

**Assessing The Export Market Participation Of
Manufacturing And Business Service Sector
Small Businesses In Western Canada**

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Abstract

This paper reports some results about export performance by small business in the four provinces of Western Canada. The study is part of a survey of the markets served by Western Canada's scientific, technical and professional service firms, those in computer software and information technology, and manufacturers. The sample involved over 670 firms.

The paper reviews relevant literature, provides background to the sample and a cursory overview of the firms, their owners and the geographic markets served. Constraints to market expansion are outlined and the importance attached to each by survey participants is reported. We then consider how perceptions of the significance of these constraints may be modified by market involvement, by intentions with respect to exporting, and by owner foreign work experience. A regression model is used to suggest factors associated with stronger participation in export markets. Incremental market growth provides an inadequate explanation for the findings; owner intentions and experience play an important role in selling into national and international markets.

This paper interprets limits to the export involvement of a selected sector of small business enterprises in the four provinces of Western Canada. The approach adopted is consistent with many studies of SME exporting in two respects: first, coverage focuses

on specific industry sectors, and second, respondents operate in a specific geographic area (Tesar and Tarleton 1982; Katsikeas 1994; Weaver and Jongmoo 1990; Barrett and Wilkinson 1985; Cheong and Chong 1988; Hook and Czinkota 1988). The set of enterprises are Western Canadian scientific, technical and professional service firms, those in computer software and information technology, and in manufacturing. Data covering export markets was obtained as part of a larger survey of the spatial markets of these businesses and their relative importance as a revenue source. The authors are unaware of any previous study of the relative importance to small business in Western Canada of particular spatial markets, nor of their perceptions about the significance of barriers to national or international market entry.

Barriers to export involvement are important for reasons associated both with the performance of the individual firm and with its influence on the well being of the region in which it operates. For the firm, exploration of new markets, with the effect of reducing dependence on any given market, has the benefit of spreading risk. Small firms heavily dependent on local markets are unduly subject to the ups and downs of the local economy and lack the potential for revenue diversification — for spreading risk — offered through sales in provincial, national or international markets.

Moderating risk in any one market is likely to be associated with firm growth, generation of additional revenues, and the opportunity for improvements in quality, production processes and service standards — effectively, for increases in productivity.

From a macro perspective when a firm expands its markets spatially the export base of the community is enhanced. Certainly for Western Canadian communities 'export base' expansion — the ability of economic units to find markets beyond local bounds — is the *sine qua non* of sustainable growth. The vast majority of the firms in our sample are engaged in the production and business to business sales of 'tradables,' that is, goods or services that can move with ease from where they are produced — 'here' — to where they are consumed — 'there.' At the limit, 'there' may be anywhere in the world. Their sales are not inherently tied to a given geographical space. As an economic developer sees them, firms in these sectors are prospective leaders in expanding the export base and hence the growth potential of a community.

The paper initially provides some background to the sample and a cursory overview of the firms, their owners and the geographic markets served. In the second part of the paper the barriers, or constraints, are outlined and the importance attached to each by survey participants reported. The third section considers how perceptions about constraints may be modified by market involvement, by intentions with respect to exporting, and by foreign work experience of owners. The fourth section uses a regression model to suggest the factors that are associated with stronger participation by respondents in export markets.

1. Background of the sample

The sample was obtained with the co-operation of provincial agencies in the four provinces based on the study's overall parameters (size, NAIC sector, geographic

distribution, and business to business focus). In Manitoba a pool of firms were randomly selected from the Manitoba Information Service Company directory and deemed representative by Manitoba Trade and Investment. In Saskatchewan the master list of firms was chosen on a random basis by the Policy Division of Saskatchewan Industry and Resources. In Alberta a pool of firms was randomly selected from the Alberta Government's Business Attraction Information System (BAIS) data base. In British Columbia the master list of firms was provided by the provincial BC Statistical Agency and InfoCANADA. Telephone surveyors from the Population Research Laboratory (PRL) at the University of Alberta made calls at random from these pools.

The survey instrument was pre-tested in April 2003 and fully implemented in May and June 2003 by telephone for Alberta, Saskatchewan and Manitoba, and initially by e-mail for British Columbia. To compensate for a poor response from the British Columbia e-mail survey, another 175 telephone interviews in the province were made during October 2003. In total, 706 firms were surveyed yielding 676 useable surveys, of which 36.5% were in Alberta, 34.6% in British Columbia, 14.3% in Manitoba and 14.5% in Saskatchewan. Just under two-thirds (63%) of the firms surveyed were in the seven major metropolitan areas of Western Canada — Calgary, Edmonton, Regina, Saskatoon, Vancouver, Victoria and Winnipeg — and the remainder were outside these areas.

The survey itself covered the following subjects: characteristics of the principal owner(s) and the firm; geographic markets served; growth in revenues in geographic

markets experienced over the past five years; anticipated revenue growth in these markets over the next five years; market intentions in the firm's original business plan; perceived obstacles to expansion into national and international markets; participation in a range of training activities; research and development activity; types of product promotion and advertising; employee educational requirements; and foreign work experience.

This paper is limited to exploring respondent export participation and perceptions of a set of obstacles to export involvement. However, we provide a brief profile of the respondent owners and their firms, and the relative importance to them of geographic markets from local to export in order to offer some context for the analysis.

Profile of the respondents

The set of firms surveyed represented primarily scientific, technical and professional service firms, those in computer software and information technology (54%) and those in manufacturing (46%). Respondent firms had a mean age of 18.4 and a median age of 20 years. Since the half-life of small enterprises in Western Canada is approximately 3 years (Baldwin, Dupuy, and Gellatly 2000), the survey contains a large proportion of firms that have established sustainable footholds in the markets they serve. The sample was limited to firms with less than 100 employees; the mean number of full time employees in the business service sector (including those in software and information technology) was 8.1 and the mean for respondents in the manufacturing sector was 16.2.

One half of the respondents were family owned enterprises (49.4%) and 70% were doing business as privately held corporations with the balance made up of single proprietorships, partnerships, and publicly held corporations.

Profile of the owners

Just over three-quarters of the principal owners were males (77.2%). Other key owner attributes were:

- Average age: 45
- Educational attainment: 80% had post-secondary education (55% were university graduates)
- Experience in managing the firm: average of 14.2 years
- Experience in this field of business: average of 23.0 years
- Experience working for a large corporation: 69.2% stated they had
- Experience in international business: 46.4% stated they had
- Participation in creation of the business: 73.2% stated they had

The profile indicates a middle-aged, well educated owner with substantial experience both in management and in the firm's reported sector of operation.

Geographic markets served

The proportion of respondents serving particular geographic markets — local, provincial, national, US and international other than the US (Rest of World -- ROW) — is found in TABLE 1. Also included is an indication of whether serving the particular market was part of the respondent's original business plan.

The above table reveals the expected result that market participation declines as the geographic market becomes more extensive and more complex. An overwhelming majority of respondents served the local market but approximately two-fifths of the sample engaged in exports. For those selling in local markets the median revenue share was 75%, which compared with median shares of 10% and 5%, respectively, for firms selling in the US and in ROW markets.

The right hand column of TABLE 1 also tells a story. Virtually all firms (92.7%) selling locally had that market as part of their original business plan but this is much less apparent in the case of other markets. For example, only slightly more than one half (53.4%) had the intention to serve the US market in their original business plan. The absence of intent to enter a specific market in the original business plan, but their present involvement in the market, is evidence that firms take advantage of new opportunities as they emerge.

2. Constraints to the pursuit of national and international markets.

The survey requested respondents to evaluate a series of statements about possible limits on their ability to expand into new geographic markets, in particular into export markets including the US. The literature on barriers to exporting by small business is extensive. (Cf. Leonidou 2004, 1995; Bauerschmidt, Sullivan and Gillespie 1985; Groke and Kreidl 1967; Yaprik 1985; Morgan and Katsikeas 1997; Howard and Borgia 1990; Moini 1997; Reid 1983; Roth 1992; Cavusgil 1984; Campbell 1996). However, we are

unaware of any studies that specifically address perceptions that small business enterprises in Western Canada have about identifiable barriers.

Going international may be an important objective for a small business in a sparsely settled area like Western Canada where the regional market, even when enhanced by sales in the national market, offers limited potential. However, in reaping the benefits of market expansion, and in particular the benefits from accessing foreign markets whether they accrue to the enterprise or to the community base, costs are incurred. These costs are barriers to change. They arise out of a whole range of variables from public policy's affect on exports, to the availability of finance, to customer access in the prospective foreign market, to developing the additional capacity to serve incremental market demands, and more. Factors external to the firm involve not only matters of domestic policy but also of conditions that may be found in a foreign economy. Numerous factors internal to the firm include, for example, the elements of managerial time and interest and marketing strategy including product adaptation and pricing. Some potential obstacles are more difficult to classify as they have both external and internal dimensions such as the availability of foreign market information provided through public and quasi-public agencies and the capacity of the enterprise to utilize it. Others concern the quality of human resources, the prospects of acquiring them in the regional labour market and their presence in the firm. These examples convey a flavour of the many obstacles to expansion amply summarized by Leonidou (2004).

We chose in the survey instrument to identify these obstacles in aggregate rather than finely detailed categories. This difficult choice was largely dictated by the realities of a survey instrument which took on average 35 minutes to complete. The categories covered by the questions were: financial resources; distribution channels; market information; qualified labour; managerial expertise; managerial interest; pre-occupation with other markets; product control; and risk and uncertainty. Respondents were asked the extent to which they agreed that each of these broad categories posed an obstacle to market expansion. Effectively, each statement invited a judgement about the net effect of the concerns under each of these broad categories on a five point Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree). The statements were applied to international market involvement (including the US) and posed as 'Limitations' to access:

1. A limitation in serving the international market is that it is difficult to obtain the added **financial resources**. (Refers to accessing additional working capital, financing for exports, and funds for possible capital expansion)
2. A limitation in serving the international market is that it is difficult to find the right **distribution channels**. (Refers to accessing distribution channels and obtaining suitable foreign representation)

3. A limitation in serving the international market is that it is difficult to find reliable **market information**. (Refers to data on the prospective foreign market and the identification of business opportunities)
4. A limitation in serving the international market is that it is difficult to find **qualified labour**. (Refers to the specific personnel needs that may be required to serve foreign markets including familiarity with foreign business practices)
5. A limitation in serving the international market is that the company is short of **managerial expertise**. (Refers to the knowledge and capability to adapt to the needs of foreign market involvement)
6. A limitation in serving the international market is that there is little or no **interest from management**. (Refers to managerial intentions with respect to foreign market involvement)
7. A limitation in serving the international market is that the company is **occupied with other geographical markets**. (Refers to the focus on other geographic markets and whether there is production capacity for exports)
8. A limitation in serving the international market is that the company is concerned about **losing control over our products**. (Refers to possible adaptation of product to foreign markets, meeting foreign product standards, pricing and promotion activities)

9. A limitation in serving the international market is that there is too much **additional risk and uncertainty**. (Refers to foreign currency and payment risks, foreign rules and regulations, non-tariff barriers, and understanding foreign business practices)

Response results for Western Canada showing the perceived significance of these barriers to national and international markets are shown in TABLE 2

One indication in TABLE 2 is that some constraints are judged relatively more important than others. However, the more obvious impression from these distributions is the substantial dispersion in the responses to most of the statements.

3. Are constraints subject to modification?

We elected to evaluate the responses further by grouping the data. There are numerous possible ways to group these but the most pertinent is separation against the criterion of whether a firm does or does not engage in exporting. In our sample approximately 40% of respondents sold internationally in either or both of their 2001 and 2002 fiscal years and 60% did not.

Case a: export experience

Grouping on this criterion explores whether experience in export sales in the sample period changes the respondents perception of the specified constraint. The approximately two fifths of firms who do sell internationally are compared with the three fifths that do not. Results of an ordinal regression analysis are contained in TABLE 3. The right hand column reports odds ratios. In this case, for example, the

constraint on market expansion arising from 'lack of managerial expertise' expresses the odds that those not selling internationally of agreeing with the statement are 2.13 times the estimated odds for those that do, suggesting also a moderate association.

The results tell a significant story. They reveal that the slightly more than three fifths of the respondents not involved in exports are more likely to agree with the presence of these constraints — whether internal or external — showing a range of association from strong to moderate. All are significantly different from the 'no effect' odds ratio of 1.0. Perhaps of greatest importance is the fact that all the internal factors relevant to market expansion are also those with highest odds ratios. Effectively, experience with a market ameliorates perceptions of constraints. However, the results also suggest that non-exporters perceive a multiplicity of obstacles, and hence high costs to a decision to export.

Case b: intention to export from birth

Were exports to the US and ROW part of the original business plans of those in the sample? The degree to which this is the case is shown in TABLE 4.

The findings suggest that participation in export markets for some is a result of intention, for others, a reaction an opportunity. However, consider the extent of dependence on a particular export market and whether, measured by the share of sales revenue derived from the particular market, there is any association with original business plan intentions. TABLES 5 and 6 report the association between intent expressed in the business plan and the share of sales revenue derived from the export market. In the case of both the US and the ROW markets, approximately one-half of the

exporting firms obtaining 10% or less of their revenue in 2002 from these markets did not have them as intended targets in their original business plan.

Ten percent of operating revenues appears to be a kind of threshold point with regard to intent. Beyond that point firms with these markets in their original business plans become a substantial majority of respondents. However, it is also clear that in both markets for a substantial majority of cases export revenues are a relatively small part of total sales.

Case c: does revenue share from exports alter the perception of constraints?

Do respondents with larger (above the threshold of 10%) shares of operating revenues from exports perceive the specified barriers differently. We have seen in TABLE 3 that those who do not participate in export markets are more likely to agree that the constraints are impediments. Do the attitudes of smaller businesses to export involvement depend not simply on whether they export but also on how large a revenue share comes from exports? To consider this question exporters to the US are divided into two groups: those 135 firms with more than 10% of their revenues from exports and the 121 firms with up to 10%. Results from the application of ordinal regression models are reported in TABLE 7. What difference does export intensity make to the firm's perceptions about market constraints? The results in TABLE 7 suggest it makes quite a bit of difference. Once again internal constraints top the odds. Managerial interest and managerial pre-occupation with other markets particularly, and to a somewhat lesser extent, managerial expertise, raise the odds that those below the

threshold will agree with the constraints. The perceived external factors of lack of efficient distribution channels and additional risk and uncertainty with foreign markets also have odds greater than 2.0.

The evidence is that greater involvement modifies perceived barriers to participation in export markets — evidence of adaptation through learning. The more experience the firm has with exporting — where the criterion is revenue share — the less important the constraints appear to be. Participation in the export market at one level modifies the importance of constraints, a greater level of participation lowers the perceived barriers even more.

The evidence is also that intention matters. Those with larger export revenue shares were also largely those whose original business plan contained an intention to penetrate export markets. It is also clear that for respondents with more limited export involvement negative perceptions encompass a range of barriers.

Case d: Indirect exporters

Respondents were asked the following question:

Do any of your customers who are also exporters use your product (service) in what they sell outside of Canada?

In the region 42.3% could be classified as indirect exporters. This share ranged from a high of 53.8% in Saskatchewan to a low of 29.2% in British Columbia with Manitoba and Alberta in the 41-44% range. Of the 254 respondents who identified themselves as indirect exporters, 128 or almost exactly one half, were also exporters to the US market,

and 96, or approximately 38%, also sold in ROW markets. 110 indirect exporters did not directly participate in exports. These 110 firms represent 43.3% of indirect exporters and 16.3% of the total survey sample.

There is an interest in how indirect exporters view constraints to export participation. After all, they are effectively linked to the export market and in a position to gain experience from networking with those firms serving foreign markets. That experience might encourage them to participate down the road in direct exporting. To address this question we subtracted from the indirect exporters those respondents identified as direct exporters (both intensive and opportunistic). We then compared their assessment of these constraints with those held by firms that serve neither the US nor ROW markets. The results are shown in TABLE 8.

The results indicate that for all constraints, save one — managerial preoccupation with other geographic markets — there is no departure from neutrality in the odds. In other words, indirect exporters generally have the same view of constraints as non-exporters.

Case e: does owner international work experience matter?

A number of authors have pointed out that a relationship can be proffered between the experience of top managers, or owners in the case of smaller businesses and organizational outcomes (Chandler and Hanks 1994; Feeser and Willard 1990; Mintzberg 1988; Reuber and Fischer 1997). To determine whether managerial (owner) experience has any impact on perceptions of barriers we separated principal owners

with at least one year of foreign work experience and those with less than one year. The results are contained in TABLE 9.

The statistical results suggest that foreign work experience ameliorates perceptions of the obstacles to export involvement.

4. A regression model of more intensive export participation

Analysis of the statements expressing possible constraints to export participation suggest the important role of experience. An initial approximation is that export sales experience is likely to reduce the perception of the stated barriers. But beyond that, greater experience in the export market — identified as revenue share derived from exports — further reduces perception of the constraints. Additional evidence on experience is associated with foreign work by the owner. When an owner's foreign experience is at least a year, barriers are seen as less daunting. Our results also indicate that commitment to the export market reflected in revenue shares is strengthened by intention — proxied by inclusion of that market in the firm's original business plan.

Important as experience and intentions may be in explaining the intensity of export involvement, evidence on the significance, or lack thereof, of other variables is subject to question. Some models point to the size of firm. The evidence here is somewhat unclear and dependent partly on the measure of size that is employed. (Calof 1993; Westhead, Wright and Ucbasaran 1998). This survey collected data on firm size in terms of average annual full and part time employment. This would seem to be an effective measure for

firms in the sectors sampled. Other models have argued that a new venture's ability to enter foreign markets is directly related to its accumulated unique bundles of tangible and intangible resource stocks (Bloodgood, Sapienza and Almeida 1996). Our survey collected data on patents held by the owner as well as R&D expenditures. Patents held can express a firm's stock of unique resources. Models have also considered that export involvement is related to industry sector (Westhead 1995). We know that for firms with less than 100 employees in the year 2000 (the last before the export slowdown of the present decade) just under one-half of the 39,000 exporting establishments (not firms) in Canada (exporting at least \$30,000) were in manufacturing (Statistics Canada 2002). That was about 7 times the number of comparably sized exporters of business services. Finally, there is a substantial literature of how export intensity is related to age of firm starting with Johanson and Vahlne (1977).

TABLE 10 reports the results of a logit model to identify the determinants of intensive exporters. Again intensive exporters are defined as those whose revenues from exports to the US market exceeded 10% of total revenues.

The results, as they apply to the US market, support experience and intent as explanations of the more intensive pursuit of exports. They also indicate the importance of a unique resource bundle (*i.e.* patent holder). Further, intensive exporters are more likely to be manufacturers, underlining their importance as an export sector even for small business in Western Canada. The sign on size is positive but lacks significance.

Foreign work experience, owner as patent holder, and age of firm are significant at 1% level, and industry sector and intent at the 5% level. The negative relationship on age of firm suggests that newer firms may have perceived a different opportunity set under NAFTA than older firms. Results for a regression model of intensive exports to the ROW sector were that among these variables only intent and foreign work experience were significant at the 5% level.

5. Conclusions

We emphasize that our sample is not a random sample of small business and it applies to Western Canada. This approach is consistent with a great deal of the literature on small business exporting. The sample covers only a limited segment of the universe of small business, albeit a segment that is recognized as an export core in a region heavily dependent for its well being on export markets.

There can be no doubt about the heavy but not the exclusive dependence of small business — even in these value added sectors — on local market customers. The health of small business is closely intertwined with the health of local communities. However, it is also clear that some small businesses in the manufacturing and business service sectors strive for markets, including export markets, beyond the bounds of their communities. What is the process by which this occurs? Put simply, one model or approach to market development does not fit all small businesses. The results reported here indicate that for a subset of small exporters, choices about geographic market targets — specifically the desire to export — begin early in their life. For some firms,

selling in international markets was part of their original business plan. This suggests that a frequently presented model of incremental market growth, one in which the firm builds on the knowledge foundation acquired in more localized markets, is inadequate. Furthermore, firms who included these intentions in their initial business plans were better performers in broader markets. That is somewhat reinforced by the finding that more intensive exporting is negatively related to the age of firm.

Another finding emphasizes how learning by doing is integral to small business. The survey here reveals two specific illustrations of the important role of experience in expanding the markets of small business. First, when small business owners have foreign work experience the likelihood of exporting is substantially increased. Second, experience as an exporter significantly lowers the perceived barriers to selling in national and international markets. More intensive involvement with exporting lowers these perceptions even more so. Those 'who do' and those 'who don't' view these barriers very differently. Preliminary findings also indicate that more intensive export involvement is more likely for manufacturing businesses. There is also support for the significance of firm possession of a unique resource bundle.

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TABLE 1: Percent of firms serving specified markets and percent identifying the market as part of their original business plan

Market	% serving designated market	Median revenue share (%)	% stating the market in their original business plan
Local*	85.4	75.0	92.7
Provincial	70.3	20.0	84.6
National	55.2	15.0	72.4
US	38.5	10.0	53.4
ROW	24.6	5.0	56.2

* defined as sales within a radius of 50kms from the place of business

TABLE 2: % distribution of survey responses to the set of statements posed as constraints to participation in international markets

STATED CONSTRAINT	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Availability of financial resources	28.4	12.7	15.3	16.4	27.2
Efficient distribution channels	20.5	12.9	19.1	21.2	26.3
Availability of market information	18.8	17.2	24.4	21.1	18.6
Availability of qualified labour	25.7	13.2	18.1	21.0	22.0
Lack of managerial expertise	30.2	16.0	16.2	20.4	17.2
Lack of managerial interest in the market	40.2	14.2	12.8	11.3	21.5
Preoccupation with other geographic markets	28.2	10.1	12.6	19.7	29.4
Concern over loss of control of products	41.9	15.1	7.2	8.0	6.1
Too much added risk and uncertainty	21.3	14.9	19.2	22.9	21.6

TABLE 3: Proportional odds that a small business selling in only local and/or provincial markets is more likely to agree with the stated factor as limiting market participation in ROW markets

Limitation	Odds•
Managerial expertise	2.13***
Managerial interest	5.44***
Preoccupation other markets	4.59***
Concern loss of product control	2.19***
Availability of qualified labour	1.70***
Availability market information	1.66***
Added risk and uncertainty	1.79***
Availability financial resources	1.46***
Efficient distribution channels	1.80***

•Derived from ordinal regression models with each specified constraint categorized on a Likert scale as the dependent variable.
 ***significant at .01

TABLE 4: Exports as part of the exporting firm's original business plan

	% yes	% no
Selling to the US part of original business plan	51.9	48.1
Selling to the ROW part of original business plan	54.8	45.2

Source: Survey

TABLE 5: Share of total revenue from sales to US market and inclusion of this markets as a target in the original business plan

Share of Firm's total sales revenue from sales to US	US market in original business plan %	US market not in original business plan %	% of firms selling to US*
10% or less	42.4	57.6	60.2
11-25%	87.5	12.5	6.7
Over 25%	73.4	26.6	33.1

Source: Survey

*The total number of firms selling to the US market was 260.

TABLE 6: Share of total revenue from sales to ROW markets and inclusion of these markets as targets in the original business plan

Share of Firm's total sales revenue from sales to ROW	ROW market in original business plan %	ROW market not in original business plan %	% of firms selling to ROW*
10% or less	52.9	47.1	63.4
11-25%	72.7	27.3	13.4
Over 25%	76.7	23.3	23.2

Source: Survey

*the total number of firms selling to ROW markets was 166.

TABLE 7: Proportional odds that a small business which exports to the US but at below the 10 percent threshold level is more likely to agree with the stated factor as limiting market participation

Limitation	Odds•
Managerial expertise	2.15***
Managerial interest	4.11***
Preoccupation with other markets	3.58***
Concern loss of product control	1.80**
Availability of qualified labour	1.53*
Availability market information	1.68**
Additional risk and uncertainty	2.20***
Additional financial resources	1.64**
Efficient distribution channels	2.49***

•Derived from ordinal regression models with each specified constraint categorized on a Likert scale as the dependent variable.

***significant at .01; **significant at .05; *significant at .1

TABLE 8: Proportional odds that an indirect exporter who is NOT also a direct exporter will be more likely to agree that the stated factor limits foreign market participation

Limitation	Odds•
Managerial expertise	0.93
Managerial interest	0.68
Preoccupation other markets	0.52***
Concern loss of product control	1.18
Availability of qualified labour	0.78
Availability market information	1.23
Added risk and uncertainty	1.18
Added financial resources	0.97
Efficient distribution channels	0.83

•Derived from ordinal regression models with each specified constraint categorized on a Likert scale as the dependent variable.

*** significant at .01.

TABLE 9: Proportional odds that an owner with less than 1 year's international work experience is more likely to agree that the stated factor limits foreign market participation

Limitation	Odds
Managerial expertise	2.10***
Managerial interest	3.63***
Preoccupation other markets	3.16***
Concern loss of product control	1.93***
Availability of qualified labour	1.34*
Availability market information	1.22
Added risk and uncertainty	1.54***
Availability financial resources	1.18
Efficient distribution channels	1.76***

•Derived from ordinal regression models with each specified constraint categorized on a Likert scale as the dependent variable.
 *** significant at .01; * significant at .1

TABLE 10: Logit Regression of Intensive Exporters to the US market

Model Summary

-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
292.872	.179	.239

Variables in the Equation	B	S.E.	Wald	df	Sig.	Exp(B)
Foreign work experience	.794	.301	6.964	1	.008	2.211
Industry sector	.725	.297	5.956	1	.015	2.065
Size	.014	.009	2.353	1	.125	1.014
Owner patent holder	1.067	.381	7.844	1	.005	2.905
Age of firm	-.384	.115	11.221	1	.001	.681
Intent in business plan	.612	.291	4.423	1	.035	1.843
Constant	-.033	.511	.004	1	.948	.967

Dependent variable: Exports to the US market are 10% of revenues or greater (greater than 10% =1; otherwise = 0)

Foreign work experience (owner has at least 1 year of foreign experience =1; 0 otherwise)

Industry sector (manufacturing = 1; otherwise = 0)

Size: the average annual number of full time employees

Owner is a patent holder = 1; otherwise = 0

Age of firm in years

Intent to export in business plan = 1; otherwise = 0