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Foreign Sales and Small Firm Growth: The Moderating Role of the Management Team

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The premise of this article is that the management team of a small firm plays a key role in internationalization outcomes. Specifically, it is hypothesized that a greater degree of behavioral integration within a small firm's management team enables it to manage the complexity of foreign sales growth more effectively, leading to greater overall firm growth. Findings, based on data collected from two different industries (software products, food processing), support the hypothesis and indicate that the behavioral integration of the management team moderates the relationship between foreign sales growth and overall firm growth.

Introduction

What enables small firms to manage foreign sales effectively? Although business owners enter foreign markets to serve growth objectives (Jones, 1999; McDougall, Shane, & Oviatt, 1994), often encouraged by their advisors and governments, it is not necessarily the case that selling in foreign markets contributes positively to overall firm growth. Managing growth itself is difficult for small firms (Hambrick & Crozier, 1985), and managing growth through foreign sales can be even more difficult due to the "liability of foreignness" (cf. Zaheer, 1995). There are likely to be cultural and linguistic differences to become accustomed to, increased regulatory constraints and paperwork to deal with, and higher product-market costs to fund.

The establishment of a direct relationship between small firm internationalization and small firm performance has been notably absent from previous research. This is partially because much of the research on small firms tends to focus on firms' internationalization itself as the dependent variable of interest (Leonidou, 1998), rather than attending to the impact of internationalization on firm performance. Moreover, those studies which do focus specifically on this relationship conclude that we cannot assume a direct relationship between foreign sales and firm growth. For example, Bloodgood, Sapienza, and Almeida (1996) found that the extent of internationalization at the time of IPO was only marginally related to income, and not at all related to sales growth. McDougall and Oviatt (1996) found that foreign sales as a proportion of total sales was significantly related to relative market share, but not to overall firm profitability. In a large-scale study of small- and medium-sized enterprises, Westhead, Wright, and Ucbasaran (2001) found that exporting was not significantly related to sales growth, employment growth, or even firm

survival. These mixed findings suggest that there has been under-specification of intervening processes in the hypothesized relationship between foreign sales and firm growth.

The article addresses this gap in our understanding of small firm internationalization. Specifically, the article examines the role of the firm's management team in moderating the relationship between foreign sales growth and firm growth. Following Sanders and Carpenter (1998), growing foreign sales is seen as increasing the complexity of, and therefore the information processing demands on, small firms. We hypothesize that management teams with a higher degree of behavioral integration will be better able to manage these demands, and hence, that the behavioral integration of the management team will positively moderate the relationship between foreign sales growth and firm growth.

After the development of the hypothesis in the following section, our research design is described and the empirical results are presented. The results are based on a sample of small firms from two different industries, the Canadian software products industry and the Canadian food processing industry. The article concludes with a discussion of the implications and limitations of the research and suggested avenues for further research.

Theory and Hypothesis Development

Previous research on the internationalization of small firms indicates that the outcomes of a foreign market entry are affected by a range of factors related to the entry decision, such as entry mode, entry timing, product/service adaptation, and network partners (e.g., Autio, Sapienza, & Almeida, 2000; Cavusgil & Zou, 1994; Lu & Beamish, 2001; Zahra, Ireland, & Hitt, 2000), as well as contextual factors, such as the environment and firm-specific resources and capabilities (McDougall, Shane, & Oviatt, 1994; Reuber & Fischer, 1999; Shrader, Oviatt, & McDougall, 2000). A small firm that is growing foreign sales therefore operates in a decision context with a multitude of decision parameters. Moreover, because the process of growing foreign sales in small firms is often opportunistic (cf. Coviello & Munro, 1997; Crick & Jones, 2000), management frequently needs to respond quickly to a narrow window of opportunity, and so a firm's ability to consider all of these decision parameters simultaneously will frequently be constrained.

A greater quantity and heterogeneity of decision factors to consider results in greater environmental complexity, and, in turn, in greater uncertainty and greater information processing demands to be managed (Dess & Beard, 1984; Duncan, 1972; Pfeffer & Salancik, 1978). Hence, growing sales in foreign markets is expected to increase the information processing demands placed on small firms (Sanders & Carpenter, 1998). We argue that the "behavioral integration" (Hambrick, 1994) of a firm's management team is expected to be consequential to how small firms deal with these information processing demands.

Hambrick (1994) defines behavioral integration as "the degree to which the group engages in mutual and collective interaction" (1994, p. 188), which involves interaction and joint decision making. It is expected that teams with greater behavioral integration will manage foreign sales growth in a more coordinated fashion, leading to greater overall firm growth. Conversely, teams with lower behavioral integration will manage foreign sales growth in a more fragmented fashion, leading to lower overall firm growth. There are four reasons for this conclusion, as outlined below.

First, research on the internationalization processes of small firms indicates that foreign sales growth in small firms results from a combination of planned direction, strategy formulation and implementation, and creeping incrementalism, numerous day-to-day

inquiries, meetings, and actions (Kutschker & Bäurle, 1997). Thus, one-time, short-term decisions can be sticky and can impact longer-term plans; for example, increased exports could make up for a decline in domestic sales without addressing the reason for the decline. Along these lines, Bonaccorsi (1992) has argued that some small firms might favor increased exporting because it is the path of least resistance to growth, rather than the best path, compared with horizontal growth or product diversification. In order for international activities to be beneficial to the firm as a whole, therefore, it is necessary to share information and coordinate activities, on both a day-to-day and a longer-term basis. Indeed, research on multinational corporations indicates that the degree of internationalization of the firm is related to the need for management team members to elicit advice from each other (Athanassiou & Nigh, 1999, 2000) and to coordinate activities (Boter & Holmquist, 1996; Roth, Schweiger, & Morrison, 1991).

The second reason that the behavioral integration of the management team is expected to impact the relationship between foreign sales growth and overall firm growth is that previous studies of the internationalization processes of both small and large firms emphasize the importance to internationalization outcomes of experientially acquired tacit knowledge, at both the individual and firm level (Athanassiou & Nigh, 1999, 2000; Eriksson et al., 1997; Johanson & Vahlne, 1977, 1990). This occurs through a variety of mechanisms, such as changes in attitude (for example, a stronger commitment to foreign markets), changes in perceptions (for example, assessments of obstacles and risks), and changes in competencies (for example, knowledge of foreign business practices or new technologies (Johanson & Vahlne, 1977, 1990; Shrader, Oviatt, & McDougall, 2000; Zahra, Ireland, & Hitt, 2000). At the individual level of analysis, tacit knowledge is transmitted through direct participation in relevant decisions and actions (Lave & Wenger, 1991; Sternberg & Caruso, 1985), and so it is expected that teams with greater behavioral integration will have a greater capacity for utilizing the tacit knowledge that individual team members have acquired. At the firm level, tacit knowledge is transmitted through the organizational processes developed through evolutionary paths. Again, more integrated teams will have a greater capacity to utilize the organization's tacit knowledge effectively (Teece, Pisano, & Shuen, 1997).

The third reason that the behavioral integration of the management team is expected to be consequential to the transformation of foreign sales growth into overall firm growth has to do with the importance of timing. This is partially an issue of speed: greater behavioral integration allows management teams to react more quickly (Hambrick, 1994), which is important in decisions about foreign markets when the window of opportunity is narrow or when there are first mover advantages (cf. Mascarenhas, 1997; Pan, Li, & Tse, 1999). Speed may even be particularly beneficial to small firms compared with large firms: because of their greater agility and flexibility (cf. Acs, Morck, & Yeung, 1999; Chen & Hambrick, 1995), they can benefit from early foreign market entry even in the absence of a large foreign market resource commitment (Mascarenhas, 1997). Timing, however, is also an issue of temporal management. Research on small firms indicates that the active management of shared time frames is associated with growth (Gersick, 1994; Slevin & Covin, 1998). It is important that these time frames be shared among managers to allow decision options to be considered simultaneously as much as possible, and to ensure that members of the management team both select and shape time frames with a congruent vision of the desired future and the rate at which it will be achieved (cf. Fischer et al., 1997). Shared time frames are apt to be more present in management teams with greater behavioral integration, in turn suggesting that greater behavioral integration is likely to be associated with a better ability to manage foreign sales growth in a way that contributes effectively to overall firm growth.

Finally, behavioral integration is also likely to mitigate any negative effects of belief diversity within the management team. Miller, Burke, and Glick (1998) point out that while a diversity of beliefs among top management team members can lead to more extensive consideration of issues facing the firm, and can reduce "groupthink" (Janis, 1972), the negative consequences can outweigh the positive consequences, because diversity is often accompanied by communication, integration, and political problems. A team with high behavioral integration is less likely to experience these difficulties. Indeed, social interaction is likely to influence beliefs among top management team members (Chattopadhyay et al., 1999) and the social integration of the top management team has been found to be related to firm growth in technology-based firms (Smith et al., 1994). Therefore, a management team with greater behavioral integration is expected to be able to take differing opinions into account and yet move forward in a coordinated manner to a greater extent than a management team with a lower level of behavioral integration.

Thus, for the reasons outlined above, it is expected that more behaviorally integrated teams will enable small firms to grow foreign sales in a manner that leads to overall firm growth, leading to the hypothesis to be tested in this article:

H1: The behavioral integration of the management team positively moderates the relationship between foreign sales growth and overall sales growth for small firms. Foreign sales growth will have a stronger positive impact on overall sales growth when a management team exhibits a higher degree of behavioral integration than when a management team exhibits a lower degree of behavioral integration.

Research Method

Sample and Survey Administration

Industry Selection. In order to explore the generalizability of the results, we tested the hypothesis with data collected from two different industries. A classification that has been widely used to describe internationalization patterns, and that is related to the nature of the underlying environmental complexity, is the distinction between global industries and multidomestic industries (Kobrin, 1991; Porter, 1986). In global industries, competition is on a worldwide basis; in multidomestic industries, competition is on a country-by-country basis. Global industries can be contrasted with multidomestic industries by their higher technological intensity and their lower market barriers, such as less pressure to conform to local preferences, practices, and regulations (Kobrin, 1991; Porter, 1986; Rosenzwieg & Singh, 1991). In global industries, the environmental complexity of internationalization for small firms stems from the need to sell in multiple markets because of high R&D costs, while managing continued innovation. In multidomestic industries, the environmental complexity of internationalization for small firms stems from high market barriers and a greater liability of foreignness (cf. Zaheer, 1995). Given the complexity of both types of industries, and the corresponding information processing demands on the management teams, it is expected that the hypothesis will hold for them both.

We drew samples from the Canadian software products industry (global industry) and the Canadian food processing industry (multidomestic industry). Using the index developed by Kobrin on the basis of intrafirm trade (1991), software products are among

the most globally integrated industries, while food processing industries are among the least globally integrated. This is consistent with Canadian exports in these sectors. In 1995, the export intensity of the software products and food processing industries were 52 percent and 19 percent, respectively, and although more than 70 percent of Canadian software product firms exported, fewer than 50 percent of food processing firms did (Baldwin, Sabourin, & West, 1999; Kormylo, 1998).[1]

Sampling Procedures and Data Collection. Firms were selected in order to obtain a sample that varied in size and age, but that were considered small and independent. Firm size has traditionally been a primary sampling criterion in research on the internationalization of emerging firms (Leonidou & Katsikeas, 1996). With recent scholarly interest in international new ventures (McDougall, Shane, & Oviatt, 1994; Oviatt & McDougall, 1994), firm age is being used more often (for example, McDougall & Oviatt, 1996; Shrader, Oviatt, & McDougall, 2000; Zahra, Ireland, & Hitt, 2000). Firm size was the primary sampling criterion used here because the theoretical focus is small firms. In addition, it is expected that firms in multidomestic industries internationalize at an older age than do firms in global industries, and so sampling on firm age would systematically exclude from the study food processing firms that effectively internationalize, but at an older age. The focus on small firms is consistent with the population of the two industries because the majority of the firms are small.

Firms that had 200 or fewer employees, that were not subsidiaries of other firms, and that were headquartered in Canada were eligible for inclusion. In the software products industry, only firms deriving 50 percent or more of their revenue from software products (versus hardware or computing services) were eligible. In the food processing industry, all agricultural producers and all pure distributors were excluded, ensuring that the firms derived some portion of their revenue from processing raw materials. The majority of the firms in both samples were located in the Toronto region, which has the largest concentration of both households and businesses in the country, in order to reduce any systematic variation due to the size of local markets or differing economic conditions.

Several sources were used to identify firms in both industries. The primary sources for identifying software product firms were the Branham 400 database (version 2.4) of software firms, developed for Industry Canada and the Canadian government's BOSS Directory of Computer Software and Services. The primary sources for identifying food and beverage firms were the Ontario Agri-Food Source Guide and the Canadian government's Canadian Food and Beverage Exporters Directory. Although it is unlikely that these directories contain the entire population of firms in the two industries, since entries and exits are ongoing, they are the most comprehensive directories available, compiled from many diverse sources throughout Canada. They are also updated on a continual basis, and so they contain firms that are very small and very new, as well as established firms.

Of the 612 firms that were contacted and that conformed to the screening criteria, 217 agreed to participate and provided usable data, for a response rate of 35 percent. The most common reason given for not participating was being too busy to schedule a personal interview. There were no other discernible patterns between the firms that agreed to participate and those that declined. Since the management team was a primary explanatory construct in the theoretical perspective developed, we excluded very small firms

1. Industry data are reported on Internet websites managed by Industry Canada and by Agriculture and Agri-Food Canada; are available at *www.strategis.ic.gc.ca*; and were accessed in 2000. Most of the data are available only up to 1995.

(those with fewer than five employees) from the data analysis, on the assumption that isolating "management team" characteristics and processes in such firms might be meaningless. This excluded an additional 30 firms, leaving a final sample of 187 firms: 90 in the software products industry and 97 in the food processing industry.

The questionnaire was administered by trained research assistants to the firms' CEO or (if the CEO was not available) to a member of the firms' top management team, in his or her office. The research assistants were trained to clarify the nature of the questions and to explain their rationale, in order to enhance the completeness and accuracy of the data collected. They also noted any difficulties in answering the questions, and these were followed up and clarified through subsequent communication with the respondent. Data were collected between June of 1996 and August of 1999.

Sample Representativeness. The representativeness of the sample is difficult to assess because, due to the heterogeneity of the industries (Baldwin, Sabourin, & West, 1999; Kormylo, 1998), it is hard to specify exactly what a representative sample would be. In 1995, 91 percent of the roughly 5,300 software product firms in Canada had fewer than 10 employees and revenues less than $250,000 (Kormylo, 1998). The sample firms are larger than those of the population (sample mean number of employees = 37 vs. population mean number of employees = 5), and have a higher growth rate (sample two-year growth rate of total sales of 65 percent vs. population two-year growth rate of total sales of roughly 57 percent). It should be noted, however, that population figures are based on 1995 data and the industry has been experiencing growth since 1995, and so it is expected that population statistics for firm size and growth would have been closer to sample statistics at the time of data collection. The export intensity of the software products sample is lower than that of the population, but is of the same magnitude (46 percent for the sample, 52 percent for the population). Thus, although the difficulties of determining representativeness need to be kept in mind, the software product firms in the sample appear to be reasonably comparable to the population with respect to firm growth and the importance of international sales in contributing to firm growth.

The Canadian food processing industry, consisting of roughly 3,000 firms in Canada in 1995, is also heterogeneous due to considerable variation among subsectors. Looking at sample and population means, the sample firms are somewhat smaller than those of the population (sample mean number of employees = 51 vs. population mean number of employees = 64), but have a much higher growth rate (sample two-year growth rate of total sales of 30 percent vs. population two-year growth rate of total sales of 12 percent). These population figures are also based on 1995 data: this industry has been relatively stagnant and so the population mean firm size might have decreased at the time of data collection to be closer to the sample mean, but it is unlikely that the population mean for sales growth would have increased. The export intensity of the sample is greater than that of the population, but is of the same magnitude (22 percent for the sample, 19 percent for the population). Thus, although the difficulties of determining representativeness need to be kept in mind again, the food processing firms in the sample appear to be somewhat more growth oriented than the population.

Measures

The research measures used in the study, together with their descriptive statistics and zero order correlations, are shown in Table 1. As can be seen from the table, there is not a problem with multicollinearity among the independent variables.

Table 1

Descriptive Statistics and Zero Order Correlations among the Research Variables

Software Product Firms

Variables	Mean	s.d.	Range Min.	Max.	Correlations Foreign Sales Growth	Behavioral Integration	Total Sales Growth
Firm age	10.08	5.83	1	28	–.118	–.018	–.316**
Foreign sales growth	39.34	70.71	–75	300		–.027	.349***
Behavioral integration	.0015	1.55	–2.1	5.5			.137
Total sales growth	64.87	131.7	–75	1000.5			

Food Processing Firms

Variables	Mean	s.d.	Range Min.	Max.	Correlations Foreign Sales Growth	Behavioral Integration	Total Sales Growth
Firm age	24.71	20.22	3	99	.119	.035	–.218*
Foreign sales growth	40.24	88.47	–20	500		–.065	.395***
Behavioral integration	.0024	1.63	–2.48	4.3			.122
Total sales growth	30.34	56.6	–50	300			

* $p < .05$
** $p < .01$
*** $p < .001$

Dependent Variable: Total Sales Growth. Percentage change in sales is a key indicator of performance for small and new firms (Brush & Vanderwerf, 1992). Self-reported return measures, such as return on income (ROI) and return on assets (ROA), can have low reliability for a small business (Chandler & Hanks, 1993), and, because of the tax incentives to keep income low, income-based performance measures are not considered accurate for new and small Canadian firms. Income-based measures related to the foreign sales of small firms are particularly noisy given variation in the way firms account for foreign currency ex-change and monetary trade barriers such as customs duties and tariffs.

To measure total sales growth, respondents were asked by what percentage their total annual sales had changed over the past two fiscal years. A two-year time period was chosen as a period long enough to smooth periodic fluctuations in sales, revealing a longer-term trend, but short enough to avoid major changes in product-market characteristics. Because the variable is positively skewed, a logarithmic transformation was used in subsequent analyses.

Independent Variable: Foreign Sales Growth. Growth in foreign sales was measured as the percentage change in total foreign sales over the past two years, which is the same time period used for measuring the dependent variable, growth in total sales. Respondents were asked by what percentage their total annual foreign sales had changed over the past two years. Because the variable is positively skewed, a logarithmic transformation was used in subsequent analyses.

As expected, the independent and dependent variables are significantly correlated, because foreign sales growth is a component of overall sales growth. However, also as expected, a relatively small percentage of the variance in total sales growth is associated with the variance in foreign sales growth ($r^2 = .12$ for the software product firms; $r^2 = .15$ for the food processing firms). This supports the notion that it is important to understand the factors that increase or suppress the tendency for foreign sales growth to contribute to total sales growth.

Moderating variable: Behavioral Integration. Behavioral integration is measured as a variable reflecting two interrelated indicators of behavioral integration: interaction and joint decision making among management team members. Interaction was measured by asking respondents how often, per year, the management team meets together as a whole.

Joint decision making was measured by asking respondents how many top management team members had an influence on three types of decisions: entering or exiting a new geographic market, adding or dropping a major product, and adding or dropping a distribution channel. Each response was then divided by the number of people on the top management team so that it was not biased by team size, and the three values were summed together to form the variable measuring joint decision making. The measure exhibits high reliability, with a Cronbach's alpha of .93 for each sample.

These two indicators of behavioral integration are significantly correlated ($r = .194$, $p = .04$ for the software product firms; $r = .297$, $p = .002$ for the food processing firms), and so it is not only logical but also justifiable to combine them into one measure. So that each element constitutes the same proportion of the composite variable, the measure of behavioral integration is calculated as the sum of the two z-scores.

Control Variable: Firm Age. Firm age is measured as the age of the firm in years. It is expected that older, more established firms will outperform new firms, due to the liabilities associated with newness (Stinchcombe, 1965). On the other hand, once firms survive the liabilities of newness, there are expected to be inertial forces associated with age, which inhibit firms' ability to grow (Baum, 1989), and so from this point firm age is expected to be negatively related to total sales growth. Since sampling was based on firm size, the sample exhibits a wide range of age, with 79 percent of the firms being over six years old. Liabilities of age are therefore expected to dominate liabilities of newness, and, as shown in Table 1, firm age is significantly and negatively related to total sales growth. However, because of the expected curvilinear relationship, both firm age and the square of firm age were included in the regression equations.[2]

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2. Firm size was also considered for inclusion as a control variable. However, in both samples, it was not significantly correlated with the dependent variable and was significantly correlated with two independent variables, resulting in multicollinearity. Accordingly, a better model resulted from its exclusion. Its inclusion or exclusion makes no material difference to the results of the analyses: for both samples, all F values and regression coefficients remain at the same level of significance, and there is less than .01 impact on the adjusted R^2 of Equation 4.

Analysis and Empirical Results

The hypothesis specifies that the form of the relationship between foreign sales growth and overall firm sales growth is moderated by the behavioral integration of the firm's management team, in that firm growth is posited to be a joint function of foreign sales growth and behavioral integration (cf. Arnold, 1982; Sharma, Durand, & Gur-Arie, 1981). The hypothesis is tested with four hierarchical regression equations for each industry, as shown in Table 2.[3]

The first equation regresses the dependent variable, total sales growth, on the control variable, firm age; the second adds the independent variable, foreign sales growth; the third adds the moderator variable, behavioral integration; and the fourth adds the interaction term (foreign sales growth × behavioral integration).

For both samples, the coefficient of the moderator variable is not significant in Equation 3, while the coefficient of the interaction term is significant in Equation 4, indicating that the variable is a pure moderator (cf. Sharma, Durand, & Gur-Arie, 1981; Zedeck, 1971). For both samples, the addition of the interaction term in Equation 4 significantly increases the R^2 over that of the additive model in Equation 3, and there is a positive coefficient on the interaction term, indicating that larger values of behavioral integration increase the slope of the relationship between foreign sales growth and total sales growth. These findings support the hypothesis.

An examination of the partial derivative of Equation 4 over foreign sales growth with respect to the z-transformed behavioral integration variable explores the findings further. The inflection point is within the range of observed values of the standardized behavioral integration variable, which means there is a nonmonotonic effect: the contribution of foreign sales growth to overall firm growth increases for most of the range of behavioral integration (behavioral integration >0.48 for the software product firms; behavioral integration >0.20 for the food processing firms), but has a negative effect on overall firm growth for lower values of behavioral integration (cf. Schoonhoven, 1981). Thus, the greater the degree of behavioral integration among management team members, the greater the positive impact of foreign sales growth on firm growth, as hypothesized. However, these findings also indicate that a minimal level of behavioral integration is required: below this level, foreign sales growth has a negative impact on firm growth.

This effect is depicted graphically in Figure 1, which shows, for each industry, the change in the log of total sales growth, given a change in the log of foreign sales growth, over the observed values of the standardized behavioral integration variable. Furthermore, the graphs in Figure 1 also indicate that the line for the food processing firms is steeper than that for the software product firms: for food processing firms, a unit increase in behavioral integration results in a greater positive impact of foreign sales growth on total sales growth, while, conversely, a unit decrease in behavioral integration results in a greater negative impact of foreign sales growth on total sales growth.

3. This same analysis was also performed on the combined sample (the two industries), both with and without a control variable for industry, and the results of these analyses do not differ materially from the separate industry analyses presented here. The separate analyses are preferable because they illustrate the industry differences in the slope of the partial derivative.

Table 2

Regression Results

Software Product Firms

	Equation 1	Equation 2	Equation 3	Equation 4
Firm age	−.193	−.242	−.236	−.255
Firm age^2	.051	.088	.081	.089
Foreign sales growth[a]		.817***	.819***	.559***
Behavioral integration			.007	−1.160**
Interaction term (Foreign sales growth[a] × behavioral integration)				1.161**
Adjusted R^2	−.013	.673	.667	.710
R^2 change		.668	.000	.046
F	.621	42.09***	31.02***	30.44***
F change		122.42***	.009	9.44**

Food Processing Firms

	Equation 1	Equation 2	Equation 3	Equation 4
Firm age	−.707*	−.606*	−.580**	−.448
Firm age^2	.491	.348	.315	.241
Foreign sales growth[a]		.439***	.453***	.465***
Behavioral integration			.127	−2.179*
Interaction term (Foreign sales growth[a] × behavioral integration)				2.319**
Adjusted R^2	.065	.250	.258	.298
R^2 change		.190	.016	.046
F	4.04*	10.77***	8.64***	11.00***
F change		22.25***	1.89	8.47*

Notes: The dependent variable in all equations is the logarithm of total sales growth.
Standardized regression coefficients are shown.
[a] logarithm
* $p < .05$
** $p < .01$
*** $p < .001$

Discussion

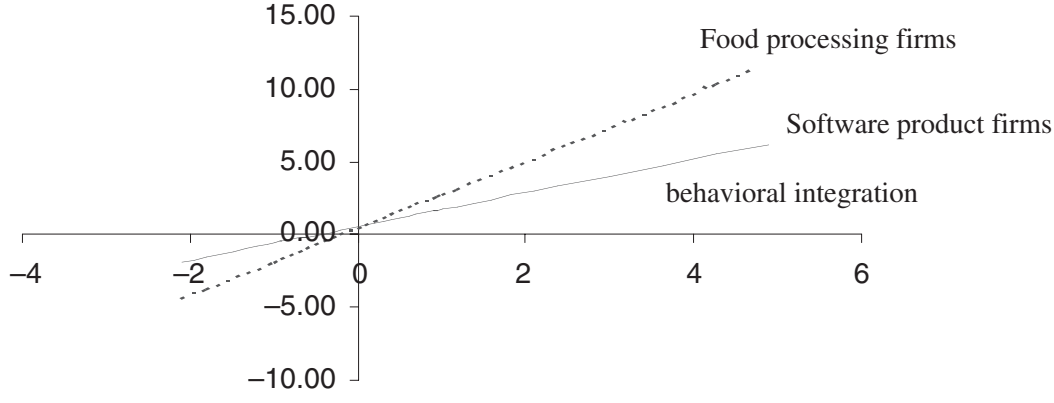
Research aimed at providing a better understanding of the internationalization of small firms is important. Most firms are small firms, and with increasing technological advances and globalization, they are facing greater economic pressures to sell outside their domestic markets. These pressures are exacerbated by public sector entities that recognize the opportunities for firm growth and community economic development that successful internationalization can generate (OECD, 1997; UNCTAD, 1994). However, small firms are inherently vulnerable to the vicissitudes of the market and typically lack the excess resources needed to withstand setbacks. Foreign market opportunities often

Figure 1

Plot of the Partial Derivatives.

The x-axis indicates values of the behavioral integration variable.

The y-axis indicates values of dY/dX, where Y is the log of total sales growth and X is the log of foreign sales growth.



present themselves in a piecemeal fashion and require fast decisions about whether and how the firm will respond. Thus, it is difficult for small firms to effectively sell in foreign markets and extant research provides little understanding of the relationship between foreign sales growth and overall firm growth.

This study presents and tests a model of small firm growth, where the relationship between foreign sales growth and overall firm growth is moderated by the behavioral integration of the management team. The underlying assumption of the model is that increased activity in foreign markets increases the environmental complexity faced by small firms, which, in turn, increases the information processing demands placed on them. Because of (1) the ad hoc way in which foreign market opportunities often come to the attention of small firms, (2) the importance of experientially acquired tacit knowledge and timing in effective internationalization for small firms, and (3) the need for coordination of internationalization activity within small firms, it was hypothesized that these firms' ability to make and to implement successful decisions about foreign market opportunities is affected by the behavioral integration of their management team. Findings support the model.

The generalizability of the findings is increased by the fact that the model was tested in both a global industry and a multidomestic industry, which are characterized by very different internationalization requirements and patterns. In general, the model predicts that because foreign markets are more uncertain and require greater information processing, the behavioral integration of the top management team will have a moderating effect. Although the behavioral integration of the top management team significantly moderates the relationship between foreign sales growth and total sales growth for both the software product and the food processing industries, its effect appears to be more consequential for the food processing firms. This suggests that a behaviorally integrated team is more consequential for ensuring the contribution of foreign sales growth to overall firm growth when the environmental complexity of internationalization stems from high market barriers and a greater liability of foreignness (multidomestic industries) than when

it stems from the need to sell in multiple markets while managing continued innovation (global industries). This may be due to the fact that firms in multidomestic industries have a greater potential for piecemeal decisions and actions, given the greater adaptation that is needed for individual markets.

As always, the study's limitations need to be taken into account when interpreting the results. Data were collected from only two industries, and only from firms based in a single country. It is possible that the behavioral integration of the management team may be *less* consequential for Canadian firms (given the Canada/U.S. free trade agreement and the fact that the U.S. is a large, close, "psychically similar" market) than for firms in countries that face greater uncertainty and larger information processing demands when internationalizing because they must deal with more numerous and disparate export markets. This would be particularly likely in the case of multidomestic industries. Furthermore, the sample firms appear to be somewhat more growth oriented than their populations. The samples are drawn from the best sampling frames available, but are not perfectly random since no population inventory exists of small firms in either industry. Therefore, despite the testing in two very different samples, limitations to generalizability may exist, and results should be interpreted with due caution.

The study contributes to the growing body of literature on small firm internationalization. One research stream in this area has emphasized the importance of characteristics of individual owner-managers to the internationalization of their firms, due to their knowledge, attitudes, contacts, and motives (see, for example, Bloodgood, Sapienza, & Almeida, 1996; Brush, 1993; McDougall, Shane, & Oviatt, 1994; Preece, Miles, & Baetz, 1998). A second research stream has emphasized the importance of firm-level characteristics, such as organizational processes and networks, to the internationalization of small firms (see, for example, Autio, Sapienza, & Almeida, 2000; Johanson & Vahlne, 1977, 1990; Reuber & Fischer, 1997; Wiedersheim-Paul, Olson, & Welch, 1978). This study integrates these two research streams by suggesting that small firms that are able to harness the resources and capabilities of individual managers in an integrated and coordinated manner at the firm level are better able to achieve firm growth through foreign sales.

This suggests that future research should pay greater attention to how foreign market activities are managed in small firms. While foreign market entries have been well studied (Coviello & McAuley, 1999; Leonidou, 1998) much less attention has been paid to subsequent decisions, and management of cross-border activities on an ongoing basis (cf. Jones, 1999). The results of this article indicate that these subsequent decisions and activities are likely to be at least as consequential for firm outcomes as the initial entry decision. Future research can extend these findings by examining the consequences of behavioral integration beyond the top management level, to the operational level, where behavioral integration may be more difficult to maintain as firms become larger and more complex. A second area of future research is suggested by the nonmonotonic nature of the moderated relationship, indicating that without an adequate level of top management team behavioral integration, increased foreign sales can affect firm growth negatively. Given that coordination and interaction are costly, future research can also examine how successful firms are able to achieve the required levels in a cost-effective manner. A third area of future research lies in examining how these findings are affected by the other component of total sales, domestic sales. If, as has been suggested (Bonaccorsi, 1992), foreign sales growth is an easier, but not necessarily more effective, means to better overall performance, then the size and stability of the domestic market might impact the extent to which small firms can sell effectively in foreign markets.

From a policy perspective, an additional contribution of the study is the attention paid to small firms in multidomestic industries. A sizable portion of recent research on small

firm internationalization has focused on high-tech firms in global industries and on the antecedents and consequences of early foreign market entry (for example, Autio, Sapienza, & Almeida, 2000; McDougall, Shane, & Oviatt, 1994; Oviatt & McDougall, 1994). In contrast, this study focuses on the ongoing management of foreign sales, includes both new and established small firms, and studies both a global and a multidomestic industry. Although small firms in a multidomestic industry are likely to enter foreign markets at an older age than are small firms in a global market (Reuber & Fischer, 1999), their foreign market activities can be equally consequential to firm growth and to the achievement of the public policy objective of economic development. Indeed, given the greater number of multidomestic firms in an economy, it could be argued that, in aggregate, they are likely to yield economic benefits that at least match those of high-tech firms if these "lower-tech" firms internationalize effectively.

From a practical perspective, the study provides encouragement for owners and managers of small firms who are either currently selling in foreign markets, or who are considering doing so. The findings are consistent with recent studies indicating that small firms in both global and multidomestic industries are able to overcome liabilities associated with their size and undertake the often complex, uncertain, and costly activities associated with successful internationalization (McDougall, Shane, & Oviatt, 1994; Oviatt & McDougall, 1994; Reuber & Fischer, 1997). More important, however, the study points out the critical role of the management team in managing foreign sales in an integrated and coordinated manner so that they contribute positively to the overall growth of the firm. Unlike many of the national and industry level factors affecting the destinies of small firms (Aldrich, 1999; Venkataraman et al., 1990; Woo, Daellenbach, & Nicholls-Nixon, 1994), the behavioral integration of the management team is a factor that is largely under the control of the firm itself. CEOs of small firms can increase the behavioral integration of the management team by ensuring that managers responsible for foreign sales interact regularly with other top managers, despite their usually hectic travel schedules, by establishing frequent and regular forums where the management team as a whole discusses substantively both ongoing and forthcoming market, product, and channel issues, and by implementing a reward system that is based on overall firm performance (cf. Hambrick, 1994). Accordingly, our finding that foreign sales growth will make more of a contribution to firm growth if there is greater interaction among management team members and a higher degree of joint decision making constitutes good news for owners and managers of small firms. It is a message they can act upon. The nonmonotonic nature of the moderated relationship is of particular practical interest, as it suggests a peril of having managers "outside the loop" when key decisions are made and actions with enduring implications are taken. In practical terms, for small firms in both global and multidomestic industries, the message of this study is that internationalization can be "bad for business" if top managers don't work effectively together.

REFERENCES

Acs, Z.J., Morck, R., & Yeung, B. (1999). Evolution, community, and the global economy. In Z.J. Acs, (ed.) *Are small firms important? Their role and impact*. Norwell, MA: Kluwer Academic Publishers.

Aldrich, H. (1999). *Organizations evolving*. Thousand Oaks, CA: Sage Publications.

Arnold, H.J. (1982). Moderator variables: A clarification of conceptual, analytic, and psychometric issues. *Organizational Behavior and Human Performance*, 29, 143–174.

Athanassiou, N. & Nigh, D. (1999). The impact of U.S. company internationalization on top management team advice networks: A tacit knowledge perspective. *Strategic Management Journal*, 20(1), 83–92.

Athanassiou, N. & Nigh, D. (2000). Internationalization, tacit knowledge and the top management teams of MNCs. *Journal of International Business Studies*, 31(3), 471–487.

Autio, E., Sapienza, H.J., & Almeida, J.G. (2000). Effects of age at entry, knowledge intensity, and imitability of international growth. *Academy of Management Journal*, 43(5), 909–924.

Baldwin, J., Sabourin, D., & West, D. (1999). Advanced technology in the canadian food-processing industry. Research Paper, Ottawa, Canada: Micro-Economics Analysis Division, Statistics Canada.

Baum, J.A.C. (1989). Liabilities of newness, adolescence and obsolescence: exploring age dependence in the dissolution of organizational relationships and organizations. *Proceedings of the Administrative Science Association of Canada*, 10(5), 1–10.

Bloodgood, J.M., Sapienza, H.J., & Almeida, J.G. (1996). The internationalization of new high-potential U.S. ventures: antecedents and outcomes. *Entrepreneurship Theory and Practice*, 20(4), 61–76.

Bonaccorsi, A. (1992). On the relationship between firm size and export intensity. *Journal of International Business Studies*, 23(4), 605–635.

Boter, H. & Holmquist, C. (1996). Industry characteristics and internationalization processes in small firms. *Journal of Business Venturing*, 11, 471–487.

Brush, C.G. (1993). International entrepreneurship: Motives and the effect of age at internationalization on performance. *Frontiers of Entrepreneurship Research*. Wellesley, MA: Babson College Center for Entrepreneurship Studies.

Brush, C.G. & Vanderwerf, P.A. (1992). A comparison of methods and sources for obtaining estimates of new venture performance. *Journal of Business Venturing*, 7, 157–170.

Cavusgil, S.T. & Zou, S. (1994). Marketing strategy-performance relationship: An investigation of the empirical link in export market ventures. *Journal of Marketing*, 58(1), 1–21.

Chandler, G.N. & Hanks, S.H. (1993.) Measuring the performance of emerging businesses: A validation study. *Journal of Business Venturing*, 8(3), 391–408.

Chattopadhyay, P., Glick, W.H., Miller, C.C., & Huber, G.P. (1999). Determinants of executive beliefs: Comparing functional conditioning and social influence. *Strategic Management Journal*, 20(8), 763–789.

Chen, M. & Hambrick, D.C. (1995). Speed, stealth and selective attack: How small firms differ from large firms in competitive behavior. *Academy of Management Journal*, 38(2), 453–482.

Coviello, N.E. & McAuley, A. (1999). Internationalisation and the smaller firm: A review of contemporary empirical research. *Management International Review*, 39(3), 223–256.

Coviello, N. & Munro, H. (1997). Network relationships and the internationalisation process of small software firms. *International Business Review*, 6(4), 361–386.

Crick, D. & Jones, M. (2000). Small high-technology firms and international high-technology markets. *Journal of International Marketing*, 8(2), 63–85.

Dess, G.G. & Beard, D.W. (1984). Dimensions of organizational task environments. *Administrative Science Quarterly*, 29(1), 52–73.

Duncan, R.B. (1972). Characteristics of organizational environments and perceived environmental uncertainty. *Administrative Science Quarterly*, 17, 313–327.

Ellis, P. (2000). Social ties and foreign market entry. *Journal of International Business Studies*, 31(3), 443–469.

Eriksson, K., Johanson, J., Majkgård, A., & Sharma, D.D. (1997). Experiential knowledge and cost in the internationalization process. *Journal of International Business Studies*, 28(2), 337–360.

Fischer, E., Reuber, A.R., Hababou, M., Johnson, W., & Lee, S. (1997). The role of socially constructed temporal perspectives in the emergence of rapid-growth firms. *Entrepreneurship Theory and Practice*, 22(2), 13–30.

Gersick, C. (1994). Pacing of strategic change: The case of a new venture. *Academy of Management Journal*, 37(1), 9–45.

Hambrick, D.C. (1994). Top management groups: a conceptual integration and reconsideration of the "team" label. *Research in Organizational Behavior*, 16, 171–213.

Hambrick, D.C. & Crozier, L.M. (1985). Stumblers and stars in the management of rapid growth. *Journal of Business Venturing*, 1, 31–45.

Janis, I.L. (1972). *Victims of groupthink: Psychological studies of foreign policy decisions and fiascos*. Boston: Houghton Mifflin Company.

Johanson, J. & Vahlne, J-E. (1977). The internationalization process of the firm—A model of knowledge development and increasing foreign market commitments. *Journal of International Business Studies*, 8(1), 23–32.

Johanson, J. & Vahlne, J-E. (1990). The mechanism of internationalization. *International Marketing Review*, 7(4), 11–24.

Jones, M.V. (1999). The internationalization of small high-technology firms. *Journal of International Marketing*, 7(4), 15–41.

Kobrin, S.J. (1991). An empirical analysis of the determinants of global integration. *Strategic Management Journal*, 12, 17–31.

Kormylo, A. (1998). A profile of Canada's software products industry. Research Paper, Ottawa, Canada: Software, Advanced Networks and New Media Branch, Industry Canada.

Kutschker, M. & Bäurle, I. (1997). Three + one: Multidimensional strategy of internationalization. *Management International Review*, 37(2), 103–125.

Lave, J. & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge: Cambridge University Press.

Leonidou, L.C. (1998). Organizational determinants of exporting: Conceptual, methodological and empirical insights. *Management International Review*, 38(1), 7–52.

Leonidou, L.C. & Katsikeas, C.S. (1996). The export development process: An integrative review of empirical models. *Journal of International Business Studies*, 27(3), 517–551.

Mascarenhas, B. (1997). The order and size of entry into international markets. *Journal of Business Venturing*, 12(4), 287–299.

McDougall, P.P. & Oviatt, B.M. (1996). New venture internationalization, strategic change, and performance: A follow-up study. *Journal of Business Venturing*, 11(1), 23–40.

McDougall, P.P., Shane, S., & Oviatt, B.M. (1994). Explaining the formation of international new ventures: The limits of theories from international business research. *Journal of Business Venturing*, 9(6), 469–487.

Miller, C.C., Burke, L.M., & Glick, W.H. (1998). Cognitive diversity among upper-echelon executives: Implications for strategic decision processes. *Strategic Management Journal*, 19(1), 39–58.

OECD. (1997). *Globalisation and small and medium enterprises (SMEs). Volume 1: synthesis report and volume 2: Country studies*. Paris: Organisation for Economic Co-operation and Development.

Oviatt, B.M. & McDougall, P.P. (1994). Toward a theory of international new ventures. *Journal of International Business Studies*, 25(1), 45–64.

Pan, Y., Li, S., & Tse, D.K. (1999). The impact of order and mode of market entry on profitability and market share. *Journal of International Business Studies*, 30(1), 81–104.

Pfeffer, J. & Salancik, G.R. (1978). *The External Control of Organizations*. New York: Harper & Row.

Porter, M.E. (1986). Changing patterns of international competition. *California Management Review*, 28(2), 9–40.

Preece, S.B., Miles, G., & Baetz, M.C. (1998). Explaining the international intensity and global diversity of early-stage technology-based firms. *Journal of Business Venturing*, 14(3), 259–281.

Reuber, A.R. & Fischer, E. (1997). The influence of the management team's international experience on the internationalization behavior of SMEs. *Journal of International Business Studies*, 28(4), 807–825.

Reuber, A.R. & Fischer, E. (1999). Domestic market size, competences, and the internationalization of small and medium sized enterprises. In R. Wright (ed.) *Research in Global Strategic Management*. Stamford, CT: JAI Press.

Rosenzweig, P.M. & Singh, J.V. (1991). Organizational environments and the multinational enterprise. *Academy of Management Review*, 16(2), 340–361.

Roth, K., Schweiger, D.M., & Morrison, A.J. (1991). Global strategy implementation at the business unit level: Operational capabilities and administrative mechanisms. *Journal of International Business Studies*, 22(3), 369–402.

Sanders, W.G. & Carpenter, M.A. (1998). Internationalization and firm governance: The roles of CEO compensation, top team composition, and board structure. *Academy of Management Journal*, 41(2), 158–178.

Schoonhoven, C.B. (1981). Problems with contingency theory: Testing assumptions hidden within the language of contingency "theory." *Administrative Science Quarterly*, 26, 349–377.

Sharma, S., Durand, R.M., & Gur-Arie, O. (1981). Identification and analysis of moderator variables. *Journal of Marketing Research*, 18, 291–300.

Shrader, R.C., Oviatt, B.M., & McDougall, P.P. (2000). How new ventures exploit trade-offs among international risk factors: Lessons for the accelerated internationalization of the 21st century. *Academy of Management Journal*, 43(6), 1227–1247.

Slevin, D.P. & Covin, J.G. (1998). Time, growth, complexity, and transitions: Entrepreneurial challenges for the future. *Entrepreneurship Theory and Practice*, 22, 53–68.

Smith, K.G., Smith, K.A., Olian, J.D., Sims, H.P., O'Bannon, D.P, & Sculy, J.A. (1994). Top management team demography and process: The role of social integration and communication. *Administrative Science Quarterly*, 389, 412–438.

Sternberg, R.J. & Caruso, D.R. (1985). Practical modes of knowing. In E. Eisner (ed.) *Learning and Teaching the Ways of Knowing*. Chicago: The University of Chicago Press.

Stinchcombe, A.L. (1965). Organizations and social structure. In J.G. March (ed.) *Handbook of Organizations.* Chicago: Rand McNally.

Teece, D.J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18, 509–533.

UNCTAD. (1994). *Small and medium-sized transnational corporations*. New York: United Nations Conference on Trade and Development.

Venkataraman, S., Van de Ven, A.H., Buckeye, J., & Hudson, R. (1990). Starting up in a turbulent environment: A process model of failure among firms with high customer dependence. *Journal of Business Venturing*, 5, 277–295.

Westhead, P., Wright, M., & Ucbasaran, D. (2001). The internationalization of new and small firms: A resource-based view. *Journal of Business Venturing*, 16(4), 333–358.

Wiedersheim-Paul, F., Olson, H.C., & Welch, L.S. (1978). Pre-export activity: The first step in internationalization. *Journal of International Business Studies*, 9(1), 47–58.

Woo, C.Y., Daellenbach, U., & Nicholls-Nixon, C. (1994). Theory building in the presence of "randomness": The case of venture creation and performance. *Journal of Management Studies*, 31(4), 507–524.

Zaheer, S. (1995). Overcoming the liability of foreignness. *Academy of Management Journal*, 38(2), 341–363.

Zahra, S.A., Ireland, R.D., & Hitt, M.A. (2000). International expansion by new venture firms: International diversity, mode of market entry, technological learning, and performance. *Academy of Management Journal*, 43(5), 925–950.

Zedeck, S. (1971). Problems with the use of "moderator" variables. *Psychological Bulletin*, 76, 295–310.

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