.0	18 030	100.0	286 207 985	100.0	15 874
1–4	166 727	54.3	2 478	13.7	2 836 520	1.0	1 145
5–19	105 330	34.3	6 087	33.8	8 996 938	3.1	1 478
20–49	23 908	7.8	4 506	25.0	14 717 111	5.1	3 266
50–99	6 975	2.3	2 249	12.5	18 436 258	6.4	8 198
100+	4 179	1.4	2 710	15.0	241 221 158	84.3	89 011

Small firms (those with fewer than 100 employees) that operated between 1993 and 2002 exported \$45 billion in 2002, accounting for 15.7 percent of total merchandise exports by firms that continued to operate between 1993 and 2002. However, previous studies report

12. See, for example, Chris Parsley, “More Important than was Thought: A Profile of Canadian Small Business Exporters.” Ottawa: Industry Canada, 2004. (www.strategis.gc.ca/sbresearch) and David Halabisky, Byron Lee and Chris Parsley, “Small Business Exporters: A Canadian Profile.” Ottawa: Industry Canada, 2005. (www.strategis.gc.ca/sbresearch)

that small firms exported \$70 billion in 2002.¹³ The difference is due to the condition that the firms examined in this study had to survive from 1993 to 2002, which reduces the number of small business exporters.

Further detail on the relationship between the size of exporters and the value of goods exported is provided in Table 2. The data show that there is some correlation between firm size and volume of goods exported, but this relationship is not strict. Generally, firms with more employees exported a higher volume of goods. Thus, 76 percent of firms exporting more than \$25 million had more than 100 employees, whereas 93 percent of firms exporting less than \$1000 were small firms. What should not be assumed, however, is that small exporters are small firms and large exporters are large firms. In fact, 34 percent of firms with more than 100 employees (representing 908 firms) exported less than \$1 million (and 15 percent exported less than \$1000). At the same time, 15 percent of firms with fewer than five employees exported more than \$1 million and 29 percent of small firms exported more than \$1 million. This confirms earlier findings that many small exporters make a significant contribution to larger levels of exports.¹⁴

Table 2: Distribution of Exporters that Survived from 1993 to 2002, by Size of Firm (in 1993) and Value of Exports

Size of Firm	Value of Exports									
	Total Exporters		Less than \$1000		\$1000 to \$1 million		\$1 million to \$25 million		Greater than \$25 million	
	No.	%	No.	%	No.	%	No.	%	No.	%
All Firms	18 030	100.0	5 823	100.0	5 894	100.0	5 412	100.0	901	100.0
1-4	2 478	13.7	1 155	19.8	935	15.9	372	6.9	16	1.8
5-19	6 087	33.8	2 476	42.5	2 234	37.9	1 334	24.6	43	4.8
20-49	4 506	25.0	1 320	22.7	1 615	27.4	1 509	27.9	62	6.9
50-99	2 249	12.5	451	7.7	623	10.6	1 082	20.0	93	10.3
100+	2 710	15.0	421	7.2	487	8.3	1 115	20.6	687	76.2

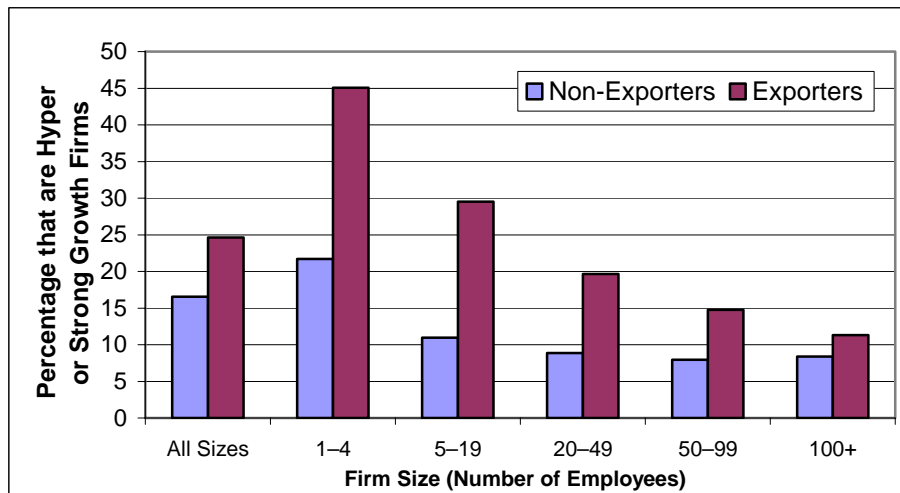
Exporters were more likely to be hyper or strong growth firms, regardless of firm size (see Figure 1). Overall, 17 percent of non-exporters were hyper or strong growth firms,

13. Chris Parsley, "More Important than was Thought: A Profile of Canadian Small Business Exporters." Ottawa: Industry Canada, 2004. (www.strategis.gc.ca/sbresearch) and David Halabisky, Byron Lee and Chris Parsley, "Small Business Exporters: A Canadian Profile." Ottawa: Industry Canada, 2005. (www.strategis.gc.ca/sbresearch)

14. Ibid.

whereas 25 percent of exporters met the criteria. This indicates that exporting can help firms achieve high growth, but that it is not a necessary condition. In firms with between one and four employees, nearly half of those that exported were hyper or strong growth firms, compared with only 22 percent of non-exporters. The gap between exporters and non-exporters increases in firms with between 5 and 19 employees. Firms of this size that are exporters are nearly three times as likely to be hyper or strong growth firms compared with non-exporters. The proportion of firms that are hyper or strong growth falls in each successive category for exporters and non-exporters, and the gap between the two diminishes.

Figure 1: Percentage of Firms that are Hyper or Strong Growth Firms, by Size of Firm (in 1993) and Export Status (2002), 1993–2002



Job Creation

Job creation over the 1993–2002 period was split evenly between net job creation by continuing firms and net job creation resulting from churning (the process of firm entry and exit). Approximately 1.9 million jobs were created over the period — 1 million by continuing firms and 900 000 due to churning. Of the 325 149 firms that operated over the full period, 18 030 (5.5 percent) were exporters, and were responsible for nearly 50 percent (475 000) of the net jobs created by continuing firms during the period. It was expected that exporters would be significant job creators because the total value of goods

exported from Canada more than doubled between 1993 and 2002,¹⁵ but exporters clearly contributed proportionally far more jobs than non-exporters during this period.

When hyper and strong growth firms are examined, as opposed to the entire population, it becomes even more evident that exporters create a disproportionate number of jobs.

Within hyper and strong growth firms, 4439 were exporters and 50 765 were non-exporters (see Table 3). Although there were more than 11 times as many non-exporters as exporters, non-exporters created only 1.6 times as many jobs as exporters.

Furthermore, these 4439 hyper and strong growth exporters, or 1.4 percent of all continuing firms, were responsible for 36 percent of net jobs created by continuing firms.

The number of net jobs created per firm increased with both firm size and value of exports. Over the 1993–2002 period, 113 firms that had more than 100 employees in 1993 exported more than \$25 million in 2002; between 1993 and 2002, these firms created nearly 80 000 jobs (8 percent of all net jobs created by continuing firms). These findings suggest that increasing exporting activity in the economy would likely create a large number of jobs. Although not perfectly comparable, these results are consistent with earlier research that found a strong positive relationship between change in exports and net employment change in the manufacturing sector.¹⁶

15. Calculated using data available from Statistics Canada, CANSIM, series V174053 and V191415.

16. Élisabeth Lefebvre and Louis A. Lefebvre, “SMEs, Exports and Job Creation: A Firm-Level Analysis.” Ottawa: Industry Canada, 2000, Occasional Paper Number 26.

Table 3: Job Creation by Hyper and Strong Growth Exporters and Non-Exporters, 1993–2002, by Size of Firm (in 1993)*

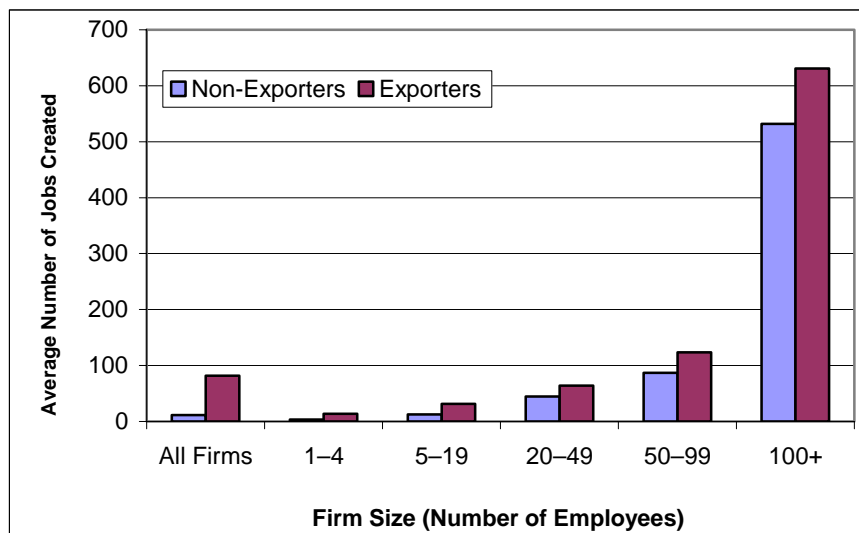
		Value of Exports											
		Non-Exporters		Exporters		Less than \$1000		\$1 000 to \$1 million		\$1 million to \$25 million		Greater than \$25 million	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Number of Firms	All Firms	50 765	100.0	4 439	100.0	1 329	100.0	1 447	100.0	1 460	100.0	203	100.0
	1–4	36 186	71.3	1 117	25.2	461	34.7	450	31.1	202	13.8	4	2.0
	5–19	11 551	22.8	1 798	40.5	593	44.6	626	43.3	558	38.2	21	10.3
	20–49	2 123	4.2	885	19.9	186	14.0	265	18.3	404	27.7	30	14.8
	50–99	554	1.1	332	7.5	42	3.2	64	4.4	191	13.1	35	17.2
	100+	351	0.7	307	6.9	47	3.5	42	2.9	105	7.2	113	55.7
Number of Jobs Created	All Firms	592 845	100.0	363 439	100.0	78 248	100.0	84 473	100.0	101 042	100.0	99 676	100.0
	1–4	115 962	19.6	15 608	4.3	4 052	5.2	6 039	7.1	**5 517	—	—	—
	5–19	147 170	24.8	56 417	15.5	12 848	16.4	16 425	19.4	23 258	23.0	3 886	3.9
	20–49	94 882	16.0	56 682	15.6	8 590	11.0	12 037	14.2	27 495	27.2	8 562	8.6
	50–99	48 178	8.1	41 055	11.3	9 695	12.4	5 269	6.2	**26 094	—	—	—
	100+	186 652	31.5	193 676	53.3	43 064	55.0	44 704	52.9	27 535	27.3	78 374	78.6

* Minor Discrepancies between the total number of jobs created and the sum of jobs created by firm size and value of exports are the result of rounding.

** These data include the number of jobs created by those that exported more than \$1 million.

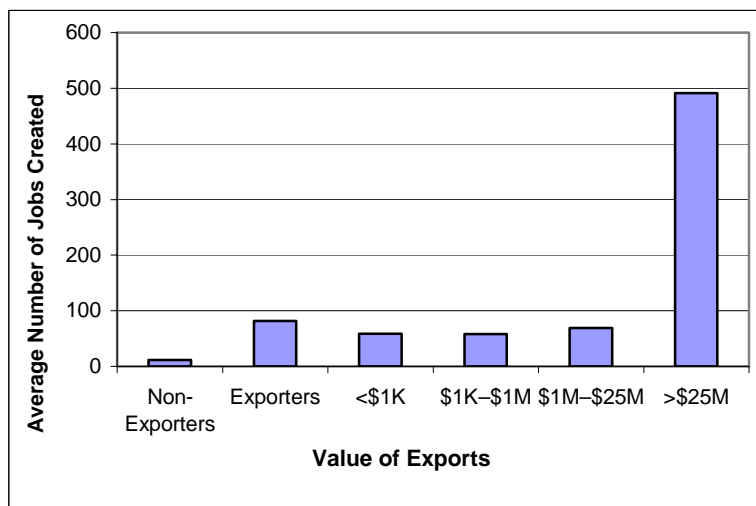
The average number of jobs created in each hyper and strong growth firm was always greater for exporters than non-exporters (see Figure 2). When looking at the total of all firms, the difference between exporters and non-exporters, in terms of the average number of jobs created, is quite large relative to the gap within each firm-size category. This is due to the distribution of firms in each group. As indicated in Table 1 and Table 3, firms with more than 100 employees represent a greater proportion among exporters than among non-exporters.

Figure 2: Average Number of Jobs Created per Hyper and Strong Growth Firm, by Size of Firm (in 1993) and Exports Status (2002), 1993–2002



There also appears to be a strong correlation between firm size and the number of jobs created. The average number of jobs created per firm increased with firm size, regardless of whether the firm exported or not. Furthermore, there is a remarkable increase in the average number of jobs created between firms with 50 to 99 employees and those with more than 100 employees (see Figure 2). There were 351 non-exporting firms with more than 100 employees that survived the 1993–2002 period, and they created nearly 187 000 jobs over these years. In comparison, 307 exporters with more than 100 employees created close to 194 000 jobs over the same time period (see Table 3). This demonstrates that job creation occurs in all firm-size categories and is not limited to small firms, which supports earlier research.¹⁷ This is also illustrated in Figure 3, where the results by value of exports mirror the results by firm size. As in Figure 2, the average number of jobs created per firm is far greater in the largest exporters than in the other export categories.

Figure 3: Average Number of Jobs Created per Hyper and Strong Growth Firm, by Value of Exports (2002), 1993–2002

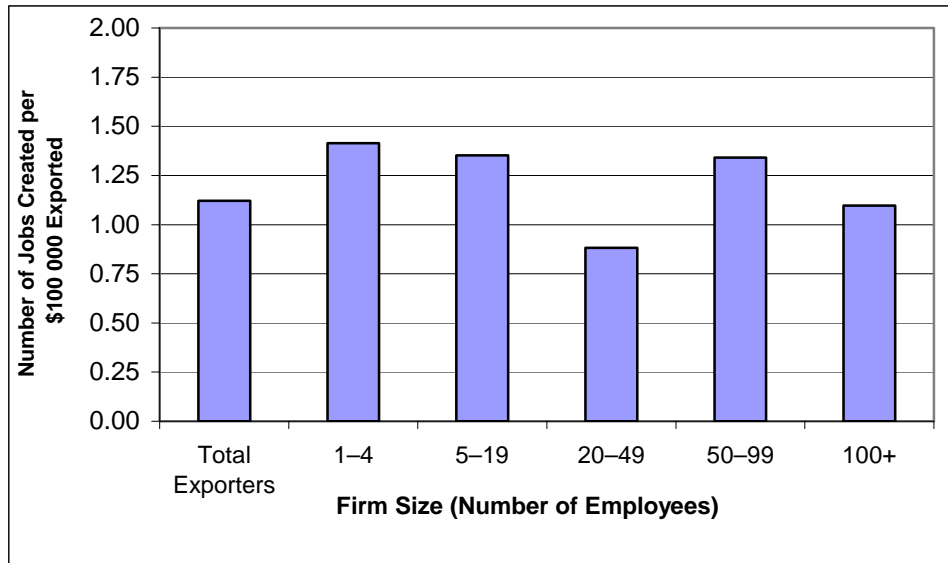


As a measure of efficiency, the number of jobs created per \$100 000 exported in 2002 was calculated by firm size (see Figure 4). There was some difference between the firm-size categories: firms with one to four employees created 1.6 times as many jobs per

17. Chris Parsley and Erwin Dreessen, “Growth Firms Project: Key Findings.” Ottawa: Industry Canada, 2004. (www.strategis.gc.ca/sbresearch/growthfirms/highlights)

\$100 000 exported as firms with 20 to 49 employees. However, this result can be somewhat misleading because very few firms with one to four employees exported \$100 000 worth of goods in 2002. All of the firm-size categories fell in the range of between 0.88 jobs and 1.41 jobs created per \$100 000 exported.

Figure 4: Number of Jobs Created per \$100 000 Exported in 2002 by Hyper and Strong Growth Firms, by Size of Firm (in 1993), 1993–2002



Wages and Wage Growth

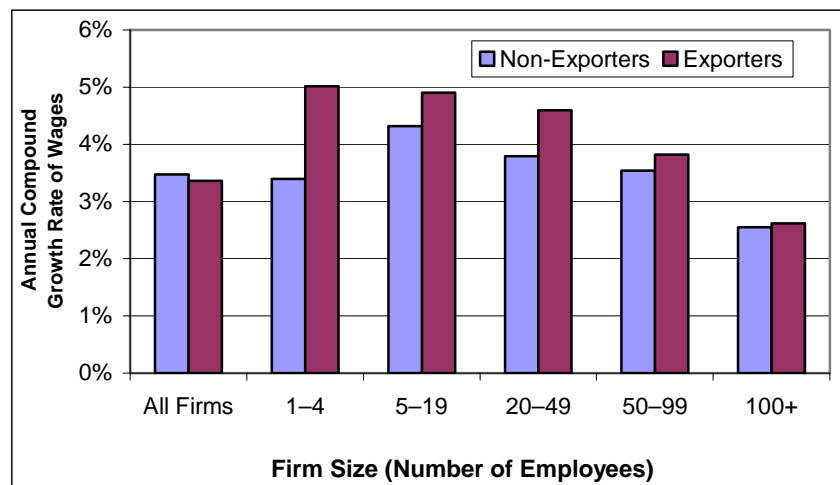
Average annual wage levels also differed between hyper and strong growth exporters and non-exporters. Hyper and strong growth exporters paid higher wages than non-exporters (see Table 4), and wages increased as the value of exports increased. However, there is no pattern in wage levels by firm size among firms that exported. For example, in hyper and strong growth firms that exported less than \$1000, wages increase with firm size. However, the opposite is true in those firms that exported between \$1000 and \$1 million in 2002.

Table 4: Wage Levels in Hyper and Strong Growth Exporters and Non-Exporters, 1993–2002, by Size of Firm (in 1993)

Firm Size	Non-Exporters		Exporters	
	Starting Wage (\$ 1993)	Ending Wage (\$ 2002)	Starting Wage (\$ 1993)	Ending Wage (\$ 2002)
All Firms	21 740	29 564	28 959	38 988
1–4	20 835	28 131	26 235	40 751
5–19	20 568	30 081	26 469	40 720
20–49	21 920	30 633	26 075	39 064
50–99	23 073	31 558	26 088	36 563
100+	23 006	28 861	30 856	38 938

Annual wage growth rates were higher among exporters than non-exporters in each firm-size category, but this is not true in the overall aggregate results (see Figure 5). Although this seems impossible, it is due to the distribution of each population of firms. As seen earlier, exporters are more likely to be larger firms than non-exporters, and larger firms have lower annual compound wage growth rates. When the two populations are aggregated by firm size, the two different firm-size distributions skew the overall results. The gap in annual compound wage growth rates between exporters and non-exporters was greatest in firms with one to four employees, and generally, this gap closed as firm size increased. There was virtually no difference in this rate between exporters and non-exporters among firms with more than 100 employees.

Figure 5: Annual Wage Growth Rates for Hyper and Strong Growth Firms, by Size of Firm (in 1993) and Export Status (2002), 1993–2002



CONCLUSIONS

This study adds to the insights gained from earlier studies in the Growth Firms Project as well as from studies of small exporters that have recently been completed by Industry Canada's Small Business Policy Branch. The job creation performance of merchandise exporters in the private sector between 1993 and 2002 was examined using a linked data set composed of the Exporter Registry and LEAP/SAF. The main results are as follows:

- Firms that exported were more likely to be hyper or strong growth firms than those that were non-exporters.
- Firms that exported in 2002 accounted for 6 percent of continuing businesses over the 1993–2002 period, but were responsible for 47 percent of all jobs created by continuing businesses over this period.
- Hyper and strong growth exporters accounted for 8 percent of all hyper and strong growth firms, but accounted for 36 percent of all jobs created by hyper and strong growth firms.
- Average annual wage growth over the period examined was approximately 20 percent higher among exporters than among non-exporting firms.

These results confirm that exporters play a very important role in the Canadian economy, and indicate that hyper and strong growth firms that export are extraordinary job creators. They also suggest that pursuing an export strategy can have very significant results for firm growth. Furthermore, the study adds support to earlier findings that fast-growing wage levels are indicative of high growth. In other words, employees appear to be rewarded for their firm's successes.

Small firms are under-represented in the exporting population, and this research suggests that an increase in the proportion of small firms that pursues exporting and high growth strategies would result in large payoffs for the firms and for the economy. More research is needed to gain a better understanding of the elements of successful growth and export strategies, as well as the barriers that firms face in attempting to export.

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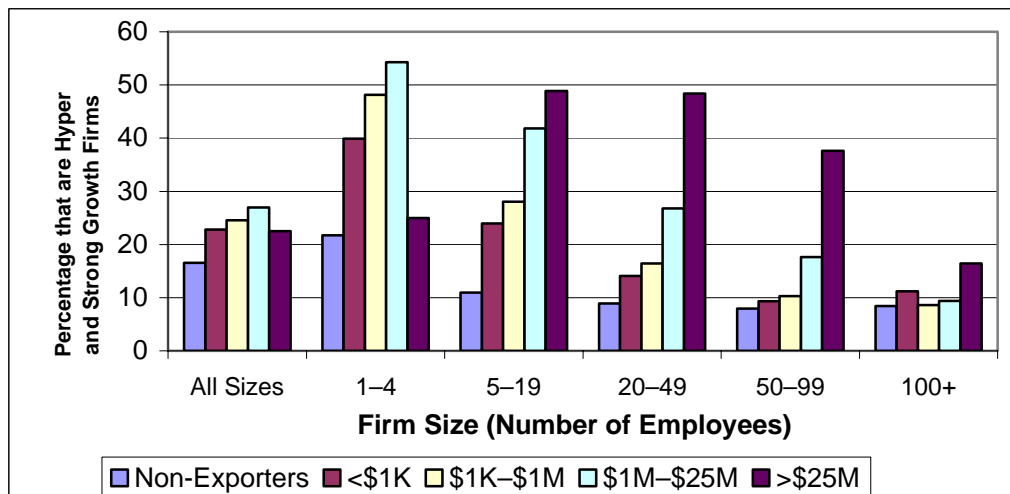
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APPENDIX: ADDITIONAL RESULTS

Probability of Being Hyper or Strong Growth Firms, by Size of Firm and Export Value

This paper demonstrated that, in each firm-size category, exporters were more likely than non-exporters to be a hyper or strong growth firm. Moreover, within exporters of the same size category, the proportions that were hyper or strong growth increased with the value of exports (see Figure A1). For example, of those with 5–19 employees that exported between \$1000 and \$1 million, 28 percent were hyper or strong growth firms, compared with 42 percent and 49 percent, respectively, for firms that exported between \$1 million and \$25 million, and those that exported more than \$25 million. Although there are some exceptions, such as the largest exporters in firms with fewer than five employees and the smallest exporters in firms with more than 100 employees, the trend holds across all firm sizes.

Figure A1: Percentage of Firms that are Hyper and Strong Growth Firms, by Size of Firm (in 1993) and Value of Exports (2002), 1993–2002



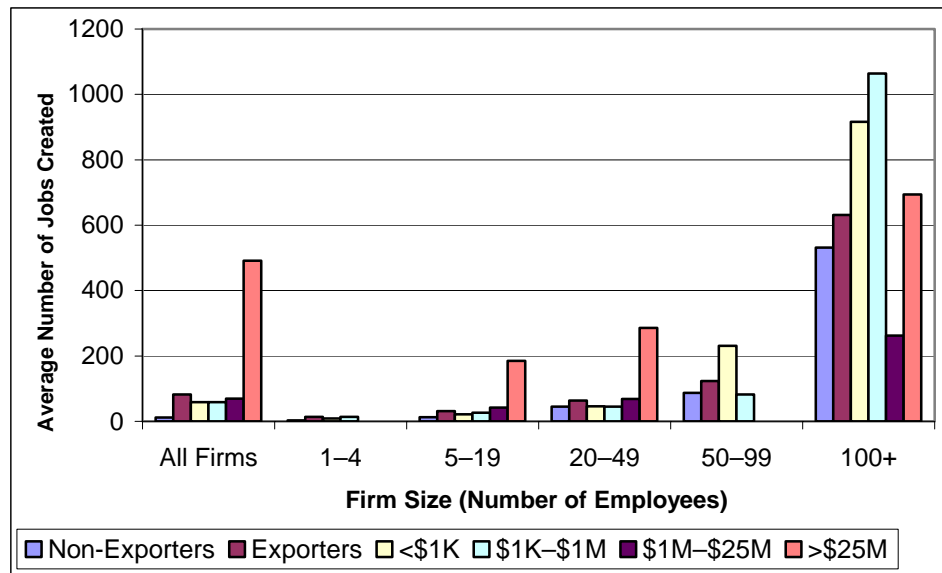
Average Number of Jobs Created per Hyper and Strong Growth Firm, by Firm Size and Value of Exports

In terms of the average number of jobs created by hyper and strong growth firms, by export value (all firm sizes combined), there was a very slight increasing trend over the

three lowest export value categories. However, there was a large jump in the average number of jobs created among firms that export more than \$25 million compared with jobs created by firms in the other export value categories (see Figure A2).

Furthermore, Figure A2 presents a good illustration of the differences between classifying firms by the number of employees and classifying by the value of exports. For example, among firms that exported less than \$1000 worth of goods in 2002, the average number of jobs created was approximately 60. Among firms with fewer than five employees, however, the average number of jobs created is less, at 14. Moreover, looking at the largest firms by value of exports gives a different picture from that of the largest firms by number of employees. Among firms that exported more than \$25 million, the average number of jobs created per firm was just under 500. However, exporting firms with more than 100 employees created more than 600 jobs on average. This confirms that classifying exporters by number of employees and classifying by value of exports can lead to different conclusions. In other words, small exporters are not necessarily small firms and large exporters are not necessarily large firms.

Figure A2: Average Number of Jobs Created per Hyper and Strong Growth Firm, by Size of Firm (in 1993) and Value of Exports (2002), 1993–2002*



* Some data are not displayed due to confidentiality restrictions.