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ALBERTA'S SMALL AND MEDIUM SIZED ENTERPRISES AND THEIR EXPORT ACTIVITY

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Executive Summary

Responses

This report is based on 110 telephone surveys of Alberta Small and Medium Sized Enterprises (SMEs) concerning their export activities. The surveys were completed during the summer of 2001. Thirteen of the surveyed firms provided in-depth interviews to explain their export stories more fully.

Select Findings

- 60 percent of the sampled firms employed 20 people or less (the Alberta survey intentionally defined SMEs as employing 100 people or less).
- The United States is an export market for 71 percent of the firms surveyed. Half of the SMEs surveyed derive more than 50 percent of their export revenue from shipments to the US.
- 74 percent of SMEs surveyed indicated plans to expand their international operations over the next year.
- Almost 40 percent of the SMEs surveyed earned more than half of their revenues from exports.
- The sampled SMEs are characterized by technologically intensive products.
- The success factors deemed most important by Alberta's SMEs when considering their export activities are quality of service and the uniqueness of their products.
- Most surveyed firms do not invest a large amount of their revenues in either research and development or marketing. Respondents often reported a desire to increase the money spent on marketing but were unable due to funding constraints.
- When considering expansion, Alberta's SMEs view low overall business costs as the most significant factor. The availability of skilled labour, and favourable regulatory and tax environments, also receive serious consideration.

Recommendations

To increase the export activity of SMEs, the Alberta Government should:

- Consider ways in which it can help small business obtain greater access to venture capital. The government should continue to provide information on International Financial Institutions (IFIs);
- Encourage the continued development of Alberta's publicly funded primary, secondary and post-secondary educational systems. Local education programs play a critical role in supplying Alberta's SMEs with skilled labour. Innovative, strong universities produce the professionals needed by SMEs as well as providing partnership opportunities;
- Continue to provide comprehensive market intelligence – it remains a valuable resource for SMEs. Information needs to be as firm-specific as possible;
- Develop a well-defined and articulated SME strategy to help identify and draw attention to the importance of SMEs in the Alberta economy and to the notable successes of small and medium sized firms;
- Increase the number of networking functions aimed at SMEs. Alliances and partnerships are crucial to SME exporters;
- Consider additional strategies that can help SMEs with the cost of marketing and research and development;
- Continue to explore and analyze Alberta's SME expansion and success factors. This will aid policy making and provide information on the shifting needs of Alberta's smaller exporters;
- Stimulate SME export activity by introducing additional tax incentives; and
- Continue to actively promote the good name of Alberta business worldwide.

Alberta's Small and Medium Sized Enterprises and Their Export Activities: A Select Survey of 110 Firms

This study, *Alberta's Small and Medium Sized Enterprises and Their Export Activity*, was undertaken by the Western Centre for Economic Research (WCER) at the request of Alberta Economic Development and Alberta International and Intergovernmental Relations. It is an initial effort to obtain knowledge about what propels Alberta's smaller firms to become involved internationally. What is the story behind their current exports? To best capture the perspective and character of such firms, 'SMEs' are defined here as having an upper threshold of 100 employees. The standard definition commonly refers to SMEs as having up to 500 employees, but in the context of Alberta's economy, firms employing more than 100 people are considered fairly large.

We should get to know our exporters better. The national profile of Canadian exporters has been changing rapidly. Since 1993 the number of firms exporting commodities has increased by almost 30 percent. Large firms continue to account for much of the value of exports, but those firms exporting less than \$1 million annually represent some 70 percent of all exporters. While these "minnows of trade", as one business writer recently referred to them, sell less than 2 percent of the value of Canada's exports, the total value of their exports have risen by 43 percent since 1993. When provinces are compared, Alberta's average exporter in 1997 sold the most abroad at \$15.4 million. While that number clearly reflects a high component of mining and petroleum shipments, there is little doubt that Alberta exporters are increasingly selling beyond the easily accessible U.S. market.¹ What makes these smaller Alberta exporters tick? Why are Alberta's SMEs so successful? How can they be even more successful?

Instead of looking solely at the challenges associated with exporting from Alberta, this study emphasizes the solutions smaller entrepreneurs have put to use to increase their visibility and competitiveness outside of Canada. What approaches do firms use to enter foreign markets? What policies, if any, can help advance small firm involvement in the global economy? Put simply, the primary aim of this study is to look at the story and strategy of Alberta companies who are not necessarily well-known, but who, despite their smaller size, are active participants in the global economy. The fact that these firms are also responsible for so much employment in Alberta makes them an especially attractive topic.

There is a growing body of literature that analyses and explores how smaller firms become successful exporters.² A useful context from which to consider Alberta's SMEs and the internationalization process is from the perspective of a network. This simple model suggests

that strategic moves by a firm are influenced by a variety of network relationships. Essentially then, external relationships drive, facilitate or inhibit a firm's internationalization. The focus is on exchanges between firms and their respective special competencies. Stability is important, as are relationships: it is an overtly 'person-driven' process where increased mobility and trade mean that national boundaries are no longer as important. This network approach seems to best reflect what is probably true about most of the Alberta's SMEs surveyed in this study: each has its own unique story of internationalization and the process itself is too broad and dynamic a concept to be captured by any single theoretical framework.

The study is based on a telephone survey of 110 firms that was carried out by the WCER in the summer of 2001. Longer personal interviews were conducted with 13 of the surveyed firms during the fall of 2001. Surveying manufacturers and service-oriented companies in a range of sectors, the report compliments the *Alberta Services Export Study (1999)*, the *Alberta Non-Tariff Trade Barriers Study (2000)*, and the *Alberta Service Exports Survey (2001)*. Like these studies, the results provide insight into what is currently affecting Alberta's businesses in the international market. More specifically, the findings presented here may enhance efforts to support Alberta's smaller firms and help them to become more competitive globally.

The information contained in the SME Survey will enable us to:

- Understand more about selected Alberta industries and the small and medium sized companies that seek to become more actively involved in global business;
- Analyze the successes as well as the challenges and opportunities facing Alberta firms in the global economy; and
- Identify the mechanisms that can enhance firm involvement in global business.

This report explores and highlights the export activities of firms in 12 broad industrial sectors:

Aerospace	Education and Training
Agriculture	Environmental Products and Services
Architecture, Engineering and Construction	Health and Life Sciences
Building Products	Industrial Equipment
Chemicals and Petrochemical	Information Technologies
Consumer Goods	Pharmaceuticals

110 firms in total were surveyed in the 12 targeted industrial sectors. In certain cases, sectors are underrepresented, while other sectors are overrepresented. In general, emphasis is not given to service SMEs in the survey because recent research on some of their international activities is presented in the *2001 Alberta Service Exports Survey*. (Keep in mind, however, that some 97 percent of all Alberta's service firms have fewer than 50 employees and these firms warrant

ongoing attention.) Furthermore, the imbalance in the number of firms reporting from each of the 12 sectors is not only a function of the varying number of SMEs working in each sector, but also must take into account the varying amounts of export experience across sectors, and finally, whether a firm's leaders would agree to participate in the survey.

Sampling and contact information for the firms was taken from *Scott's Directories*, *Western Industrial Directory*, www.strategis.gc.ca (Canada's Business and Consumer Site), and various associations. In a few cases, Alberta Economic Development supplied contacts.

The survey was qualitative in nature, mixing short answer, multiple choice and scaled questions. In general, the survey sought to answer the following questions:

Where, when and how did survey firms initiate their export activities?

What are the challenges and opportunities facing these firms?

What mechanisms help smaller Alberta firms to be more active globally?

As well, the study includes profiles of successful Alberta exporters in the hopes that their stories can serve as examples and lessons for others.

Introduction

Promoting SMEs and their performance both domestically and abroad makes sense. The flexibility of these firms, their capacity to innovate, and their relatively efficient use of resources make them highly desirable in any economic context. Not only is their contribution to local and regional development well recognized, but recent research also consistently emphasizes the linkage between SMEs and employment. In addition, free trade agreements and increasingly liberalized trade mean that large firms do not necessarily have an advantage based solely on size.

The role of small business is vital in shaping growth and opportunity in Alberta.³ In the 1992-1999 period, almost 8,000 new small businesses⁴ – those with fewer than 50 paid employees – were created in Alberta. The contribution of these small and medium sized firms to employment growth is dramatic, easily outstripping the employment gains from large business and the public sector. Moreover, in the context of Alberta's highly cyclical economy, there is evidence to suggest that small and medium sized enterprises stabilize employment. Put simply, there is a smaller employment response to changes in economic activity in SMEs than in larger firms.⁵

A recent Industry Canada study on the subject of SMEs, exports and job creation, found an overall "strong, positive and significant relationship" between changes in exports and employment.⁶ The study, which considered over 3,000 manufacturing SMEs over a three-year period, found that innovation was a key contributor to export performance, particularly in knowledge-intensive industries. The survey results go on to demonstrate that "established SMEs have a low exit rate but are also becoming increasingly globalized, and in so doing, are generating jobs. There are strong indications that the contribution of mature exporting SMEs to employment growth cannot be overlooked."⁷

When the performance of Alberta's SMEs is analysed within the context of their global activity, another positive picture emerges. By almost any measure, the story of Alberta's SMEs and their export activity is one that clearly underlines the role played by smaller entrepreneurs in taking Alberta products and services worldwide. Although SMEs are not as likely to export as larger firms, national survey results from 1997 suggest that almost 40 percent of firms with more than 50 employees export to the US or abroad, while almost 13 percent of 'micro-firms', those with five employees or less, export to the US or abroad.⁸ Alberta's smaller firms occupy a significant position in exporting.

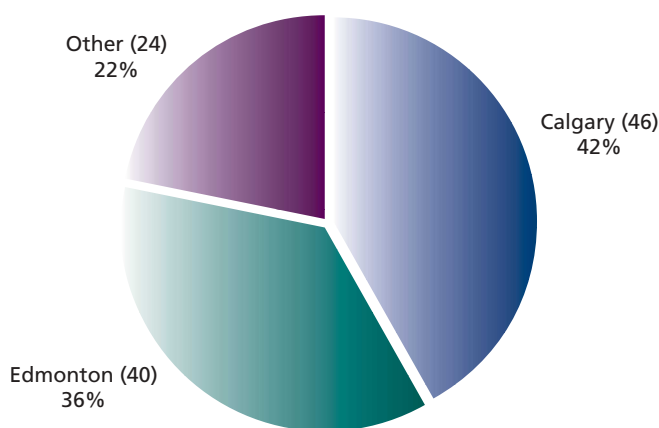
The survey data presented probably overestimates the international activity of Alberta's SMEs. To some degree this is a function of the firms chosen for inclusion in the survey: interviews were only conducted with firms which reported receiving five percent or more of their revenue from export sales in the year 2000. Many firms contacted did not meet this threshold. Those that did meet the threshold were for the most part experienced exporters, and this depth of experience across a wide range of sectors and firm sizes, is perhaps the report's most surprising and important finding.

I. Profile of Surveyed Firms

Firm location

Most of the firms were located in Calgary (46 firms) and Edmonton (40 firms). Another 24 firms from outside the major centres were also included in the sample. These were primarily agriculture and resource-oriented firms (Figure 1).

Figure 1 **Location of Firms Surveyed**



The Sectors Surveyed

The unequal distribution of firms surveyed across the various sectors (Figure 2) is a rough reflection of the variety of Alberta's SME exporters. The SME survey was designed to capture the activities across 12 selected industry sectors. Firms were asked to classify their own primary business and exports. It is possible that this self-identification may have created a few errors.

In general, the firms chosen were deemed to be fairly representative of their sector. The industrial equipment sector had the most respondents (18%), followed by the information technologies sector (14%). The smallest sectors represented here were education and training (2%) and consumer goods (1%). The decision to survey the latter sectors was made only towards the end of the survey in order to round out the results from targeted sectors.

Non--manufacturing firms (service firms and wholesalers) were not the main focus of the survey. In addition, important sectors like consumer goods and chemical and petrochemical firms were under-represented in the sample because they tend to employ more than 100 people. It should also be noted at the outset, however, that many of the firms representing other sectors did indeed sell a product or service related to the chemicals and petrochemical industry.

Figure 2 **Export Sector of Firms Surveyed**



Healthy Exports Shipments from Edmonton's CV Technologies Inc.

CV Technologies Inc. (CVT), located in Edmonton's Research Park, has put Alberta at the forefront of commercialized nutraceuticals. In the firm's labs CVT's scientists are working towards proving that the natural health products they ship throughout the world – effective treatments

and preventions for common maladies like flu, colds, high blood pressure and even stress – deserve the recognition and regulation offered to competing synthetic pharmaceutical compounds. This goal is clearly within reach. With one product having now completed Phase II clinical trials and some 12 US Patents (and 22 patents worldwide), CV Technologies is close to breaking into a huge and highly lucrative export market.

It has not been easy. The relaxed regulatory framework that exists for traditional medicines means that CVT has had to market its products globally based squarely on the sound science and technology that gives its treatments a distinct advantage. To compete with pharmaceuticals and less-advanced traditional medicines, CVT must prove its treatments are superior. Company founder and CEO Dr. Peter Pang has travelled the world tirelessly, educating



health practitioners about these advantages and his firm's patented 'ChemBioPrint'[™] technology. Therapeutic evaluations of Chinese medicines is made possible using 'ChemBioPrint'[™] technology. The leading universities and biotechnology centres in Asia are using this technology. Lectures and presentations which are a critical part of CVT's global marketing effort have paid off handsomely. In 1996, CVT made its first significant offshore sales to Brazil as a result of one of Dr. Pang's presentations. Sales to Australia followed. But these early successes underlined the need to have a consistent and knowledgeable presence in the targeted market. Sales in Brazil eventually weakened once the distributor was gone. As Director of Operations, Ivan Dijkstra discussed these past export efforts, underlining that "the local person driving the promotional campaign is critical to its success".

Since the late 1990s, CVT's international marketing thrust has relied on three distinct strategies. One concentrated on the important American market; another focused effort in Asia that uses Hong Kong as its base; and a broader more passive campaign sought to capitalize on opportunities elsewhere. The US strategy took flight in 1999 and was very aggressive. CVT opened an office in Boulder, Colorado, in the hopes of raising capital in the then surging financial markets. Attracted by the prospect of being closer to the action while working towards a possible Nasdaq listing, the Boulder office was a seemingly sensible move that soured quickly and was reversed as financial markets dried-up in early 2000. The company currently runs all North American efforts from its Edmonton office. At the same time, CVT's efforts in Asia were being expanded. Subsidiaries were established throughout the region to alleviate some of the problems associated with differences

such as culture and time.

Like many of Alberta's smaller firms, successful exporting for CVT requires it to take advantage of opportunities as they arise, and there remains a certain amount of luck involved when making sales in this way. Dijkstra recalled one instance where a key contact and client in the USA moved on to another firm. Some months later the marketing team at CVT was delighted to find that the client had subsequently sold his new employer on the effectiveness and quality of CVT products. The result was a solid distribution agreement in the US announced in the fall of 2001. As Dijkstra pointed out, the art of selling abroad still relies on meeting the right person at the right time.

Another passive but proven method used to get exposure in international markets is to remain active and visible in the nutraceutical networks that operate in the neighbouring provinces of Saskatchewan and British Columbia. While these networks provide wide exposure, even Dijkstra was surprised when Italian customers said they had heard about CVT via the Saskatchewan network.

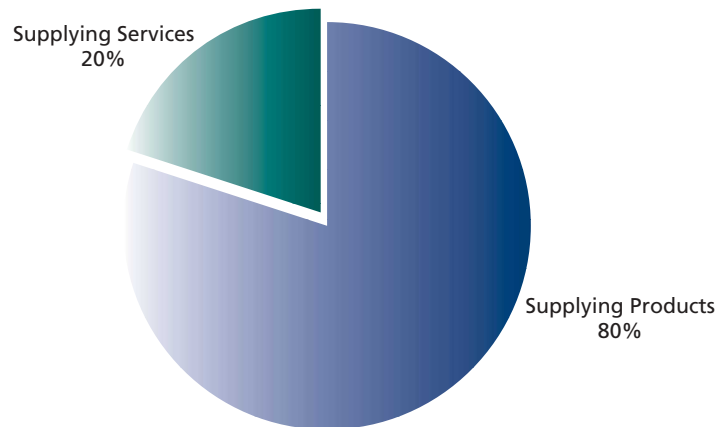
Going forward, the success of CV Technologies' international efforts will be anchored by the strong scientific and entrepreneurial contingent that they have built in Alberta. The work towards a pharmaceutical patent remains a priority. As a base for CVT's operations, Edmonton and its vibrant scientific community clearly present advantages. Accessing foreign markets is not simply a matter of being right next door. A combination of quality research, a growing niche market and imaginative communications techniques, provide CVT with an opportunity to enhance its share of the burgeoning global healthcare market.

Main Sources of Revenue

In the later stages of surveying, an effort was made to include a group of representative service firms from the 12 key marketing sectors. As indicated, such non-manufacturing companies probably dominate exporting when all of Alberta's SMEs are considered.

Of the 110 SMEs surveyed, 20% (22 firms) categorized their exports as services while the remaining 80% (88 firms) supplied goods (Figure 3). The service firms sampled included several from aerospace, education and training, and health and life sciences. Service firms also comprised a major portion of the important environmental and engineering sectors. Slightly over half of the service SMEs sampled shared a connection to the natural resource sector, and most of these firms provided services to the chemicals and petrochemical industry. Manufacturers, or firms selling products, anchored the industrial machinery, information technologies, building products, and agriculture sectors. Many of these SMEs also showed strong connections to Alberta's resource industry.

Figure 3 **Main Source of Revenue**

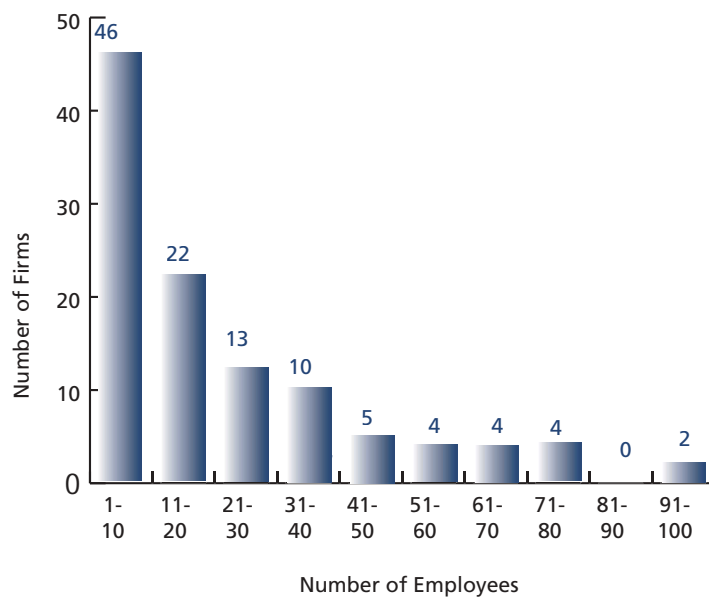


Number of Employees

Most of the SMEs interviewed employed 50 people or less. It is important to remember that these small firms are representative of the vast majority of Alberta's firms. Figure 4 represents the sample by number of employees. The largest firms came from the chemical and petrochemical sector and averaged 33 employees. Other sectors sampled whose firms employed 25 people or more were the industrial equipment and the information technologies sectors. The smallest firms sampled were found in the aerospace, pharmaceutical, and health and life sciences sectors where firms typically employed an average of 17 people.

The larger size of firms in the petrochemical, building products, and industrial equipment sectors is not surprising. For these firms the production process is relatively labour intensive. In the context of size, the most striking sector is information technologies where sample firms employed, on average, 26 people. In general, much smaller SMEs were found in sectors representing highly technical products or services. Many of these firms are kept small by choice. One company founder explained that he wants to remain a small company: '(my) experience with a larger firm entailed expending enormous amounts of energy on management and quality control'. Instead, he prefers to be part of the creative process – that is his passion.

Figure 4 **Number of Employees in Sampled Firms**



Westmark Products Ltd. Works Wood for Export Markets

In many ways, Westmark Products Ltd. symbolizes how ingenuity in this traditionally resource-based industry can lead to remarkable growth. Since the 1960s, when it was one of the few firms making hockey sticks for the local market, the firm has grown and now directly employs about 70 people. Currently exporting 40% of its product, Westmark's growth and diversification has not been easy.

Considering the Alberta Government's long held desire to see increased sales of value-added forest products, smaller, custom secondary wood manufacturers like Westmark are still relatively rare. Secondary players, unlike Alberta's larger traditional mills, are more or less on their own in a highly diversified marketplace. Producing and selling lath, grape cleats, box ends, pallet boards and survey stakes is different than selling construction grade materials.

Westmark's owner, Mr. Arthur Lemay, has always worked within the context of a shifting international marketplace. In Westmark's only foreign marketplace, the constantly changing nature of US softwood import policies pose strategic challenges. For example, recent changes that saw US tariffs being applied at border value instead of 'first mill' value meant that Westmark was suddenly paying an extra tax on labour,

waste and transportation costs.

Not surprisingly, when we spoke with Art Lemay at his mill and sorting facility in October 2001 he was heavily involved in industry and government committee meetings devoted to the latest round of US softwood restrictions. The time Mr. Lemay has devoted to these issues takes him away from other pressing management and marketing demands, but will undoubtedly help bolster the voice of Alberta's secondary or 'value added' wood products industry.

Westmark's first export – some twenty years ago – was cleats for grape boxes. The first of a string of export products, these shipments to California underlined the firm's flexibility in meeting the demands of a niche market. The company reacted similarly when presented with the opportunity to produce box ends for another important California agriculture export, asparagus. Now faced with competition in these markets from corrugated cardboard, Westmark has once again needed to adapt and augment its product line.

For the most part, Westmark's international sales are a reaction to opportunities. Lemay realizes he may be missing better markets. The footwork of Lemay, his brokers and the Forest Industry Suppliers and Logging Association (FISLA) may turn-up new sales, but it is a highly competitive marketplace. To prepare for any potential shipments to Europe, Lemay is going through the painstaking process of securing European Union certification for Westmark's wood products. And through involvement in FORESTCARE, Westmark is committed to continually improve its performance in the forest, to work with the community, and to work towards environmentally sound operations.



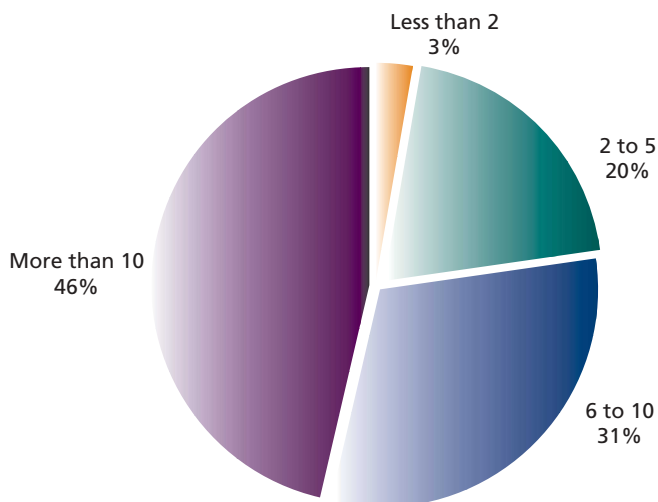
Art Lemay maintains Westmark's success in export markets by ensuring that the mill and yard adapt quickly to new, specialized markets. Vigorous external committee work on Lemay's part also helps see that Alberta's secondary wood products players are not lost

among the well-publicized trade problems common to the sector. By reaching out into the larger world and staying current on the issues, Lemay continues to position Westmark for export success.

Exporting Experience

Alberta's exporting SMEs tend to be very experienced (Figure 5). Of the survey sample, over 77 percent of the firms reported that they had been exporting for more than five years and over 46 percent had been active internationally for ten years or more. Engineering and construction SMEs are especially well established with 90 percent of these firms exporting for ten years or more. Conversely, Alberta's newer industrial sectors, i.e. information technologies and building products, are not as experienced in foreign markets, with only about a quarter of the sample firms having exported for more than ten years. With the benefit of freer trade, these emerging industries may become the 'next generation of large exporters'.

Figure 5 **Years Firm Has Exported**



II. Current Export Activity of Sample

Percentage of Revenue Earned by Exports

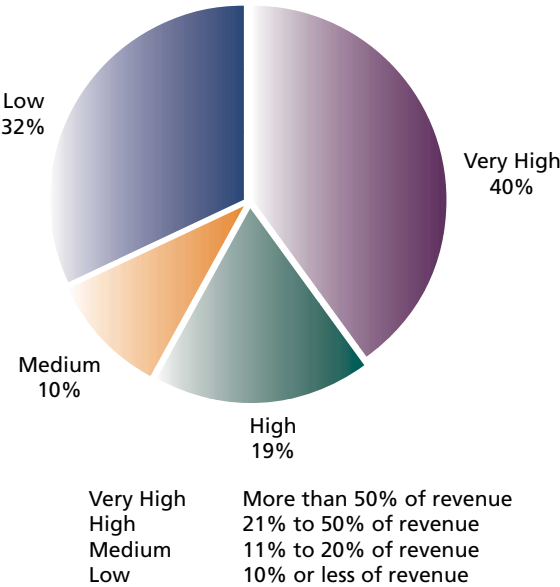
For the following section, the export orientation or 'export intensity' of each firm was categorized by the percentage of total revenue generated from exports in the year 2000. Firms with 10 per cent or less were classified as 'low intensity' exporters, those with 11-20 percent exports as 'medium', 21-50 percent as 'high', and those with 50 per cent or more as 'very high' intensity exporters.

A large portion of Alberta's SMEs export sparingly (Figure 6). 32 percent of firms surveyed earn ten percent or less of their revenues from exports. For example, the owner of Tripak describes exports as 'gravy' on domestic sales. In contrast, Adams Pearson Associates Inc. has crafted a sensible and successful export strategy to smooth the bumps in domestic market demand.

Differences in exporting intensity are to be expected when sampling from a range of sectors. In a sector like industrial machinery, for example, a large proportion of firms earn ten percent or less of their revenue from exports. One specialized manufacturing company noted that the value of their exports was directly related to the scientific research expenditure of the receiving country and that is why they currently sell more in the US than in Canada. Normally the sector has such a large domestic market and high transportation costs, that firms tend to be less active globally. At the other end of the spectrum, however, are firms in the agricultural sector where 90 percent of the sample earned more than half their revenue from exports.

In aggregate, 40 percent of the sample SMEs earned more than half their revenues from exports. As indicated, SMEs working in the agricultural sector were the most reliant on export markets, followed by the pharmaceuticals sector where over half of the sampled firms earned 80 percent or more of their revenue from exports.

Figure 6 **Export Intensity**



When looking at the relationship between the number of years a firm had been exporting and its export intensity (Figure 7), approximately 84% of the sample had five or more years of exporting experience.⁹ Of this experienced group there was a fairly even split between those with a ‘low’ intensity and those with a ‘high’ intensity. This suggests that the length of time a firm has been successfully selling into international markets does not define its reliance on those markets. Put another way, lengthy experience in exporting may not be a clear-cut influence on a firm’s dependency on those markets. Firms with less than five years of exporting experience tend to be evenly distributed throughout the range of export intensity. These findings suggest that export experience, or the lack thereof, is not a substantial barrier to successful exporting for SMEs.

Figure 7 **Export Intensity and Years of Exporting**

Firm Exporting Intensity	Number of Years Exporting	
	Less than 5	5 or More
Low (0% to 10%)	17.6%	82.4%
Medium (11% to 20%)	25.0%	75.0%
High (21% to 50%)	16.7%	83.3%
Very High (More than 50%)	13.5%	83.2%

Tiny Tripak Takes on the Giants

When Wetaskiwin's Fred Winter watched his investment in a US lubrication firm go sour in bankruptcy proceedings, he saw an opportunity and bought the Canadian rights to the company. That was in 1984, and since then Winter has slowly worked at selling his highly efficient Tripak lubricants into a stubbornly reluctant marketplace. The idea that lubricants produced by a small, independent Alberta company can compete and perhaps outperform the offerings of big oil producers is difficult for people to believe. But Winter's vision remains unbowed. Standing solidly behind the results of his product, he knows that his next big shipment may convince another group of skeptics.

Tripak's products are seemingly everyday automotive and machinery lubricants. Distinguishing them from familiar brands lining the shelves in garages and shops has been difficult. Selling products based on superior performance means that clients must be able to see the advantages they offer. In far flung markets like Denmark, Ecuador and China (where Tripak has its only offshore office) Winter has demonstrated and repeatedly sold his product based solely on its performance and competitive price.

Looking over his experience as a small exporter, Winter emphasized the importance of choosing the right people with whom to do business. Tripak's earliest offshore sales to Denmark depended on his own personal contacts. And the success of that initial shipment – the customers in Denmark have since become regulars – committed Tripak to seeking out good, trustworthy people to help break its products into a new market. The difference

between Tripak's success and failure in a given export market can often be attributed to the locals chosen to represent the product. The Chinese market, although potentially huge, is not easy to crack. Winter has learned that local marketing practices must be accommodated and a foothold in a provincial market has not become a springboard to national recognition as it might be in a more developed economy. Winter suggests that Canadian companies abroad can offer other potential exporters assistance in finding useful contacts – a practice he has followed in China.

Alberta has offered the firm both advantages and disadvantages. Government assistance in the form of specific market intelligence or credit support has not been available. Winter also feels that Tripak's sales have been hampered by aggressive criticism from Alberta's large integrated oil companies whose best interests would not be served by reductions in demand for oil and gasoline. On the other hand, in Alberta, Winter has readily available inputs and enjoys the lifestyle of running a business in an upbeat economic climate.

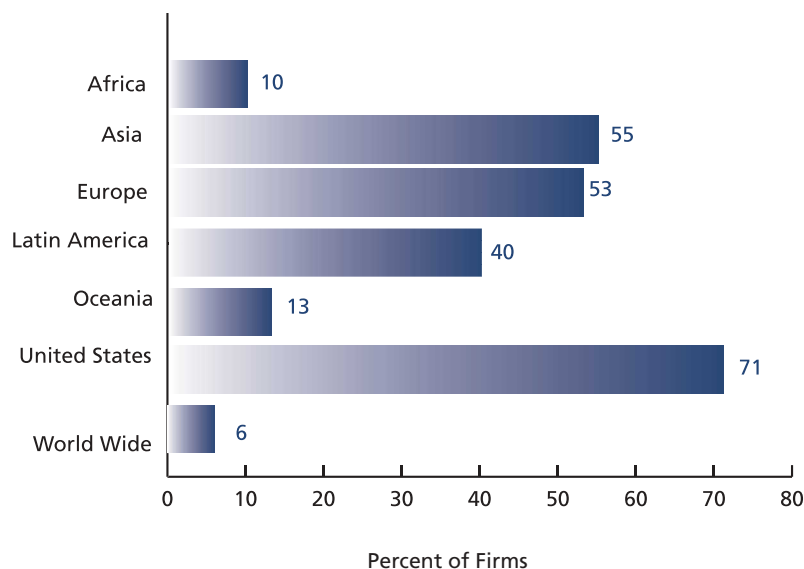
Exports are considered 'gravy' for Tripak's domestic sales, yet Winter has hired an Asia export director to lead another attempt at the Chinese market and has begun to advertise Tripak more widely in Canada. Like other small business owners, Winter believes passionately in his product.



Current Export Markets

Alberta's SMEs are actively exporting around the world (Figure 8). The sample of 110 firms showed 71 percent actively selling into the US. About 55 per cent of the SMEs sampled sold into Europe and/or Asia. In Europe, the United Kingdom was the most common market (10 percent). In Asia, China (including Hong Kong) was most frequently mentioned (12 percent) followed by Japan (7 percent). After the United States and China, Australia (11 percent) was the single most frequently mentioned country, with Mexico (8 per cent) and Argentina (5 percent) the most commonly mentioned markets in the Americas.

Figure 8 **Percentage of Firms Exporting to Geographic Markets**



United States Market

Not surprisingly, the United States is the most common export market with half of the firms sampled sending more than 50 percent of their exports south of the border. Many firms viewed the US market as an extension of the domestic market. That is to say, these firms did not view US sales as exports. Firms also emphasized it was important to minimize the existence of a border in the eyes of their US buyers. American spelling is often used, business is normally transacted in US dollars and the perception of geographical distance is minimized.

The high proportion of exports to the US was most visible in the information technologies sector with 87 percent of sampled SMEs sending at least 70 percent of their export shipments to the US. The aerospace, building products, and health and life science sectors were also highly dependent on the US market. The environmental, pharmaceutical, and chemicals and petrochemical sectors were the least dependent on the US market, with each shipping a little over 25 percent of their total exports there. These three sectors also showed the most diverse

Poly Pacific Blasts Its Way into the US Market

Since 1989, Poly Pacific International Inc. President Thomas Lam has doggedly carved a niche for his firm's innovative and environmentally sensible alternative to industrial paint stripping. With early assistance from the Alberta Research Council, Lam perfected the production of an efficient plastic cutting or 'blast media' for paint removal. In the ten years since Poly Pacific's first sales to the US, Lam has built his export market to the point where it is now 95 percent of the order book.

Not only is the list of big customers growing – major airlines, defense departments, the Kennedy Space Science Center and large high technology companies – but Lam has been able to enhance his service to clients by effectively disposing of the toxic wastes produced from the blasting process. The initial product is derived from waste plastic, but after a client applies it in the stripping process, the waste – which now

input: industrial garbage. Furthermore, by reducing the use of chemical paint strippers, Poly Pacific can rightly be viewed as an ecologically sound and entirely original industrial enterprise.

Successfully marketing this idea was as difficult as streamlining it. Lam can vividly recount the 2,800 cold calls he made in the first year to potential customers throughout the continent. "Many thought I was a telemarketer and couldn't be bothered to listen." In 1993, Poly Pacific's first big export sale was to a distributor in the American southwest and it paid off handsomely. So happy was the client that he went so far as to help Lam make contact with a prime US distributing competitor!

Since then the struggle to gain a substantial foothold in the US has taken a fantastic amount of patience and energy. For Poly Pacific the US was a difficult market. US government contracts demanded that suppliers be 'small' firms, but in the US that definition initially meant that Poly Pacific would have to compete against home grown firms with up to 500 employees and \$500 million in sales. Moreover, powerful interests had a stake in limiting the little Alberta company's access to these potentially lucrative government contracts. Since these early years, the evident qualities of Poly Pacific's product and its environmental implications have seen many supply contracts be re-written to favour the Alberta firm.

In Europe, Poly Pacific has chosen not to compete but to pursue co-operation with a major player – the company will use Poly Pacific's technology to replace its own, less environmentally acceptable paint removal policies.

Lam continues to work with the Alberta Research Council to find additional uses for



photo courtesy of the Edmonton Journal

contains toxic paint chips – is removed by Poly Pacific and delivered to their Ontario recycling unit. Here plastic posts and dimension plastic 'lumber' are formed in a process that neutralizes toxic elements. This innovative use of waste material allows Poly Pacific to make two sales with its costliest

plastic blast. This has led to a new marketing thrust being made in Asia. Lam sees the developing economies of Asia, and particularly China, as ripe for the introduction of environmentally sound industrial processes. While Poly Pacific made cautious and ultimately failed attempts to target Asia in the past, Lam sees an opportunity going forward. One particular benefit now is the large volume of cheap plastic input or waste from the burgeoning manufacturing sector in Asia. If Lam can

reprocess this material and sell it back to them, he'll have unlocked another huge market.

Doggedly determined, Lam's belief in continuous research, and his pursuit of cheaper inputs and new markets, ensure Poly Pacific's continued success. One only has to hear Lam excitedly describe how Poly is on the brink of introducing its process into the high tech electronics industry, to get an idea of just how successful they will become.

geographical base for their exports which may, in part, be a function of their highly specialized nature. It is interesting to note that two of these sectors, the environmental and the chemicals and petrochemical group, showed slightly more dependence on markets in Latin America than they did in the US market.

When considering the relationship between the US market and export orientation, the sample showed that almost half of the 'low' intensity exporters relied on the US for over 75 percent of their exports (Figure 9). For the cross-tabulation (shown below), firms were categorized (in 25 percent increments) by how they answered the survey question: "What percentage of total exports were destined for the US?"¹⁰ As might be expected, the 'very high' intensity exporters tended to rely less on the US market. While strong in the US market, an almost equal number of high intensity exporters showed a tendency to ship elsewhere. This result suggests that the Alberta's SMEs most active in export markets tend to look to diversify beyond the US markets.

Figure 9 **Export Intensity and US Exports as Percentage of Total Exports**

Firm Exporting Intensity	US Exports as Percentage of Total			
	0 to 25%	26% to 50%	51% to 75%	76% to 100%
Low (0% to 10%)	31.4%	14.3%	5.7%	48.6%
Medium (11% to 20%)	50.0%	0%	0%	50.0%
High (21% to 50%)	35.0%	15.0%	15.0%	35.0%
Very High (51% to 100%)	42.1%	7.9%	15.8%	34.2%

Sunora Foods' First Export Shipment Kick Starts Firm

Sunora Foods Ltd. is a firm that literally took root because of an export opportunity. As company President Steve Bank explained after a busy day monitoring key foreign markets, his food oil enterprise didn't even exist until 1988, when he was approached by a well-placed contact in the US food industry to source and package a large shipment of canola oil. Not only was Sunora's first shipment unsolicited, the business itself began as a result. Today the firm has become a small to medium sized interest in the niche food oils market: Spanish olive oils, corn oils and other related cooking products are also now represented under the Sunora label. Sunora currently exports 80% of its product.

From his unassuming central office in the northwest corner of Calgary, Bank recounted his exporting story amongst shelves lined with his company's products. Now boasting 50 employees, Sunora has become a small but visible player in the global food oil market. His success, he believes, lies in competitive pricing, quality of service and marketing efforts. As Bank sees it, manufacturing while trading food oils is the key to marketing the product. Much of the business focuses on trading oils (often including hedging techniques), bulk oil packaging and turnkey deals in new markets. But the firm's trading activities are not like that of a broker – Sunora will actually take possession of the oil and do the manufacturing necessary to bring the product to market. Bank defines himself as being "intensively attuned to a very narrow area" and describes Sunora as "a niche player in a global market".

Canada itself is a small or niche player in the global food oil market. Annual fluctuations in oil seed crop yields force Bank to keep abreast of current growing conditions in Canada and abroad. Competition in larger worldwide markets, particularly from soya based oils, demands a certain amount of market intelligence. The proximity of Sunora to some of the best canola crops grown in the world has not, by itself, guaranteed success, but Alberta does offer Sunora a favourable tax and regulatory environment

Being a relatively small player in the oil trade also demands a solid level of quality and service. Bank credits Sunora's salespeople in the field who understand and interpret local markets for the decision-makers in Calgary. While Bank recounted a few of Sunora's stumbles – from poor shelf promotions to ill timed hedging – he mentioned how regional differences in markets, including the US, demanded well crafted sales strategies. Interestingly, he cited Quebec as being the most difficult market to penetrate, one where "tastes were totally different".

By combining manufacturing with trading, Sunora Foods has become a player on the world food oil market. Market intelligence, quality and service will help keep it there. It's a safe bet that Steve Bank's sensitivity to customer tastes and requirements will ensure that Alberta's Sunora Oils are found on shelves in an increasing number of markets.

Other observations

At least 20 percent of firms in the agricultural, engineering and construction, and chemicals and petrochemical sectors exported to Asia. A similar ratio of firms in the aerospace, environmental, and health and life sciences sectors exported to the EU. For the industrial equipment sector, the US was the dominant destination, followed by Europe, Asia and Latin America.

In general, Alberta's aerospace, information technologies, industrial machinery, pharmaceutical, health and life sciences, and building products sectors deal almost exclusively with highly developed countries. This is not surprising since these SMEs are working in technologically intensive areas.

Another notable trend in the survey is the degree to which the aerospace and information groups dealt primarily with English-speaking countries. As expected, agriculture SMEs were the most likely group to export to developing nations, as were firms in the environmental and engineering and construction sectors. This is not to say, however, that the foreign customers purchasing from these sectors are primarily residents of the importing nation. The environmental and engineering and construction SMEs tend to sell to foreign companies looking to develop the natural resources of the destination country.

Few Alberta's SMEs trade with Africa. A surprisingly small number trade with Mexico: out of the 110 respondents, only seven reported doing business in Mexico. Some survey respondents pointed to the crudeness of these markets. Corruption and shipment delays were often given as reasons for avoiding trade in less developed markets.

Another and perhaps more important cultural determination of Alberta's SME trading pattern is language. Of the first or 'primary' markets mentioned by respondents, more than three-quarters used English as an official language. When all countries named as markets were aggregated, just over 50 percent were English-speaking. It is likely that smaller firms have a greater problem overcoming linguistic barriers than do larger firms. It is important for Alberta's SMEs to understand that Canadian business methods are not always transferable. As was noted by Tripak's owner when discussing exports to China, it is essential to adapt practices to local customs.

Adaptive Engineering Ltd. Captures North American Market

David Smith, founder of Calgary's Adaptive Engineering Ltd., turned his idealistic desire to build a bike for the disabled into a firm that is now a world leader in portable wheelchair lifts and aircraft ground support equipment. As Smith describes it, his work on the bike led to further research into ways to "apply appropriate technology and high quality craftsmanship to the world of the disabled". Adaptive Engineering now exports 95% of its products to the US.

When Smith speaks of 'appropriate technology' he is referring to products that are simple, easy to use and do not require electrical power. This latter characteristic is important as such equipment often sits idle for extended periods and, as a consequence, has trouble starting. The gleaming, polished look of the lifts and ramps being manufactured inside Smith's central Calgary shop belies their simplicity. With a light push, the equipment responds smoothly to



the operator's needs. A new baggage carrier, for example, glides and turns almost effortlessly after being gently nudged; a wheelchair lift is quickly made operational after two or three simple mechanical movements.

Looking at the lifts, one instantly recognizes why Via and Amtrak railways began purchasing them for station platforms some twenty years ago. With early help from Canada's National Research Council, Smith was able to perfect the designs and establish the firm's first patents. Today, Adaptive Engineering Ltd. has its name on eight to ten patents and employs over 30 people. The firm has sold well over a thousand of its wheelchair lifts and about 400 of its aircraft ramp carts with annual sales now approaching the \$4 million mark.

Like other firms working in a specialized marketplace, Adaptive doesn't have to rely on its own marketing for growth as clients often come to them. The recent explosion in regional jet usage offers a case in point. These smaller aircraft require new passenger boarding ramps or an adaptation to existing jet bridges. This has created substantial demand for aviation ground support equipment both in Canada and abroad.

Adaptive is considering entering markets beyond North America. India, for example, has shown potential but based on past experience, David Smith is wary. Expanding the export market requires extensive research and development to ensure that Adaptive's products meet the transport regulations of the particular target market. Smith's growth strategy is not really an issue for his family-owned enterprise – he is cautious about growing too fast.

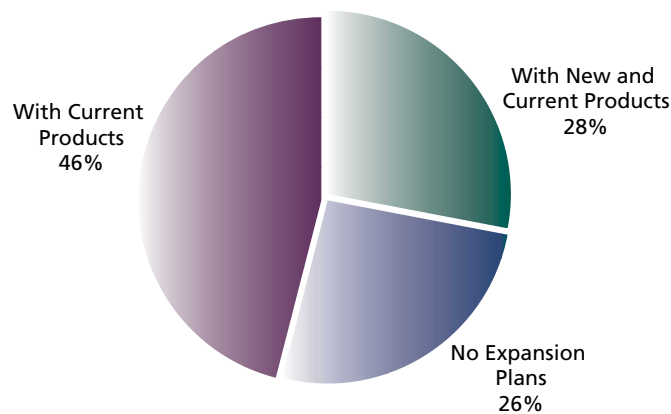
By any measurement, Adaptive Engineering Ltd. is a highly successful exporter. Not only does it export 95% of its products, Adaptive's continued focus on new markets, innovation, specialization and reliability will ensure that its international order list continues to grow.

III. Future International Activities and Strategies

SMEs Export Expansion Plans

Nearly three-quarters of respondents reported that they intended to expand their exporting operations over the next year (Figure 10). Almost all other SMEs surveyed said they would not expand but had no plans to *decrease* export sales. The most common reason cited for choosing not to expand exports was that the company could not currently handle any more business. Many respondents were comfortable with their current sales situation or felt the risk simply outweighed the possible gains of an expansion effort. Lack of funding was also commonly cited as a reason for not expanding export activities.

Figure 10 **Expansion Plans**



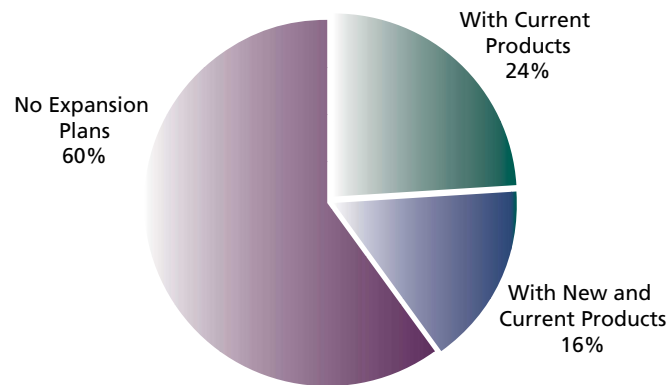
As noted above, innovative firms tend to be high performance exporters. All of the health and life sciences SMEs surveyed intend to expand their marketing range; almost all of the information technologies firms planned on expanding; and a slightly lower proportion of SMEs in the chemical and petrochemical sector were eyeing export expansion. SMEs in the aerospace and pharmaceutical sectors appear to be the most innovative when considering new markets, with 80 and 67 percent of firms, respectively, planning to introduce a new product or service in the hopes of increasing export sales. But for most of the firms surveyed, firm expansion plans did not include the introduction of new products or services.

In aggregate, slightly more than half of the SMEs in the environmental, construction and engineering, and building products sectors reported export expansion plans for the following year. When considering sectors with the least innovative approach to export expansion – in terms of products offered – the agricultural and building products sectors stand out, with only about 15 percent of these SMEs planning to introduce new products. When aggregated,

roughly half of the firms which were planning to enter new markets, intended to do so using a combination of new and current products.

Curiously, most SMEs in the survey were uninterested in entering new markets (Figure 11). The most 'expansionist' sectors were the aerospace, agriculture, and environmental sectors, all of which recorded a majority of firms planning a new market entry. Expanding in existing markets or entering new ones requires extensive research, which translates into increased costs. However, in not searching for new markets, firms may be missing excellent opportunities. The survey sample's most conservative group of SMEs in this regard belonged to the building products, chemicals and petrochemical, and engineering and construction sectors. Less than a third of these SMEs were planning a new market entry.

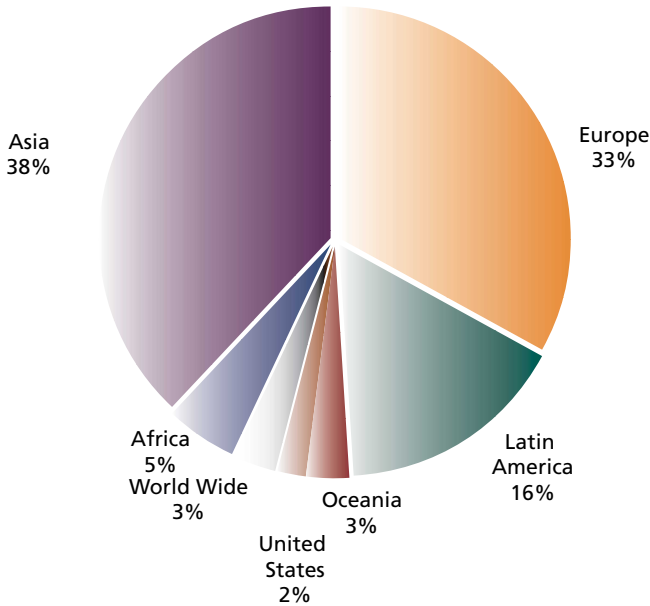
Figure 11 **Plans for Expansion in New Markets**



The strategies for market entry were often vague for specific new target markets (Figure 12). The United Kingdom, Japan, China, Mexico, Brazil and Australia were the countries mentioned most frequently.

Firms in the agricultural, health and life sciences, and engineering and construction sectors, were apt to think in regional terms and often specified Asia when considering new target markets. Major English-speaking markets ranked high for the information technologies sector, while the surveyed aerospace firms chose the EU. The industrial equipment sector was primarily interested in the EU and Latin America. The comment was made, however, that the EU was a difficult market to enter, in part because people tended to buy locally.

Figure 12 **New Geographic Markets**



The high percentage of Alberta’s SMEs planning to expand their operations over the short term is very encouraging. In aggregate, 70 percent of the SMEs interviewed were looking to expand. This bodes well for the provincial economy and does not simply mean more jobs and higher profits in the short term. By seeking to diversify within the global marketplace, SME export expansion strategies will help reduce the cyclical or ‘boom/bust’ nature still evident in the Alberta economy.

Long Term Expansion Factors

Respondents were asked to rate or scale eight factors on their importance in influencing company export expansion plans (Figure 13). The survey did not ask specifically about venture capital, as the lack of such funding is already a well known issue in Alberta.¹¹ Not surprisingly the most important influence on expansion plans was overall business costs.

The relative unimportance of low cost labour is, however, a surprising finding that can best be explained by noting the degree to which sampled firms were working in a technologically intensive area. It follows that low cost labour tended to be deemed important by SMEs working in primary sectors like agriculture, but not as important to firms working in a high tech sector.

Another striking result of this line of questioning was the relative unimportance of ‘market proximity’. It was expected that this would be a natural and all too familiar barrier to SMEs shipping out of Alberta. The Edmonton-based microfabrication company, Micralyne Inc., makes an effort to reduce the perception of distance. Similarly, one of Calgary’s petroleum engineering firms stated it worked hard at reducing perceived geographical distance when

dealing with American clients. Adams Pearson Associates Inc. (APA) addressed the problem by locating offices near the US and Canadian offshore activity. This allows APA to easily pick up work either independently or by way of the larger international firms working in these same areas.

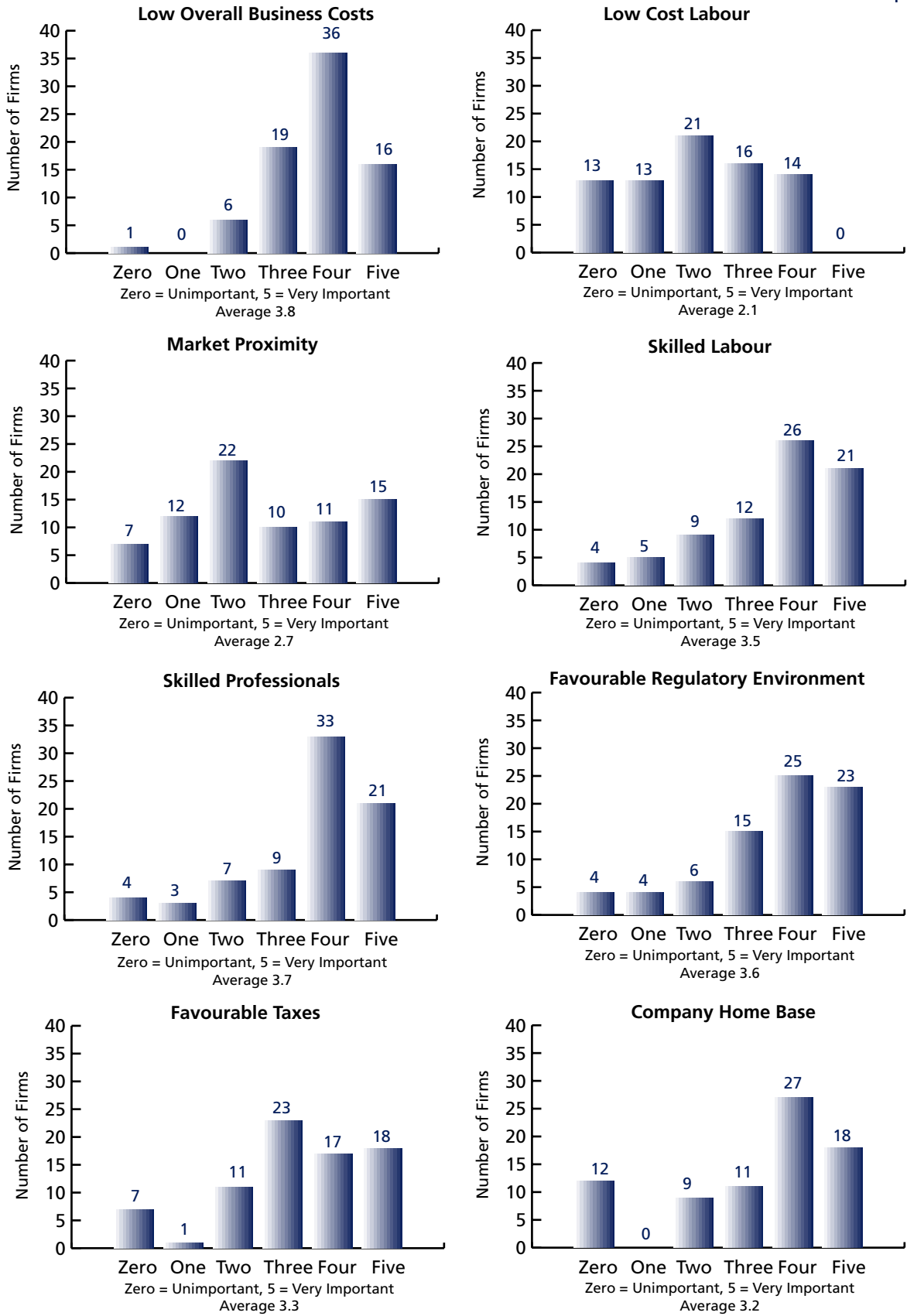
Highly ranked long term expansion factors included ‘access to skilled labour’ and ‘access to skilled professionals’. These factors seem particularly important to SMEs in the aerospace and the engineering and construction sectors. These firms emphasized the importance of an excellent, publicly funded education system to produce the next generation of skilled labour and professionals. Several of the sample firms already participate in apprenticeship, co-op and mentoring programs and hire summer students, all in an effort to prepare students for employment in their industries. A sound education system was also mentioned as a necessary lure for those skilled personnel considering a move to Alberta.

In general, surveyed firms reported that Alberta was a pleasant place to live—the relatively low cost of living was frequently mentioned. Naturally SMEs placed great emphasis on a favourable tax environment as an important export expansion factor. This was especially true for the engineering and construction sector and the pharmaceutical firms surveyed. A favourable regulatory environment was also ranked highly by both the health and life sciences and pharmaceutical sectors. This was an expected result as health care products and services remain the most highly regulated industries in the world.

Another factor deemed important by many SMEs was their ‘present home-base’. The high ranking of this very general factor suggests that in the context of exporting, SMEs located in Alberta feel that the province is not only a desirable place to do business, but it is a comfortable environment within which to launch global activities. While several Edmonton firms view the lack of direct flights to and from their city as ‘time-consuming’ and an ‘annoyance’, respondents were generally upbeat about their prospects. Many firms openly praised the Alberta government’s efforts to better facilitate international trade.

The expansion factors explored in the survey are extremely important to those making policy in this area and figure prominently in this study’s final recommendations. Consistent analysis of these factors over an extended period would be an excellent tool to illustrate the shifting needs of Alberta’s smaller exporters.

Figure 13 Importance of Factors in Decision to Expand

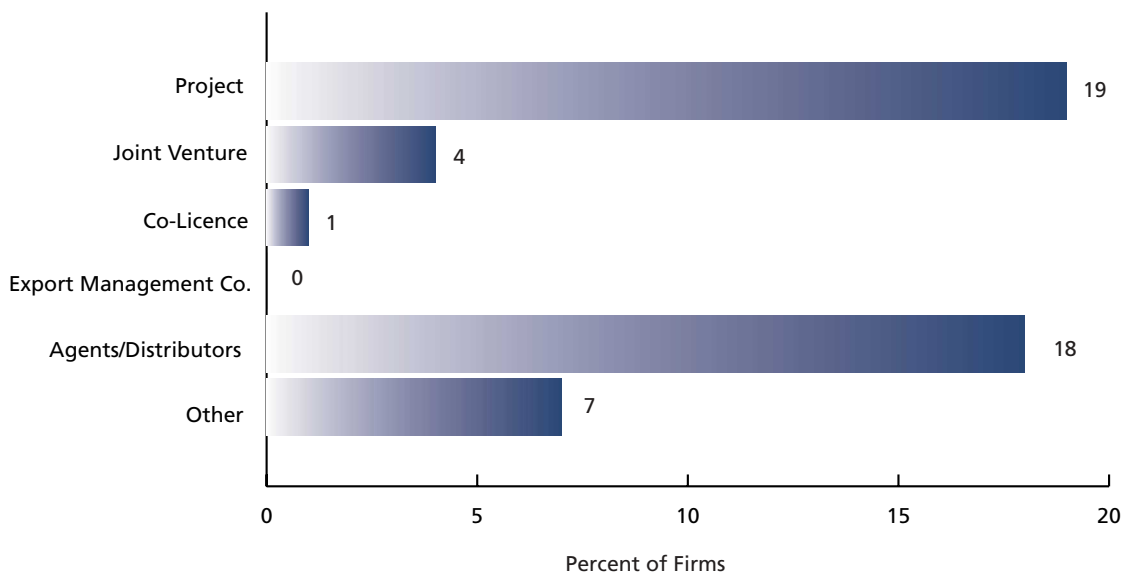


Collaboration and Marketing Abroad

Liberalized international trade and increased regional market integration have not simplified exporting for the majority of SMEs. Today's international business environment is more competitive and complex than it has ever been. Like elsewhere, Alberta's exporters, including the smaller firms, are finding it necessary to cooperate with others – and often with foreign firms – to enhance market penetration. Joint-ventures, distribution agreements, production agreements, and shared project work can be viewed as important components of a firm's international strategy.

A little more than half of the SMEs surveyed reported that, in the context of exports, they collaborated with other firms in one way or another. Alberta's SMEs not collaborating with others often chose not to because of 'divergent interests' or 'financially unviable situations'. The most common methods of collaboration are shown in Figure 14.

Figure 14 **Methods of Collaboration**



Collaboration was especially important for the environmental sector, in which all surveyed firms engaged in some sort of collaborative effort to enhance exports. Joint-ventures and projects with others were the two most important types of collaboration for these firms

This type of networking and alliance-building was almost equally important for the chemical and petrochemical sector where 71 percent of firms surveyed engaged in some form of collaboration. Distribution arrangements were also particularly important for the chemical and petrochemical and the pharmaceutical sectors where over 70 per cent and 50 percent of surveyed firms, respectively, relied on collaboration to export.

Of the engineering and construction firms surveyed, 60 percent were involved in similar cooperative arrangements where they were engaged in international projects with others. For example, the petroleum engineering firm of Adams Pearson Associates Inc. (APA), found collaborative efforts helped it win large international contracts. In some cases they would be subcontracting part of their own project, while in other cases they would accept work from larger companies. This effective strategy reduced costs, built revenues and bolstered APA's international recognition.

Many firms, including Calgary's Sunora Foods Ltd., emphasized the use of distributors. Distribution agreements were the second most frequent form of collaboration found in the survey. 'Local' salespeople better understand and interpret their own particular and often complex markets. They are often the force behind a successful promotional campaign that provides the SME with adequate market penetration. One of the survey's profiled firms, CV Technologies Inc., watched helplessly as their sales in one export market plummeted after losing their local distributor. Tripak, another firm interviewed for the survey, saw their choice of the wrong distributor lead to the abandonment of an entire export market.

Collaboration was a less important export strategy for the following sectors: aerospace (33%), building products (33%), industrial equipment (35%), and information technologies (40%). We can only speculate as to why these firms tend to be solitary exporters. It is possible that their products tend to be so highly specialized, distribution arrangements are the only form of collaboration necessary.

When cross-tabulations (Figure 15) were run on methods of collaboration and whether the firm was a goods or services exporter, the data showed that service firms rarely use agents and distributors in foreign markets. Unlike goods exporters, these firms showed a strong inclination to joint-venture. Intuitively this makes sense: firms that produce goods usually rely on getting them into the marketplace by way of representatives with local knowledge, while service firms are apt to bundle their products with the offerings of other foreign firms.

Figure 15 **Types of Collaboration According to Goods or Service Product**

Type of Firm	Type of Collaboration					
	None	Project with other firm	Joint Venture	Co Licence Export Products to another firm	Agent or Distributor	Other or Combination
Goods	56.0%	17.9%	2.4%	0%	19.0%	4.8%
Services	42.3%	19.2%	5.4%	3.8%	7.7%	11.5%

Domestic Experience Drove Adams Pearson Associates Inc. onto International Stage

Calgary's Adams Pearson Associates Inc. (APA) is an oil and gas engineering company that has crafted a sensible and successful export strategy to smooth uneven market demand. Company President Bob Pearson points to the depths of the 1986 recession as providing a valuable lesson. That rough period saw the firm let go of the majority of its employees, a difficult decision for Pearson and one that underlined the need to look for work beyond Alberta and Atlantic Canada.

When work in the domestic market evaporated quickly and the oil and gas industry was sluggish to respond, development projects elsewhere took on new attraction as firms like APA scrambled for business. With many competitors in the hunt, APA began looking at relatively risky emerging markets in South America. This international move, although initially backfiring in the South American market, has brought the firm work throughout the world. APA's satellite offices in Texas, North Africa, and Atlantic Canada also support the firm's efforts to achieve a mix of conventional land operations and sophisticated offshore projects in the North Sea, Gulf of Mexico, and on the Grand Banks and Scotia Shelf.

Wary of the boom/bust nature of work in the Western Canadian Sedimentary Basin, Pearson is constantly striving to increase the proportion of APA's international work. "We choose international work for several reasons," Pearson explains. "Profit margins are higher (Canadian salaries are lower in part due to the exchange rate); the work is generally more interesting; and the larger international projects seem to last longer

between project start-up and completion."

Another crucial strategy is to leverage APA's reputation and overcome the limits of its small size by working with other highly respected firms. "In this industry, perception is important – being bigger is seen as being better. But we also subcontract because some projects are simply too large for us." Pearson does not rule out working with, or even for, competitors and smaller players. "In some cases, independent consultants have brought us interesting work." He cites APA's initial work in Venezuela originating in this manner. "The clients were desperate for help on the project."

The creative international strategy outlined by Pearson was what one might expect from a highly trained engineer. His systematic approach is perhaps best illustrated by APA's move to open offices near US and Canadian offshore activity. This is where the larger international companies – the firms most likely to work worldwide – operate. Not only do these contacts potentially deliver work elsewhere, APA can readily pick-off work in the backyard of the larger consulting firms. Currently, Pearson's long term goal is to see that APA appears consistently on the lists of specialized firms invited to tender on petroleum engineering studies for complex international projects. Instant recognition like this will give the firm invaluable visibility.

Certainly there have been a few mistakes. Besides being too reliant on the domestic market during the firm's early years, Pearson recalled wasted effort on projects APA had a low potential of obtaining. In one memorable case, APA helped put together packages promoting a

development project in Colombia that was, in hindsight, impossibly risky.

APA is well placed to continue growing outside of Alberta. Pearson believes that both the federal and provincial governments have done a good job in positioning and promoting the domestic energy industry. The situation for APA in Calgary is almost perfect. The variety of hydrocarbon accumulations in the region and related technical problems offer a great opportunity to test new technologies. Canadian engineers are exposed to a wide breadth of practical experience. The slew of conferences and trade shows held in Calgary helps potential clients learn about the firm and its 'boutique' energy service.

Currently 25% of revenues come from exports outside of North America. Markets currently being serviced by APA include Nigeria, Tunisia, Algeria, Egypt, Australia, the North Sea, Qatar, Kazakstan, Venezuela, and Asia. Pearson believes his drive to 'recession-proof' APA has not only brought the firm stability and challenging projects but it has also fostered the technical skills and enthusiasm of its employees. The key factors of APA's success as an exporter is their constant attention to quality of service and the expertise of their engineers. Going forward, APA's willingness to open offices closer to key offshore projects should create even more international opportunity.

IV. Liberalized Trade and Alberta's SMEs

The Effects of Free Trade

Respondents were asked to rate the effects of the free trade agreements (particularly the 1989 Free Trade Agreement, the 1994 North America Free Trade Agreement, and the 1997 Canada-Chile Free Trade Agreement) on their exporting ventures. The results show that Alberta's SMEs attach limited importance to these agreements (Figure 16).

Several key sectors, however, did report benefiting from the free trade agreements. Roughly half of the firms in the aerospace, pharmaceutical, and engineering and construction sectors felt positive effects. Firms in the health and life sciences sector also reported a positive effect, and the Canada-Chile agreement was mentioned by a few firms in the environmental sector.

Those who did comment positively often cited their firms' increased access to the US market. 'NAFTA has made life easier for us' one respondent explained, 'we face fewer duties, our professionals can travel there, and the paperwork has diminished.' Similarly, another respondent felt that his firm had gained a 'favourable footing' and could now compete. Moreover, 'the ease of obtaining American inputs' had increased their efficiency.

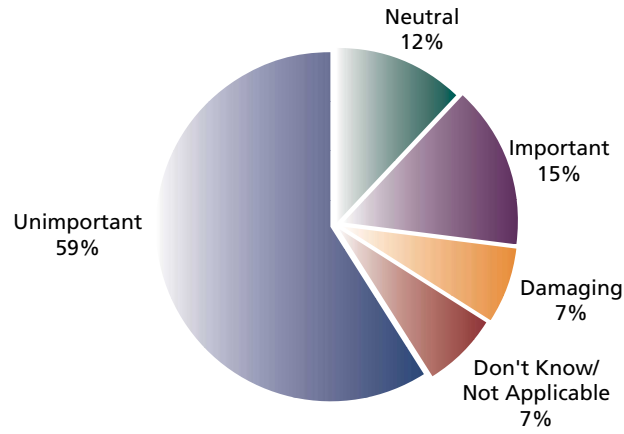
In general, survey firms indicated that these agreements had only a minor effect on their market access. Most significant was the high proportion (over 90 percent) of SMEs that felt that NAFTA and the Canada-Chile Free Trade Agreement had no applicable effect. This result may be a reflection of the minimal trade between Alberta's SMEs and the Mexican and Chilean markets. As well, it may be that the passage of time since the signing of these agreements has lessened the perception of their impact.

One notable statistic flowing from this segment of the survey is the fact that seven percent of the SMEs sampled believed that free trade with the US is damaging their ability to gain market access. Representative comments in this regard were that NAFTA created a 'one way street' when it came to US-Canada trade and that 'commerce was heading north'. Several respondents also cited increased paperwork as a negative result of the NAFTA.

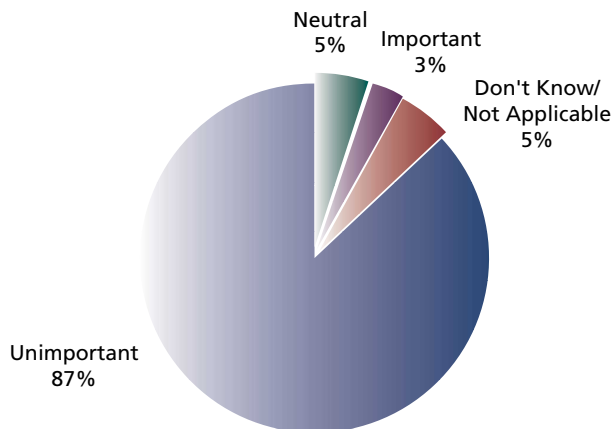
Numerically, the firms responding negatively on the trade agreements represent an insignificant segment of the sample. It is, however, interesting to note their enthusiastic disapproval of freer trade. Perhaps Alberta's smaller firms need to be made more aware of the opportunities offered by these agreements. The exclusion of health services meant some firms would not be affected by the agreements.

Figure 16 **Effects of Free Trade Agreements and Exports to the United States, Mexico, and Chile**

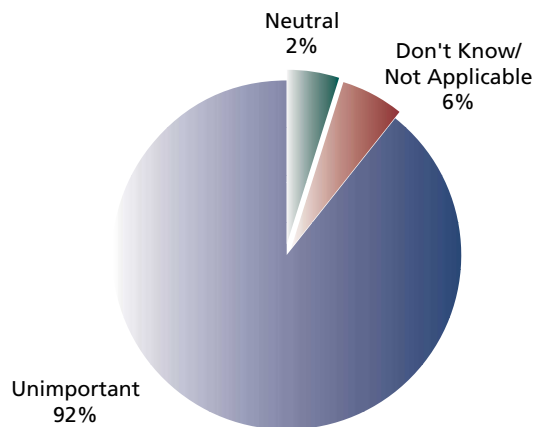
Exports to the United States



Exports to Mexico



Exports to Chile



Micralyne's Micro-Manufacturing Serves a New and Sophisticated Marketplace

Micralyne Inc.'s tiny products represent the first wave of what could be a huge and competitive marketplace for the micro-machining of non-electronic devices. Now located in Edmonton's research park, the company was founded at the University of Alberta and its first sales resulted from the contacts of U of A scientists. When Micralyne was fully privatized, the initial neutral marketing stance became more aggressive and complex.

By its very nature, this is an industry that requires its marketing representatives to have an intimate knowledge of micro-technology: traditional salespeople and



researchers must work together to form a marketing team. For a leading edge company like Micralyne, research is an important upfront investment and although they are rewarded for it, the real money is made once manufacturing results from any initial investment in research and development.

When export sales are considered (some 70% of total sales), the US market is not thought to be any different than the

domestic market. Instead of focusing on differences in the Canadian and U.S. markets, Chris Lumb, Micralyne's President and CEO, considers the similarities between the two business environments. By contrast, the large and sophisticated telecom and medical research markets in the European Union – Micralyne's most obvious offshore market – pose a number of hurdles. Complex laws and regulations, a 'Europe First' attitude, and the obvious barriers presented by distance and language, help make the US the prime or de facto market outside of Canada. Moreover, Micralyne's products are often found in the exports of its Canadian clients and these shipments are also primarily bound for the U.S.

When strategies in the U.S. market are explored, Lumb's prime consideration is whether or not the clients are leaders in their field. In a sense, the strategy is a matter of making the right decision about the long term impact of the relationship with the client on Micralyne's bottom line. The client effectively becomes a paying partner as slim margins from customized product development are turned into feasible, profitable manufacturing runs. Typically then, the client must be both unique and willing to negotiate upfront development costs, future rights to the product, and the final price of Micralyne's manufactured product. Micralyne becomes critical to the client's production.

Although the company is not casting its net in all markets, they do consider their strategic position in a global context. It is critical for Micralyne to know how other markets are evolving in what is a rapidly growing infant industry. Trade missions and

conferences are not only seen as marketing tools but are viewed as a necessary way of gathering corporate intelligence. Asia is a case in point. Micro-manufacturing is not yet common in places like Taiwan, but the potential is there and Micralyne wants to know just how to position itself should similar production needs and capabilities appear there or elsewhere. The possibility of future partnerships or joint ventures with well-placed foreign firms is not out of the question.

Active government participation in the marketing effort is not necessary but has been helpful. Basic market intelligence and contacts can save money and time and are always welcome. The crucial long term foundation for firms like Micralyne depends

on the Alberta economy consistently providing and sustaining access to capital and skilled labour in combination with an attractive living environment and lifestyle. Lumb stresses that an excellent education system, in particular the University of Alberta, is fundamental to the flow of ideas and innovations necessary for his company. In this sense, policy makers have an important role to play in nurturing Alberta's high tech industry.

Micralyne's export activities will take it down exciting new paths over the coming years. An aggressive approach, one characterized by innovative research and development, and a substantive marketing effort, is sure to keep Micralyne at the forefront of this nascent global industry.

Further Commentary on the Free Trade Agreements

In addition to rating the effects of free trade on market access, respondents were asked to comment on the overall effect of free trade on their interest and access to the US, Mexican and Chilean markets. Some highlights from these commentaries are provided below.

With regard to the US, 16 percent of sampled firms considered the trade agreements to be generally positive. Many respondents commented that the agreements cut the necessary amount of paperwork and reduced duties. A number of firms also responded that transportation was made more efficient. Some commented that importing inputs from the US was made easier. A few of the engineering and construction firms reported that the movement of their professionals was made easier – unfortunately though, for many sectors this remains a difficulty. (Two respondents even indicated that they tell customs officials they're on a pleasure trip when crossing the US border for business purposes.)

Border crossing remains a point of annoyance for many. Lengthy border inspections and large amounts of paperwork were the most common complaints heard in the interviews. SMEs reporting a deleterious effect from the free trade agreements with the US often commented on the sheer confusion they created, the paperwork, the lack of conformity on the part of American firms, the increased competition in home markets, and the exclusion of relevant industries from the agreements.¹²

For the most part, surveyed SMEs did not feel that they had been greatly impacted by the FTA and NAFTA. The passage of time, the exemptions provided to some SMEs (particularly those in agriculture), and the relative youthfulness of surveyed firms, likely plays a role in these results. The fact that many SMEs did not comment specifically on free trade is likely a result of them not having the necessary experience to compare with their current situation.

When considering perceptions of free trade with Mexico, Alberta's SMEs exporting into that country seemed even less knowledgeable about the role played by NAFTA. With 84 percent of SME respondents citing no effect on their access or interest in the Mexican market, there is little to report. As discussed earlier, developmental and cultural perceptions must play a strong role in how Alberta's SMEs view Mexico. Put simply, only seven firms stated that free trade had improved their access or interest in the Mexican market. For these SMEs, tax considerations, transportation and reduced paperwork were noted as direct improvements flowing from NAFTA.

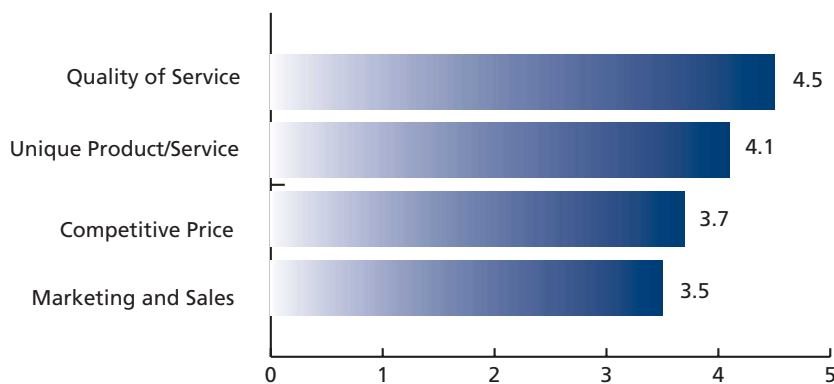
Chile was mentioned by three of the SMEs interviewed. Taken together, these firms felt only a subtle effect from freer trade with Chile. Perhaps the most interesting observation was that by bringing attention to the opportunities in Chile, there would be a subsequent increase in their sales to Alberta firms entering the Chilean market. Like the export situation *vis-a-vis* Mexico, Alberta's SMEs seem less able than the province's larger firms to overcome cultural hurdles.

V. The Elements of Success

Export Success Factors for Alberta's SMEs

Survey firms were asked to rate various factors that contribute to their export success on a scale of 0 ('unimportant') to 5 ('very important'). They were asked to scale the following factors: the importance of product quality of service, product uniqueness, price, and marketing, with an option to discuss other factors like safety, response time, exchange rates and technical innovation (Figure 17). 'Quality of service' was the factor ranked highest in terms of importance (4.5). The next highest ranking factors were 'uniqueness of product' (4.0) and 'competitive pricing' (3.8). The least important factor listed was 'marketing' (3.5).

Figure 17 **Company Success Factors**



Interpretation of these factors of success is straightforward. Providing quality service is what all these firms try to do. Poly Pacific International, for example, claims its success is based on going one step further than their competition by removing, neutralizing and reusing toxic wastes. This high quality service provides their clients with a complete solution to their industrial waste problems. Similarly, the export success of Adams Pearson Associates Inc. rests solidly on the expertise of their engineers and the firm's meticulous attention to the quality of the services provided.

What is most revealing about the survey sample is the degree to which the firms depend on the uniqueness of their products. Serving restricted market niches is the core business of the contemporary SME. One only needs to consider the specialized knowledge of Alberta firms working in petrochemical, engineering, or building products, to sense why this factor would be so important. As well, the sectors surveyed tended to be of a technical nature, so the importance SMEs attached to producing something unique was understandably high. For example, Adaptive Engineering (see profile) focuses on innovation, specialization and reliability

in designing lifts and ramps for the transportation industry. Likewise, the ability to produce unique research equipment is the basis for almost all of Tyler Research's exports (see profile).

The marriage of technological skill and high quality significantly reduces the importance of competitive pricing as a strategy for success. Alberta's SMEs know they have to be profitable and that their export efforts cannot undermine this goal – pricing strategies must fairly reflect the costs of quality and technical expertise. For some companies, however, combining competitive pricing with an excellent product is of paramount importance in obtaining a foothold in a market. As shown in the survey profiles, a firm like tiny Tripak faces competition from giant oil firms; while Sunora Foods Ltd. – with its focus on developing markets – knows that price is a crucial factor in getting the consumer to choose its fine food oils.

The ranking of the least important listed factor, 'marketing', is curious as almost all the sample firms reported a desire to increase their export marketing capacity. One possible explanation for this relatively low ranking is that firms see the risk in mounting a direct, potentially expensive, export marketing campaign. These very real costs must then be weighed against any assessment of future sales. International marketing is both expensive and time consuming. Moreover, as respondents reported elsewhere in the survey, many firms still have a very strong reliance on opportunistic export sales, which bypass the need for marketing.

Respondents generally supported the idea that background export market research information was valuable. As one highly successful respondent from the manufacturing sector put it: 'We don't have the time to invest in market research when there are other, more immediate export issues requiring our time and energy.' Since SME export activities are largely initiated by the customer, there is often already some specific market information available to the exporter. Background information covering broad topics like market infrastructure or government programs was seen by respondents as being very useful.

Alberta's SMEs are confident about their ability to deliver a unique, quality product, but less certain about how they can do that internationally while keeping to budget. Improving how SMEs market globally would be a rewarding policy initiative. As mentioned in the recommendations section of this report, help with funding in this area is one possible approach. Another recommendation emphasizes enhancing Alberta's strong market intelligence.

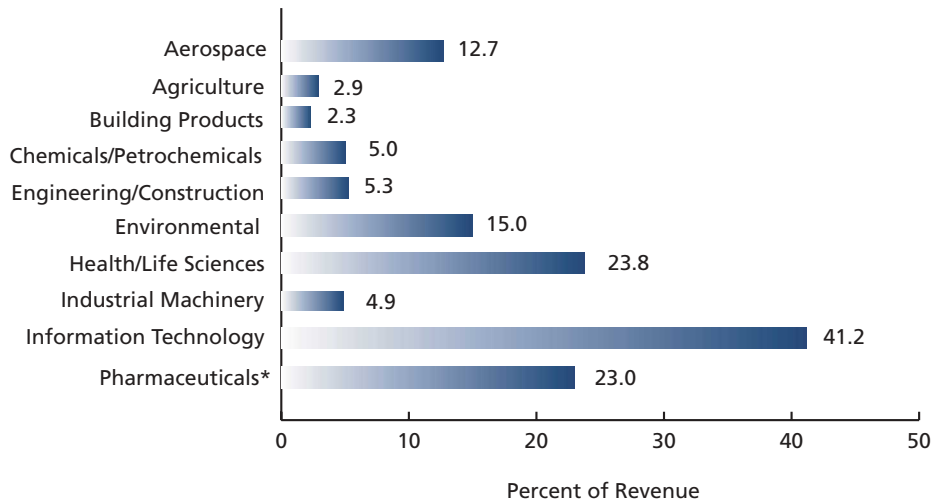
Investment in Research and Development (R & D)

Firms were asked to report the average percent of revenue they invested in R & D (Figure 18). For some Alberta's SMEs, research and development are essential for survival and any growth. The fact that pharmaceutical and information technology firms invest the most in R & D – in some cases much more than they derive from revenues – is not surprising. These firms are often positioning themselves for expected future gains. For example, health and life science firms reported spending, on average, almost a quarter of their revenues on R & D, while pharmaceutical firms generally reported taking in less revenue than they actually spent on R & D.

In some other sectors surveyed, such as agriculture and building products, less than 3 percent of revenues were reportedly fed back into R & D. This is understandable. The products sold by these firms can often be described as 'low tech' and are subject to the demands of a slow, evolving marketplace. At the other end of the spectrum are the SMEs working at the leading edge of science. They see the paramount importance of excellent research and educational institutions and this important link was emphasized by several of the high tech firms surveyed. One of the larger firms, Micralyne Inc. (see profile), emphasized that they not only recruit professionals from the neighboring University of Alberta; they network with its researchers; and are partners in several large scale projects at the campus.

The Alberta Government – through the Alberta Heritage Foundation for Medical Research – has also supported research which has, in turn, supported Alberta's SMEs. The Alberta Research Council, has also been used by Alberta's SMEs to help refine their products. For Poly Pacific International (see profile), this relationship began in the firms' infancy and continued even when costs climbed after cost recovery measures were instituted at the Council. While respondents generally expressed a desire to increase their investment in R & D, they felt constrained by their financial situation. Many respondents felt that this was one area where government grants and loans would be welcomed.

Figure 18 **Percentage of Revenues Re-invested in Research and Development**



*This does not include one firm which invested 800% of its revenue in R and D.

Curiosity Directs Tyler Research Corporation's Export Success

Tyler Research Corporation is housed near Whyte Avenue in Edmonton's old south side industrial area. When not on the shop floor, the friendly owner and President, Jonathan Tyler, works in a small cluster of casual office spaces that is decorated with some of the firm's attractive and funky design work: a gleaming metal version of an Adirondack chair and some intricate research tools mixed in with common household pieces like wine racks and chess pieces. Some items emphasize the essence of the firm while others show creative minds at play. The eclecticism of Tyler's display products matches his unique view of his high tech business and the global environment that it serves.

A biophysics expert and a journeyman machinist, Dr. Tyler built his scientific research tool business after leaving the University of Alberta in 1993. Tyler wanted to better respond to a network of scientists toiling in laboratories throughout the world.

The Biomedical Design Centre that he had helped fashion within the Faculty of Medicine faced provincial cutbacks in the early 1990s and the University's increasing emphasis on publishing meant risky, cutting edge design was no longer a priority at the Design Centre; so Tyler left to start his own company.

For Tyler, being nimble and reducing lag time are important qualities when the customer requires a solution to a highly technical research problem. The firm is not interested in commercial runs of inventions nor is it particularly growth-oriented. Since the sources of most sales are international lab scientists at the forefront of research, Tyler must respond to opportunities very quickly. Tyler Research will design and build a prototype that can then be given to subcontractors to complete. Producing twenty units of any single design would be a big production number for their shop.

Some of the biomedical products that

Tyler builds and makes parts for include Campenot Nerve Growth Chambers, biofilm devices and a range of electrophoresis units that can be customized by Tyler to conform to various national guidelines. Another important design breakthrough was Tyler's peptide synthesizer, which was developed in concert with the Canadian Protein Engineering Network Centre of Excellence based at the University of Alberta.

Most of the medical devices and parts Tyler ships go to the US and countries in Europe. The breakdown of export sales roughly parallels the client country's commitment to invest in research. Here in Canada, programs such as the Federal Government's Industrial Research Assistance Program (IRAP) help innovators like Tyler Research, but the real demand for products lies elsewhere. Marketing products and staying current on the technical requirements of trade, imports included, is a time consuming process. Word of mouth has been the most important marketing tool for the firm. Similarly, Tyler has to look long and hard when hiring skilled professionals; there are no biomedical engineering programs in the region and even finding a machinist with a wide-range of skills can be difficult when Alberta's energy sector is booming. He participates in the Northern Alberta Institute for Technology (NAIT) journeyman program and hopes the graduating apprentices will respond to, and return to, the interesting work offered by his company.

Other matters that can make life difficult for small innovative firms like Tyler is the degree of difficulty – compared to cities like Calgary – of having clients visit. According to Tyler, the lack of direct flights and cumbersome customs processes can make

Edmonton a challenging city for the high tech manufacturer. Tyler has also faced the reluctance of the larger banks to provide reasonable lines of credit. He feels that the locally based financial institutions, such as Capital City Savings, are responding to the needs of high technology businesses in Western Canada. "Unlike the larger eastern-based banks, they are flexible and receptive to innovative ideas." Another local asset singled out by Tyler is the Alberta Heritage



Foundation for Medical Research, which attracts top researchers and funds that then produce further demand, including foreign demand, for Tyler's bio-medical equipment.

Jonathan Tyler is satisfied with his business and lifestyle in Alberta. He has decided to keep the firm small so that he can involve himself directly in product creation and not have his curiosity for innovation dulled by administrative work. In important ways, being small helps the firm succeed in export markets. Tyler can guarantee crucial quality control by inspecting every single product before it is shipped while providing a very quick turnaround.

Research, Development and Export Intensity

Another important relationship pursued in the survey was the degree to which an SME's export intensity was related to the amount the firm invested in R & D (Figures 19 and 20). R & D is often viewed as an important determinant of export performance in sophisticated economies. Each firm's investment in R & D or 'R & D Intensity' was categorized by how they answered the question: "What percentage of your annual revenues are invested in R & D?" An investment of 5 percent or less was deemed 'low', 5 to 9 percent 'medium', 10 to 19 percent 'high', and 20 percent or more 'very high'.

While R & D intensity was 'low' for almost half of the SMEs surveyed, intense exporters were much more willing to roll money into R & D. More than half of the firms surveyed were 'medium', 'high' or 'very high' R & D investors. A striking 20 percent of the most intensive exporters placed 10 percent or more of annual revenues into R & D. Though the survey sample of SMEs is small and varied, there appears to be a relationship between the willingness of Alberta's intensive exporters to innovate and their corresponding success in international markets. Innovation as a means of obtaining some sort of exclusive competency in the global marketplace is a strategy pursued by many successful exporters.

Figure 19 **Investment in Research and Development**

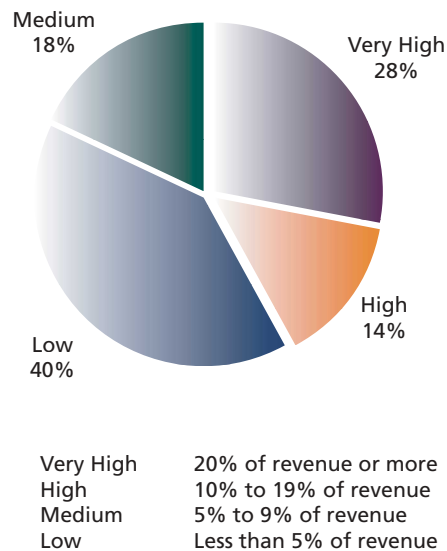


Figure 20 Investment in Research and Development and Export Intensity

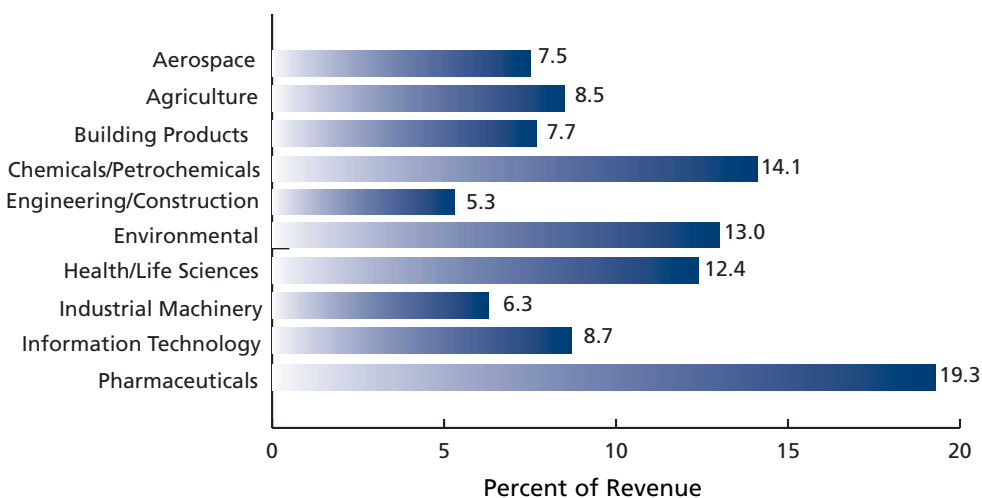
Exporting Intensity	Percentage of Revenue Invested in Research and Development			
	Low (0 to 5%)	Medium (5 to 9%)	High (10 to 19%)	Very High (20% or more)
Low (0% to 10%)	62.9%	11.4%	20.0%	5.7%
Medium (11% to 20%)	41.7%	0%	33.3%	25.0%
High (21% to 50%)	50.0%	11.1%	16.7%	22.2%
Very High (51% to 100%)	37.8%	10.8%	32.4%	18.9%

Investment in Marketing

The average annual percentage of revenue invested in marketing, based on the year 2000, was similar across the sectors when compared with their investment in research and development (Figure 21). Unlike research and development, however, a strong marketing effort is necessary regardless of the sector.

Pharmaceutical firms invested the most in marketing (19.3 percent) while engineering and construction firms spent the least (5.3 percent). In general, service-oriented firms like those in engineering and construction, are apt to rely on their contacts and word of mouth to advertise their expertise more than are goods producers. Similar to the survey results for SME investment in research and development, many respondents reported that additional help from the Government of Alberta would be welcomed. Promoting the province internationally and, specifically, trade show activity were mentioned by respondents. And as mentioned above, others suggested that access to marketing loans and detailed marketing intelligence would improve their exporting endeavours.

Figure 21 Investment Strategies: Average Percentage of Revenue Invested in Marketing



Marketing and Export Intensity

The relationship between Alberta's SMEs' marketing efforts and export intensity was somewhat weaker than expected (Figures 22 and 23). Marketing intensity was categorized for surveyed firms by their response to the question: 'What percentage of your annual revenues are invested in marketing?' Firms responding with 0 to 5 percent were categorized as 'low intensity', firms with 5.0 to 9.0 percent were 'medium', firms with 10 to 19 percent 'high', and 20 percent or more were deemed 'very high'.

While firms with a strong export orientation did spend slightly more in their marketing efforts, the relationship was not as significant as expected. One possible reason for the weakness of this result is that many of the SMEs surveyed were highly specialized and did not need to market themselves intensively. For example, new clients approach Tyler Research Corp. after talking to colleagues who have been happy with Tyler's expertise and ability to solve problems. Conversely, Poly Pacific International and Sunora Foods Ltd. attribute marketing for their successes. Art Lemay of Westmark Products Ltd. observed that the tendency for his firm (and many others) is to rely on opportunistic sales that come their way. The opportunity cost of this passive approach is difficult to ascertain, but there is an assumption that marketing campaigns might have produced more lucrative results.

Figure 22 **Investment in Marketing**

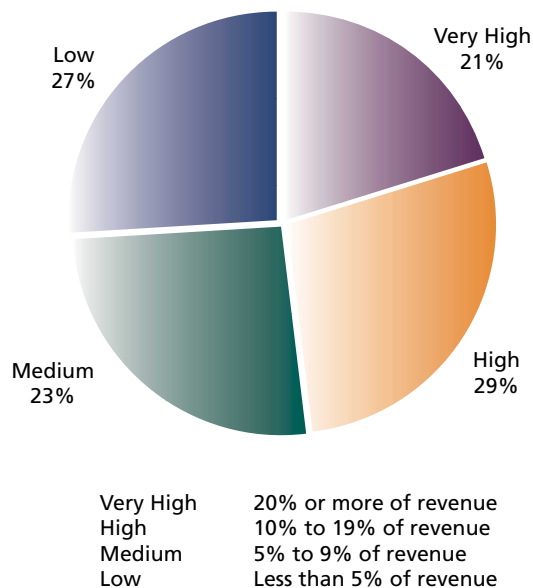


Figure 23 **Investment in Marketing and Exporting Intensity**

Exporting Intensity	Percentage of Revenue Invested in Marketing			
	Low (0 to 5%)	Medium (5 to 9%)	High (10 to 19%)	Very High (20% or more)
Low (0% to 10%)	31.4%	28.6%	25.7%	14.3%
Medium (11% to 20%)	33.3%	25.0%	25.0%	16.7%
High (21% to 50%)	22.2%	33.3%	38.9%	5.6%
Very High (51% to 100%)	29.7%	5.4%	54.1%	10.8%

Exports, Inter-Firm Relations and ‘Other’ Sources of Income

Surveyed respondents were asked about their company’s links to other firms, in particular, the types of business relationships that provide supplementary sources of income or production capacity. Specifically, SMEs were asked whether they licensed technology to or from others; if they performed research and development or production on a sub-contractual basis; or if they sub-contracted these activities to others. 79 percent reported that they were involved in one or more of the listed activities.

There are several ways to interpret these findings. For instance, SMEs reported on their production status by indicating whether they acted as contractors or sub-contractors or both. Many reported a shifting production status – or a combination of internal and external production. This is an important and sensible approach for smaller businesses. It allows them to temporarily expand production capabilities or utilize more fully extant production inputs. Such flexibility provides SMEs with much of their competitiveness. Of the 65 firms reporting, 66 percent rely on these transactions for revenue. Without question then, subcontracting production is an important source of income outside of direct sales and can keep companies busy during slack periods.

An SME working as a sub-contractor, however, can have its own export activities negatively affected by the degree to which it provides inputs to other, typically larger exporters. Put simply, it is expected that contractors will realize higher export sales than will subcontractors.¹³ The survey data gathered from Alberta’s SMEs generally supports this view. Of the 45 firms that reported sub-contracting for others, only 27 percent were ‘very high’ intensity exporters (50 percent or more of revenues from exports). Of the 48 firms that contracted production to others, 40 percent were ‘very high’ intensity exporters (Figures 24 and 25).

Figure 24 **Subcontracting Production and Export Intensity**

Exporting Intensity	Subcontracted Production from Other Companies	
	No	Yes
Low (0% to 10% of Revenue)	29.2%	39.5%
Medium (11% to 20% of Revenue)	6.2%	18.6%
High (21% to 50% of Revenue)	21.5%	14.0%
Very High (More than 50% of Revenue)	43.1%	27.9%

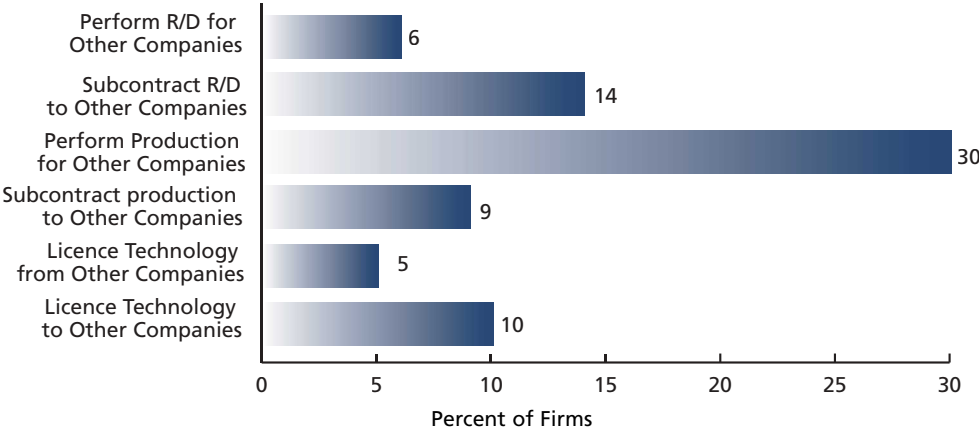
Figure 25 **Contracting Production and Export Intensity**

Exporting Intensity	Contract Production to Other Companies	
	No	Yes
Low (0 to 10% of Revenue)	35.5%	30.4%
Medium (11% to 20% of Revenue)	6.5%	17.4%
High (21% to 50% of Revenue)	24.2%	10.9%
Very High (More than 50% of Revenue)	33.8%	41.3%

The firms involved in the various types of business relationships are shown in Figure 26 and discussed more specifically below.

With the exception of SMEs working in the environmental sector, surveyed firms from each sector subcontracted some of their work to other firms or acted as a subcontractor for others. For example, almost half of the industrial machinery firms performed production for others (mostly custom manufacturing for Alberta's oil and gas industry). Why the environmental sector was an exception is not clear from the survey results. Some firms view sub-contract work as an entry into an export market.

Figure 26 Sources of Income



Alberta's SMEs working in the information technology sector led surveyed firms when measured by involvement in the licensing of technology both to and from others. Firms in the building products sector were least involved in licensing arrangements. The character of these very different sectors plays an obvious role in their approach to utilizing this strategy in the international marketplace. Where smaller information technology firms, for example, live or die by their ability to license their products (especially software) to larger companies, a building products firm is likely to simply sell its product directly into a foreign market.

Most of the pharmaceutical firms surveyed subcontract their research and development to other firms. Slightly more than half performed R & D for others. Again, the nature of the industry demands cooperation with others. Pharmaceutical firms face a battery of chemical and clinical tests before a new product can be sold internationally. At the other end of the spectrum is the agricultural sector, where only one sample firm engaged others to help with research and development. Standard commodity production does not rely on the inter-firm relationships that characterize most of the sectors sampled.

VI. The Government's Role and General Comments

The final two survey questions asked respondents what they believed the Government of Alberta could do to help facilitate their exporting endeavors. They were then asked if they had any further general comments related to the SME export survey. The comments provided below are not comprehensive; they have been chosen to reflect issues that are most relevant in light of the survey results.

According to respondents, the best help the government could provide is better access to funding, including loans, grants and venture capital. Start-up capital and funds for developing new products are evident stumbling blocks for many small businesses. Respondents often bemoaned the fact that their firm was ready to expand but did not have access to the necessary capital. Raising investment capital is an ongoing challenge. The 2001 Ernst & Young report on Alberta technology firms also underlined the need for accessible growth capital.

A host of additional comments were offered on the topic of funding. One respondent, for example, articulated the need for funding above and beyond that more commonly directed to research and development. In this case, it was noted that once a new product was market ready, funds evaporated and 'there was nothing left to launch the product'. Another respondent stressed that venture capital was not as readily available in Alberta as it was in Ontario and Quebec. He recommended that the Alberta Government make the province a 'more attractive place to invest'. In a similar vein, a number of respondents reported that they needed funding to break into new markets.

Much of the talk about funding focused squarely on marketing assistance. There were general comments pointing out the need to promote Alberta throughout the world. And specifically, as shown in the SME survey results, smaller businesses do have a relatively difficult time marketing elsewhere. They have trouble committing the necessary personnel and money to developing new markets. The message from a large group of SMEs is that they would derive an advantage from increased trade show activity and other, more direct, marketing techniques.

In contrast, however, another contingent of SMEs suggested that trade shows were not the answer. They felt that sector-specific marketing help was a better approach. Access to sector-specific market information was of interest to these latter firms.

There were various comments suggesting that government market research was 'welcome assistance' that 'helped overcome trade barriers' and 'reduced risk'. Many SMEs don't have the resources to gather basic and accurate market information. Understanding the infrastructure necessary for SMEs to more easily sell their products elsewhere is a key element that can be

supplied by the government. Other basic needs such as efficient transportation, fast telecommunications, favourable regulations and the supply of highly skilled workers were also mentioned during the course of the survey as helpful forms of government assistance. The notion that governments can help with issues like ‘regulations’ is not simply a call to reduce government involvement, it is often a request to provide a more consistent framework for firms working in new industries. A spokesperson for a leading SME working in the health sciences area, for example, acknowledged that government plays a critical role in creating understanding and ‘formulating favourable regulations for our emerging and misunderstood business’.

More generally, other respondents suggested that the tax regime in Alberta could be made more favourable to small business. Preferential treatment was cited in the context of the recent tax breaks and energy refunds offered to large businesses. All the non-tariff problems that face Alberta’s big exporters – like excessive paperwork, border-crossing delays, limitations in transportation infrastructure – will have a greater impact on smaller firms.¹⁴ In this context, for example, survey respondents mentioned the need to maintain and ensure consistent business travel expense programs. Somewhat surprisingly, only two respondents mentioned that inter-provincial barriers make their international trade more difficult. In this regard, the harmonization of regulations dealing with professional groups was the important issue.

A significant number of the sample SMEs reported that they were not interested in any government help. Of the 110 firms surveyed, 10 percent felt the government could do nothing for them, while 12 percent stated that the government should not try to do anything to enhance their export activity.

Besides a few drawbacks due to the trade agreements and various foreign business cultures, a good number of firms commented that Alberta was ‘an excellent place’ from which to launch their international activity.

VII. Select Findings and Recommendations

Select Findings

- Of the 110 Alberta's SMEs surveyed, 60 percent employed 20 people or less. (The survey intentionally defined SMEs as employing 100 or less).
- The United States was an export market for 71 percent of the firms surveyed. Other important countries or secondary markets for the sampled SMEs were China (12 percent), Australia (12 percent), Great Britain (10 percent) and Mexico (8 percent).
- 74 percent of survey SMEs indicated plans to expand their international operations over the next year and 40 percent intended entering a new market. The most attractive potential markets for respondents were Australia, Brazil, China, Great Britain, Japan and Mexico.
- Almost 40 percent of the SMEs surveyed earned more than half of their revenues from exports. Half of the firms surveyed derived more than 50 percent of their export revenue from shipments to the United States.
- Surveyed SMEs tend to trade primarily with English speaking countries. English was the official language in 76 percent of the countries mentioned by the SMEs during the course of the survey. Outside of the US, Great Britain and Australia are favoured markets.
- Surveyed SMEs tend to export to the developed nations. With the exception of firms in the agriculture and building products sectors, the sampled SMEs are characterized by technologically intensive products.
- The 'success factors' deemed most important by Alberta's SMEs are quality of service and the uniqueness of their products. Competitive pricing is not relied on as much.
- Most surveyed firms do not appear to invest a large amount of their revenues in either research and development or marketing. Respondents often reported a desire to increase the money spent on marketing but were unable due to funding constraints.
- 70 percent of SMEs surveyed are planning to expand their business over the next two years.

- When considering expansion, Alberta's SMEs view low overall business costs as the most significant factor. The availability of highly skilled labour and professionals, and favourable regulatory and tax environments, also receive serious consideration. Entrepreneurs stressed the importance of a good educational system – both secondary and post-secondary – which helps supply SMEs with skilled labour professionals and partnership opportunities.

Recommendations

To increase the export activity of SMEs, the Alberta Government should:

- Consider ways in which it can help small business obtain greater access to venture capital. The government should continue to provide information on International Financial Institutions (IFIs);
- Encourage the continued development of Alberta's publicly funded primary, secondary and post-secondary educational systems. Local education programs play a critical role in supplying Alberta's SMEs with skilled labour. Innovative, strong universities produce the professionals needed by SMEs as well as providing partnership opportunities;
- Continue to provide comprehensive market intelligence – it remains a valuable resource for SMEs. Information needs to be as firm-specific as possible;
- Develop a well-defined and articulated SME strategy to help identify and draw attention to the importance of SMEs in the Alberta economy and to the notable successes of small and medium sized firms;
- Increase the number of networking functions aimed at SMEs. Alliances and partnerships are crucial to SME exporters;
- Consider additional strategies that can help SMEs with the cost of marketing and research and development;
- Continue to explore and analyze Alberta's SME expansion and success factors. This will aid policy making and provide information on the shifting needs of Alberta's smaller exporters;
- Stimulate SME export activity by introducing additional tax incentives; and
- Continue to actively promote the good name of Alberta business worldwide.

VIII. Notes

1. Bruce Little, "Who exports Canada's goods to the world", *The Globe and Mail*, 29 January 2001. Also see Statistics Canada, *The Daily*, (February 25, 2002), "Profile of Canadian exporters 1993 to 2000" at <http://www.statcan.ca/Daily/English/020225/d020225c.htm>.
2. This is of obvious interest to policy makers charged with encouraging export activity. The 'internationalization process' itself became a topic of interest to researchers over the last few decades. Some analysts felt that firms would gradually internationalize themselves depending on their desire and ability to innovate, while others saw an incremental or gradual increase in knowledge – the 'Stages Model' – as the key. See for example, S. T. Cavusgil's I model (for 'innovation-related' internationalization model) in "On the Internationalization Process of the Firm," *European Research* 8(6), pp. 273-281, and a classic paper by J. Johanson and J. E. Vahlne, "The Internationalization Process of the Firm: A Model of Knowledge Development and Increasing Foreign Market Commitment," *Journal of International Business Studies*, 8, pp. 35-40. These general models gave rise to specific research but, in an increasingly complex global market, their notions regarding the internal and external influences on the export decision process explains less than it did even twenty years ago.
3. E. J. Chambers and N. L. Rylska, *A Portrait of Small Business Growth and Employment in Western Canada* (Western Centre Economic Research, No 63, 2001).
4. *Ibid.*, p.9. Note that this is a conservative number. We can assume that many medium sized firms were not captured in the data. The definition of 'small business' used in the cited study includes only those firms with 50 or less employees. In the current SME survey, an upper threshold of 100 employees is used. This is not the standard North American definition. In most reporting, small businesses are those with 50 or less employees and medium sized businesses employ 50 to 499 employees.
5. See, for example, R. Fendel and M. Frenkel, *Do Small and Medium Sized Enterprises Stabilize Employment? Theoretical Considerations and Evidence from Germany*. Industrial Organization / Economics Working Paper Archive at WUSTL (web site) at: <http://netec.mcc.ac.uk/WoPEc/data/Papers//wpawuwpio9706002.html>
6. Lefebvre, Élisabeth and Louis A. Lefebvre, *SMEs, Exports and Job Creation: A Firm Level Analysis*, Occasional Paper Number 26 (Industry Canada, December 2000).
7. *Ibid.*, p. 36. Note that in the Lefebvres' research, SMEs refer to manufacturing firms with fewer than 500 employees. Their definition corresponds to the definition of SMEs accepted by most national and international organizations. By using firms with 100 employees or less for our Alberta survey, we may not be capturing a significant number of these 'mature exporting SMEs'.

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8. As cited in Corinne Pohlman, *Alberta Small Business Primer*. Canadian Federation of Independent Business, September 1998, at (web site):
<http://www.cfib.ca/research/reports/primerab98.asp>
 9. Here the statistical significance was not conclusive but given the small sample size and the variety of sectors and firms surveyed, the results provide an indication of some general relationships.
 10. Again, for this cross-tab, statistical significance was not conclusive, but given the small sample size and variety of sectors surveyed, the results provide an indication of a general relationship.
 11. See, for example, Ernst & Young's *2001 Alberta Technology Report*, which reports that raising investment capital is an ongoing challenge for Alberta IT firms.
 12. See *Alberta Non-Tariff Trade Barriers Study 2000* (Western Centre for Economic Research, No. 58, 2000).
 13. Lefebvre *et al.*, *SMEs, Exports and Job Creation*, p.4.
 14. On the topic of Alberta and non-tariff barriers to trade, see *Alberta Non-Tariff Trade Barriers Study 2000* (Western Centre for Economic Research, No. 58, 2000).

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