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Ownership and the Internationalization of Small Firms

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Abstract

Small and medium sized enterprises (SMEs) play an important role in international markets. This study argues that the ownership structures of SMEs influence their proclivity to take risks and expand the scale and scope of their internationalization efforts. Data from 889 Swedish SMEs reveal that internal owners (CEOs and other senior executives) tend to be risk averse and have a lower proclivity to increase scale and scope of internationalization than external owners (venture capitalists and institutional investors). The results provide interesting insights into the behavioral change of executives regarding the scale and scope of internationalization in the presence of external ownership.

Small and medium enterprises (SMEs), independent firms with 500 or fewer employees (Lu & Beamish, 2001), play an important role in today's international markets. SMEs "account for between a quarter and two-fifths of worldwide manufactured exports" (OECD, 2002:13). In 1999, about 20 percent of European SMEs drew 24 to 32 percent of their sales from foreign markets. In the same year, 97 percent of exporting firms in the United States were SMEs. SMEs play an equally important role in other parts of the world. For example, Korean SMEs accounted for roughly 40 percent of manufacturing exports in 1999 (OECD, 2002).

SMEs are usually limited in their resources and international experience. Therefore, they have to make important decisions about the scale and scope of their foreign operations. Scale refers to the extent to which an SME relies on foreign markets in its operations such as marketing, manufacturing, and R&D. Scope denotes the international geographic reach or the number of countries in which an SME conducts its business. While researchers have examined the factors influencing the internationalization efforts of large firms (Hitt, Hoskisson & Kim, 1997; Tihanyi, Johnson, Hoskisson & Hitt, 2003), explanations for the variability in SMEs' internationalization are limited (Westhead, Wright & Ucbasaran, 2001).

Differences in the scale and scope of SMEs' international operations are often attributed to their home market and industry conditions or the attractiveness of foreign markets (Dunning, 1988). Yet, SMEs in the same market or industry adopt specialized internationalization strategies, probably because of heterogeneity in their resource endowments and divergent managerial perceptions of the opportunities and threats associated with international expansion. These perceptions reflect senior managers' risk preferences that, in turn, are shaped by their ownership stake. SMEs' success or failure in foreign markets can undermine these owner-managers' wealth, careers, and professional reputations.

Research suggests that equity ownership influences managers' risk-taking propensity (Eisenhardt, 1989; Zajac & Westphal, 1994) and the resultant willingness to assume the risks associated with internationalization. The success of SMEs' internationalization can enrich managers by generating new growth opportunities. Yet, past research from larger firms has yielded conflicting findings on this issue. Though some research shows that managers become risk averse as their ownership in the firm increases (Beatty & Zajac, 1994; Denis, Denis & Sarin, 1999), other studies reveal a positive association between equity incentives and managerial risk taking (Sanders & Carpenter, 1998). These conflicting findings make it difficult to gauge the relationship between ownership and the scale and scope of SMEs' internationalization. Researchers have also overlooked other influential external owners such as venture capitalists (VCs) and institutional owners, whose goals and priorities might conflict with those of the SMEs' internal owners. External owners such as VCs and institutional investors (banks, investment firms, and other institutions such as pension funds) play a key role in the life of SMEs by monitoring managers and recommending strategic actions. Consequently, decisions regarding the scale and scope of SMEs' internationalization are likely to reflect the preferences of the internal and external owners, a proposition that we examine in this paper.

This study investigates the effect of internal and external ownership on the scale and scope of SMEs' internationalization using a large sample of Swedish SMEs. Internal ownership refers to shareholding by the firm's CEO and the top management team (TMT), defined as a firm's senior executives who hold the position of vice president or higher. We follow Carpenter and Sanders (2002), who proposed that it is important to study the incentives for the entire TMT, not only the CEO, to understand how internal ownership influences strategic choices. Internationalization is a complex and costly process that requires a thorough investigation of opportunities, building the infrastructure necessary to expand, and developing and executing multiple strategies. These activities demand the participation and support of the entire TMT. SMEs usually have small TMTs (4-7 members), fostering communication between the CEO and other senior managers. Though the founder-CEO plays a central role in making internationalization decisions, other TMT members also shape the SMEs' strategic decisions, especially where a group-centered decision-making process is the norm, as it is in Sweden.

The study also explores the effect of external ownership on SMEs' internationalization. The heterogeneity in ownership structures reflects SMEs' history and the preferences of their founders regarding the degree of control on strategic decisions, the nature of the firm's products, and the funding requirements for growth (Davila, Foster & Gupta, 2003). Variations in external ownership structures may influence SMEs' goals in domestic and foreign markets, determining the scale and scope of their international operations. Prior research has not examined how VCs and institutional owners influence these variables, an issue this study addresses.

THEORY AND HYPOTHESES

Internationalization Theories

Strategy and entrepreneurship scholars argue that firms succeed by building and retaining a competitive advantage. Ireland, Hitt and Sirmon (2003) recently integrated theories from the strategy and entrepreneurship disciplines to explain how firms develop and sustain these advantages. They noted that firms succeed by identifying and exploiting new opportunities and by deploying their resources in ways that allow them to create value. Some of these opportunities lie in foreign markets, requiring strategies that leverage SMEs' skills and capabilities. This view is consistent with Dunning's (1988, 2001) eclectic paradigm that proffers that firms internationalize their operations in order to capitalize on differences in factor endowments across countries. Dunning also posits that firms' ability to create a sustainable advantage depends on three variables: ownership (e.g., patents), location (e.g., transportation cost), and internalization (e.g., management ownership and control) advantages.

Dunning's eclectic paradigm highlights the importance of the advantages of ownership in shaping internationalization decisions. It builds on Casson's (1982) view of entrepreneurship as making judgments about opportunities and configuring the resources in pursuit of these opportunities. Agency theory also suggests that these judgments are determined by the decision maker's ownership stake. Thus, judgments about the scale and scope of SME international operations will depend on the manager's perceptions of risks and attractiveness of foreign market opportunities. By applying the eclectic paradigm, our analyses recognize the strategic (Ghoshal, 1987; Hymer, 1976; Porter, 1986; Vernon, 1966), economic (e.g., cost-benefit) and non-economic (risk perceptions) factors that determine SME internationalization (Dunning, 2001; Hill, Hwang & Kim, 1990).

Capitalizing on their firms' ownership, location, and internalization advantages (Dunning, 2001), SME owner-managers make important judgments about the size and attractiveness of foreign opportunities and their riskiness. Managers understand that their SMEs are both pushed and pulled to internationalize their operations. SMEs internationalize to escape domestic regulations, declining demand, and maturing technologies in their home markets (Porter, 1986). SMEs are also pulled to internationalize by lucrative opportunities (Ghoshal, 1987). Even so, managers' perceptions of the risks and returns associated with internationalization influence their strategic decisions. Agency theorists hold that assessments of the risks associated with internationalization may vary based on the CEO and TMT members' ownership stakes and external owners may assess these risks differently from internal owners.

Scale and Scope of SME International Operations: Rewards and Risks

The scale of internationalization indicates the extent to which a firm's activities depend on foreign markets. A large scale of foreign operations allows firms to leverage their domestic skills abroad and acquire their market share rapidly (Bartlett & Ghoshal, 1998). Still, for many SMEs, building a large scale of international operations is challenging because of the diverse skills needed and the costs involved (Hill et al., 1990). Success also requires integrating foreign operations, adopting new technologies, introducing control systems, and ensuring effective coordination (Porter, 1986). These factors raise the cost of internationalization and increase the odds of an SME's failure, heightening managerial perceptions of risks.

The scope of internationalization refers to SMEs' geographic reach around the globe (Lu & Beamish, 2001). A broad scope enables SMEs to gain greater returns from their intangible resources, achieve market power, and diversified risks (e.g., Tallman & Li, 1996). It also encourages investments in building competencies and learning from distant markets and leveraging this knowledge to innovate (Hitt et al., 1997). However, the proliferation of products and markets increases the complexity of SME operations, inducing rigidity and lowering market responsiveness. Local cultures also develop as the firm expands, preventing management from cultivating the synergies associated with a broad scope, possibly depressing financial performance. Thus, while Tallman and Li (1996) find a positive relationship between international scope and financial performance, others show that increased scope might initially improve performance but then decline (Geringer, Beamish & de Costa, 1989), while yet others find a linear negative impact (Franko, 1989).

Still, there are serious risks of not internationalizing as well. SMEs that fail to internationalize may lose their competitiveness, especially when their home markets are small (Franko, 1989), as in the case of Sweden. In turn, this may increase income stream uncertainty (fluctuations in performance), managers' personal wealth risk (lower compensation or personal wealth), and competitive risk (not having access to resources that enhance competitiveness). Managers' perceptions of these risks could influence SMEs' scale and scope of international operations, as discussed next.

Internal Ownership and the Scale and Scope of SME Internationalization

Agency theory highlights the role of ownership in creating the incentives necessary to make risky decisions (Jensen & Meckling, 1976). Ownership gives CEOs and TMTs an incentive to assume the potential risks associated with international expansion (Sanders & Carpenter, 1998). Eisenhardt (1989) observes that two problems arise in typical agency relationships. The first problem relates to differences in risk preferences. The employment and compensation of agents in the form of stock options are often based on the performance of their firms, whereas principals can diversify their investments. Tying agents' personal wealth to firm performance may lead some agents to become risk averse because a substantial part of their net worth is tied to the firm. The second problem is the incongruence of goals between principals and agents. When this divergence occurs, the potential for opportunistic behavior by agents rises. To curb this behavior, principals monitor agents or align their goals with those of the firm. In SMEs, many CEOs are also founders and owners, which somewhat mitigates principal-agent problems but not the principal-principal problems (Dharwadkar, George & Brandes, 2000). While CEOs or founders may hold a large ownership stake, they may not necessarily behave in ways that benefit other owners as well. For example, while internationalization may create value for all shareholders, the risk associated with it may deter CEOs or founders of SMEs because of the potential income stream uncertainty that can lower their own wealth.

Board monitoring of executives and high-powered incentives (i.e., stock ownership) may align principal-agent interests and may improve firm performance (Jensen & Murphy, 1990). However, while stock ownership may align shareholder-TMT interests and reduce goal conflict, it might also create a risk-averse TMT (Fama & Jensen, 1983). The benefits of incentive alignment notwithstanding, some studies show that as CEO and TMT ownership increases, there are likely to be decreases in the large firm's willingness to take risks or invest in long-term projects that exhibit a high degree of uncertainty (Beatty & Zajac, 1994; Denis et al., 1999; Zajac & Westphal, 1994). A few studies report mixed results on the effect of ownership on risk aversion (Lane, Cannella & Lubatkin, 1998; Palmer & Wiseman, 1999). The bulk of evidence suggests that higher stock ownership by the CEOs and the rest of their TMTs may lower their willingness to take risks. We do not know if this effect extends to SMEs' internationalization. Sanders and Carpenter (1998) find a positive relationship between CEO compensation and the degree of internationalization in large firms but do not address the ownership of the entire TMT, which is important in SMEs. Documenting the effects of CEO and TMT ownership on SMEs' subsequent internationalization is a necessary extension to this literature.

CEOs may view internationalization as a means of creating a legacy by building their firms' presence abroad. Internationalization offers an opportunity to capitalize on SMEs' entrepreneurial orientation by being proactive, reaching foreign markets ahead of their competition, and by introducing products and process innovations there (Covin & Slevin, 1991; Lumpkin & Dess, 1996; Miller, 1983). Firms that cultivate such an entrepreneurial orientation as they internationalize their operations stand to achieve higher profitability and growth (Zahra & Garvis, 2000). If internationalization is profitable, CEOs also gain from building a strong international presence.

The risks associated with SMEs' internationalization can undermine CEOs' equity holdings. These risks reflect country-specific conditions such as cultural differences and political instability. Risks may arise also from exposing the firm's proprietary know-how and skills to competitors (Dess, Gupta, Hennart & Hill, 1995). Internationalization also requires substantive capital outlays to build a large scale of foreign operations, and the payoff from these investments is uncertain. Agency theory suggests that CEOs and other TMT members will withhold investments from broad internationalization moves, aiming to protect their wealth and minimize their own risks. Instead, CEOs would favor a more conservative approach to internationalization, aiming to minimize competitive and income stream uncertainty and the loss of personal wealth. CEOs are likely to prefer limited international expansion that does not undermine their SMEs' domestic position. Therefore, we posit the following hypothesis:

> Hypothesis 1: Higher levels of CEO ownership will be negatively related to the (a) scale and (b) scope of SME internationalization.

Other TMT members may have different goals from those of the CEO (Scott & Bruce, 1987). Similar to CEOs, TMT members are likely to be risk averse and prefer a limited scale of internationalization. TMT preferences regarding scope, though, are likely to diverge from the CEO. A larger international scope can improve TMT members' chances of mobility within the SME and increase their job security by generating new business opportunities. It also serves to diversify the riskiness of the SMEs' various operations. These managers' compensation is likely to be tied to their business units' performance and increased organizational size. Given that these gains are more likely to materialize if the SME expands across multiple international markets, TMT ownership is more likely to encourage the firm to build a broader market scope. Taken together, these observations suggest the following hypothesis:

> Hypothesis 2a: Higher levels of TMT ownership will be negatively related to the scale of SME internationalization.

> Hypothesis 2b: Higher levels of TMT ownership will be positively related to the scope of SME internationalization.

External Ownership and the Scale and Scope of SME Internationalization

SMEs often obtain financial resources from several external sources, including VCs and institutional investors. Working individually or in syndication, VCs work with firms with high potential but yet unproven technologies or business models. Some of these firms compete with radically new products in new industries and therefore are highly risky. VCs usually have short payback periods and anticipate high rates of returns in the firms they fund. Other institutional investors usually fund less risky businesses, potentially serving as the second or third source of funding -- with VCs being the first. They also have longer payback periods and lower expected return rates than VCs. Thus, VCs and institutional investors have different risk preferences, time horizons, and profit goals and therefore may influence the scale and scope of SMEs' internationalization differently. Still, both investor groups provide the capital necessary for SMEs' international expansion. They also monitor management decisions (Zahra, Neubaum & Huse, 2000) and help firms make better strategic decisions (George & Prabhu, 2000; Thomsen & Pedersen 2000). Currently, we know little about how VCs and institutional investors influence SMEs' internationalization scale and scope.

VCs and institutional investors can influence a firm's strategic behavior through persuasion as well as private or public activism (Tihanyi et al., 2003; Westphal, 1999). These investors also fund firms in particular industries, which allow them to understand the nuances of the decisions managers face. CEOs and other TMT members are likely to heed these institutions' suggestions because of their industry expertise and connections to other sources of funding. Sweden is dominated by pension funds that have long-term investment horizons (Henrekson & Jakobsson, 2003). These investors are also proactive in expressing their views with management. Institutions also have an interest in resolving any disputes in a private manner because public confrontations with senior management are expensive and time-consuming. Thus, while activism by institutional investors against large US firms is rising (Tihanyi et al., 2003), we expect SME managers to consider and accommodate the preferences of these investors. Swedish institutional investors have a long-term investment horizon and therefore may encourage SME managers to support long-term initiatives. The effect of this long-term influence on SMEs' scale or scope of internationalization has not been empirically documented.

Despite the benefits of SMEs' international expansion, some managers may prefer short-term profit-maximizing strategies (Chaganti & Damanpour, 1991). Zahra et al. (2000) show that in order to promote investments leading to long-term returns, institutional investors can encourage, and if necessary privately or publicly pressure, managers to make the investments necessary for international expansion. Internationalization can improve financial performance, but this takes time to materialize (e.g., Kuemmerle, 2002). These time and cost factors are important determinants of SME strategies, as these firms do not have abundant resources to support international expansion over extended periods of time. Risky strategies, such as internationalization, that cause short-term income stream uncertainty can be more profitable in the long run than incremental strategies (Bhide, 2000). Given that institutional investors typically invest in a portfolio of firms, they are more willing than SME managers to accept higher risks in each individual investment (Davila, Foster & Gupta, 2003; George & Prabhu, 2003). Thus, they may view aggressive international market entry as critical to an SME's ability to quickly achieve legitimacy in foreign markets. This might lead institutional investors to encourage internationalization on a large scale and scope. Therefore, we posit the following hypothesis:

> Hypothesis 3: Higher levels of institutional ownership will be positively related to the (a) scale and (b) scope of SME internationalization.

VCs are another group of external owners who can influence SMEs' internationalization. VCs interact frequently with their managers, communicate their views about future strategies, serve on firms' boards, and closely review SMEs' investment decisions. Some VCs challenge firm founders and even replace them if firms perform poorly or if serious differences of opinion about the firm's strategic options persist. This active and vigilant involvement of venture capitalists can accentuate their influence on SMEs' important decisions (Davila et al., 2003; George & Prabhu, 2003), such as internationalization.

VCs specialize in the types of firms they fund, which increases their understanding of the strategic importance of internationalization for creating legitimacy, overcoming the limitations of a small domestic market, and achieving profitability. These variables will encourage VCs to be supportive of building sufficient international business scale to quickly reach profitability in foreign operations. VCs understand that SMEs have limited resources and skills, and greater gains could be obtained by leveraging these resources in a few markets by building a larger scale of operations.

Entering multiple markets could be risky for SMEs because doing so can fragment senior managers' span of attention and make it difficult to realize synergies across different markets. Given the attendant risks associated with large-scale internationalization, VCs will encourage managers to select a few foreign markets in which they can successfully expand, quickly recoup their investments, and make a profit. Therefore, we posit the following hypothesis:

> Hypothesis 4a: Higher levels of VC ownership will be positively related to the scale of SME internationalization.
>
> Hypothesis 4b: Higher levels of VC ownerships will be negatively related to the scope of SME internationalization.

Interaction Effects of Internal and External Ownership on Internationalization

Given that internal and external owners may have divergent goals and time horizons, we need to understand how the interaction effects of various ownership combinations influence the scale and scope of SME internationalization. Some research indicates that senior managers change their behavior in the presence of large investors (e.g., Gedajlovic & Shapiro, 2002), alleviating principal-agent problems. Chaganti and Damanpour (1991) found complementarities in the strategic choices made by executives and institutional owners make on issues such as taking on and managing debt. Yet, empirical documentation is limited on the interaction effect between internal and external ownership on the scale and scope of SMEs' internationalization.

In a study of 435 of the largest European firms, Thomsen and Pedersen (2000) reported that the influence of managerial ownership on firm value increases in the presence of institutional investors. They found that the effect of increasing institutional investor ownership from 5% to 15% corresponded with an almost 25% increase in the market-to-book value of equity in these firms. This finding highlights the effect of institutional monitoring on increasing senior managers' willingness to invest in long-term value-creating activities. Given their diversified investment portfolios, institutional investors participate in multiple industries and can learn from their diverse investment experiences.

Learning from the successes of other SMEs allows these investors to provide strategic advice and guide SMEs' decisions (Davila et al., 2003; George & Prabhu, 2003), including the scale and scope of internationalization. Problems of information asymmetry and inadequate knowledge of foreign markets that SMEs face (Kuemmerle, 2002; Westhead et al., 2001) can be bridged by the experiential knowledge of international markets and industry dynamics of the institutional investors (George & Prabhu, 2003). Investors also have long-term investment horizons and therefore may encourage managers to pursue internationalization on a broad scale and scope, overcoming SME managers' conservatism. Therefore, we posit the following hypothesis:

> Hypothesis 5: The (a) scale and (b) scope of SME internationalization will be high when both CEO and Institutional ownership are high.

Hypothesis 1a posits that CEO ownership will be negatively associated with the scale of internationalization. Hypothesis 4a posits that VC ownership will promote a larger scale of internationalization. Given that VCs follow industry trends closely and can help managers in making these decisions by sharing experiences and identifying additional sources of funds, VCs are positioned to overcome senior managers' apprehension about building a broad international presence, especially in small markets such as Sweden. Thus, the interaction of CEO and VC ownership can induce managers to build a larger scale of international operations. However, CEO ownership (hypothesis 1b) and VC ownership (hypothesis 4b) will both have a negative effect on the scope of internationalization. The predicted conservatism by the CEO and the VC is likely to intensify resistance to building a broad international scope. This discussion suggests the following hypothesis:

> Hypothesis 6a: The scale of SME internationalization will be high when both CEO and VC ownership are high.

> Hypothesis 6b: The scope of SME internationalization will be low when both CEO and VC ownership are high.

Agency theory holds that high TMT ownership will be negatively associated with the scale of internationalization (hypothesis 2a), but institutional ownership will have a positive effect (hypothesis 3a). Given the experiences and knowledge that institutional investors possess and share with the TMT and because these Swedish institutions have a long-term orientation, as institutional ownership increases, the TMT's reluctance to build international operations on a large scale will dissipate. Thus, institutional ownership is expected to overcome the TMT's conservatism regarding the scale of SME internationalization. The same logic applies to the scope of SMEs' internationalization. The positive effect of high institutional ownership on scope (hypothesis 3b) can magnify the predicted positive effect of TMT ownership on the scope of SME operations (hypothesis 2b). These observations suggest the following hypothesis:

> Hypothesis 7: The (a) scale and (b) scope of SME internationalization will be high when both TMT and institutional ownership are high.

VCs are active in shaping SMEs' strategic decisions because of their ownership stake, connections to other institutions, and deep industry knowledge. VCs recognize the necessity of building a strong international presence to overcome limited domestic markets and capitalize on opportunities in foreign markets. Hypothesis 4a predicts that as VC ownership increases, the scale of SMEs' internationalization will also increase. Hypothesis 2a posits a negative association between TMT ownership and scale of SME internationalization. Consistent with agency theory, VCs' preferences, encouragement, and support will help reduce the TMT reluctance to internationalize on a large scale. The opposite effect is expected with the scope of international operations. VCs are expected to withhold support of these decisions as being risky (hypothesis 4b) and encourage managers to build a larger scale in one or a few foreign markets rather than pursuing a broadly defined market scope. These observations suggest the following hypothesis:

> Hypothesis 8a: The scale of SME internationalization will be high when both TMT and VC ownership are high.

Hypothesis 8b: The scope of SME internationalization will be low when both TMT and VC ownership are high.

METHOD

Design and Sample

Internationalization is an important concern for SMEs in countries with smaller domestic markets for their products (Dunning, 1988). According to OECD (2002: 193), “More than 99% of all enterprises [in Sweden] are classified as SMEs.” SMEs account for 57% of the value added and 66% of net investments in that country. In 2000, three out of five employees in the private sector in Sweden worked for SMEs. Given these facts, we collected data by surveying a sample of Swedish firms that varied in their internationalization and ownership structures. Sampling criteria were (a) industrial sector divided into four groups based on ISIC codes (manufacturing, professional services, wholesale/retail, and other services); (b) employment size class divided into two groups (10-49, 50-249, which is the European Union’s cutoffs for small and medium-sized enterprises, respectively); and (c) corporate governance (independent firms and members of business groups). The sampling population contained 2,455 firms whose names and addresses were obtained from Statistics Sweden (the Bureau of Census). We collected data using telephone and mail surveys targeting the CEOs of SMEs.

In 1997, we collected data for the study's independent and control variables. We collected data for the dependent variables in 2000, reducing potential reverse causality. The three-year lag was chosen for several reasons. Notably, SMEs could face many obstacles in internationalizing their operations and therefore the effect of these activities might take time to materialize. Given the scarcity of financial resources, managers and external investors alike may become impatient if the payoff from internationalization takes longer than three years. Prior studies of SMEs’ internationalization have used a three-year time lag (e.g., Zahra, Ireland & Hitt, 2000), as done in this study.

To collect data for this study, we contacted the firms by telephone and obtained 2,034 responses (82.9%). Shortly thereafter, all firms interviewed were sent a mail survey, generating 1,278 responses after two reminders, for a response rate of 52.1% of the original sampling population (2,455). In 2000, firms that responded to the 1997 survey were contacted again for a telephone interview for the dependent variables. We excluded data from 28 respondents with firm size greater than 500 employees. T-tests to check for response bias did not reveal any significant difference between respondents and nonrespondents for the telephone and mail survey data collection efforts on age, size, and ownership characteristics. The final sample with data for 1997 and 2000 was 889 firms (36% of original sample; 70% of 1997 survey respondents).

Measures

Dependent Variables. *Scale of internationalization* was measured as the percentage share of a firm's business activities conducted internationally. It was computed as the arithmetic mean across five different items: export share, import share, share of advertising budget directed at international markets, share of R&D expenditure abroad, and share of production completed abroad. Items were chosen based on prior studies (Bloodgood, Sapienza & Almeida, 1996). The measure also sought to overcome a weakness of past studies that used the degree of internationalization (i.e., the volume of sales from foreign markets) and failed to consider non-sales related activities such as outsourced international production or R&D that created value but were not directly captured by sales. To validate the measure for scale of internationalization, we asked respondents to estimate the percentage share of their total profits that was derived from foreign markets, a widely used measure (Carpano, Chrisman & Roth, 1994). The correlation between our scale measure and the profits derived from foreign markets was high and significant 0.79 ($p < .001$).

Scope of internationalization was measured by the number of countries in which the firm had direct export relationships. While scope could be defined differently based on industry type and firm size, it is likely that most of the international expansion efforts by SMEs will take the form of exports (Lu & Beamish, 2001; Zahra et al., 2000). Thus, our measure captured the number of countries to which SMEs actively exported their products and goods.

Independent Variables. *CEO ownership* was measured by the percentage of firm shares held by the CEO. *TMT ownership* was measured by the percentage of firm shares held by members of a firm's entire top management team. *Institutional ownership* was measured by the percentage of ownership held by banks, investment firms, and pension funds. *VC ownership* was measured by firm shares held by venture capitalists. For the ownership measures, we used data that the CEOs provided because detailed information on the ownership structures of Swedish SMEs is not available from public secondary data sources. To validate the ownership measure, we asked the CEOs for their ownership stake during the telephone interview and the mail surveys. There was a high and significant correlation ($r = .86$, $p < .001$) between responses for the two instruments.

Control Variables. The analyses also controlled for the following variables: *Firm age*, following past research was measured as the number of years since incorporation. *Firm size* was measured as the number of full-time employees, controlled for the possibility that it may influence the resources available to support SMEs' internationalization. Firm size might also influence SMEs' governance systems (Westphal, 1999).

Past performance was measured in two ways. The first was an index consisting of three items, comparing a firm to its competitors. The items were net profit, cash flow, and growth of net worth. The items had 5-point scales ranging from "much worse than competitors" (coded 1) to "much better than competitors" (coded 5). The scale had a Cronbach's α of 0.76. The second measure of past performance was the number of years in which the firm was profitable out of the past five fiscal years.

Industry opportunity was measured by a three-item scale that asked for respondents' perceptions of the presence of industry-level opportunities. Items were "industry development is better relative to the economy", "unused market potential exists in the industry", and the "industry is in growth stage." The items had 7-point scales ranging from "completely disagree" (coded 1) to "completely agree" (coded 5). The scale had a Cronbach's α of 0.70. Research indicates that industry opportunity promotes internationalization (Bloodgood et al., 1996; Dunning, 1988). We included this variable to control for the possibility that domestic market conditions, rather than foreign market opportunities, promoted internationalization. This variable also controlled for the possibility that TMTs' perceptions of opportunity rather than risk would foster SMEs' internationalization.

New market development captured SMEs' opportunity-seeking behavior. We asked CEOs this question: "over the past three years, approximately what percentage of sales is derived from new markets?" We controlled for this variable because entrepreneurial-oriented firms were expected to have a significant portion of their sales from new markets (Autio, Sapienza & Almeida, 2000).

Managerial involvement. Given the fact that not all Swedish SMEs have an independent TMT, we asked CEOs if the TMT was actively involved in the firm's decision-making processes. Managerial involvement was a categorical measure where having an active and involved TMT was coded 1 (otherwise 0). It is possible that family members included in the TMT are not involved in the firm's strategic decisions.

Oversight was measured as representation of outside board members as a percentage of the total board size, as done in other studies (Zahra et al., 2000). Though research on SME boards is scarce (Huse, 2000), evidence suggests that Scandinavian boards actively monitor and guide the CEOs and the rest of the TMT. Directors who are friends and relatives of the CEO may weaken the board's power relative to the CEO whereas independent outsiders may challenge managers.

Founder-owner. Analyses included a dummy variable if the CEO was also the founder, controlling for the founder's effect on internationalization because of his (her) ownership stake.

Founder-managed firms could be more entrepreneurial than other firms and may internationalize their operations quickly.

Industry effects were controlled for using dummy codes for the firm's primary business. Analyses included three dummy variables that reflected SMEs' businesses: manufacturing, retail, service, and other industries. Westhead et al. (2001) found differences in internationalization across industry types.

Data Analysis

The data are drawn from two rounds of mail and phone surveys of Swedish firms, collected over a three-year period. This has resulted in some sample attrition (from n = 1, 278 to n = 889) that may not be random. Because internationalization is risky, those variables that influence internationalization may also cause bankruptcy and failure, and attrition may be systematic in a manner similar to self-selection. To address this bias, we used the Heckman (1976) correction models where two equations are developed - one for selection and the other for the dependent variable. These two equations are estimated simultaneously. This method is a two-step estimator model where the probit estimation of the selection model is used in the primary regression model to suggest if there is a significant selection bias (Berk, 1983). Such models facilitate unbiased inference to the population given that a correct selection model can be developed. The selection model was developed based on logistic regression analysis of variables that differentiated between the total number of observations and the uncensored observations. Respondent's age, ownership share, prior profits, industry, and firm age were included in the selection model. The two-stage estimator method outperforms an ordinary least squares (OLS) method only if selection bias is severe (Berk, 1983; Stolzenberg & Relles, 1997: 503). In this study, neither was the sample selection bias significant nor did the regression coefficients substantively differ between the two-step estimator and the OLS models. Consequently, we used a hierarchical OLS regression model. To check for multicollinearity issues, variance inflation factors were calculated. All variance factors were under two, revealing no serious collinearity problems.

To study factors influencing scope of internationalization, an OLS model is inappropriate in that the dependent variable takes on a limited range of positive integer values when measured by the number of countries. We used negative binomial regression because it is well suited to handle overdispersion in count data (Hausman, Hall & Griliches, 1984). Negative binomial regression is derived from the Poisson process but accommodates variance greater than a normal Poisson process (Hausman et al., 1984). Because scope could have a zero value (i.e., no internationalization) that is statistically meaningful, we use a zero-inflated negative binomial model with robust standard errors. This specification allows for partial observability of zero outcomes and overdispersion of count data. Next, we present the results of the data analysis.

RESULTS

The correlations for the study's measures and their descriptive statistics appear in Table 1. First, we consider the results for the effect of ownership on scale of SME internationalization. In the OLS model with the control variables, the adjusted R^2 of the control model was .21 (Table 2). To test hypotheses 1a-4a, the ownership variables were subsequently entered. Hypothesis 1a and 2a were supported; the CEO and TMT ownership coefficients were negative and significantly associated with internationalization scale. Ownership by institutional investors positively influenced SME internationalization scale ($p <.05$), supporting hypothesis 3a. However, the influence of VC ownership was significant only at $p <.07$ (hypothesis 4a) and received weak support. The direct effects model had an adjusted R^2 of .23, with the ownership variables accounting for a change in adjusted R^2 of .02 over the control model (F-change = 5.67, $p <.01$).

TABLES 1 & 2

To test for the interaction effect among ownership variables, two-way interactions were entered. The CEO x institutional and CEO x VC ownership product estimates were both significant ($p < .05$), supporting hypotheses 5a and 6a. Of the TMT x institutional and TMT x VC ownership product estimates, only the VC interaction was significant ($p < .05$), supporting hypothesis 8a. Hypothesis 7a that posits an interaction between TMT and institutional ownership was not supported. The interaction effects model had a change in R^2 of .01 (F-change = 4.36, $p < .05$ and F-change = 4.18, $p < .05$, respectively). The full model explained 24% of the variance with a change in R^2 of .03 ($p < .001$) over the base model.

Some internationalization studies may use the geometric mean for internationalization. Calculating the geometric mean reduced the sample size to 485 firms due to the multiplicative function in its formula. Though geometric means are appropriate for indices, they did not fit our data well. For instance, a firm that had 50% R&D activities abroad but no production would still have a zero value for scale because of the formula $(x_1 * x_2 * x_n)^{1/n}$ for geometric mean. When we ran the regression with the geometric mean of the scale of internationalization, the negative effect of CEO and TMT ownership was significant. Though institutional and VC ownership had positive coefficients, they were not significant. There is significant sample attrition when geometric mean is used because we multiply the scores where some zero values are included. Consequently, we use the results of the arithmetic mean, which is easier to interpret and provides robust results with a larger sample of 833 observations.

FIGURE 1a and 1b

To illustrate the interaction effects, we plotted ownership against the scale of SME internationalization using the OLS regression estimates. We set CEO ownership at low (5%), mean (34%), and high (50%) values of ownership, and we entered a range of values for institutional and VC ownership. As indicated in figures 1a and 1b, internationalization increased with institutional and VC ownership but at a faster rate for those with larger CEO ownership.

TABLE 3

To gauge the influence of ownership on the scope of SME internationalization, we used the number of countries as the dependent variable (table 3). CEO ownership and TMT ownership were negatively and significantly related to scope ($p < .001$ and $p < .05$) respectively, supporting hypotheses 1b and 2b. Other main effects (3b-4b) were not supported because institutional and VC ownership were not statistically significant. The CEO x institutional ownership was supported at $p < .001$ (hypothesis 5b). The CEO x VC interaction was contradictory to expectations; we expected a negative effect but found a positive and significant effect (hypothesis 6b). The TMT x institutional ownership interaction was significant but in the opposite direction; there appeared to be a negative effect (hypothesis 7b). The TMT x VC interaction effect was not significant and hypothesis 8b was not supported.

DISCUSSION

SMEs play an increasingly important role in global markets (McDougall & Oviatt, 2000; OECD, 2002; Zahra, Ireland & Hitt, 2000). Yet, we know very little about the antecedents of SME internationalization, especially the influence of their ownership structures. This study documents the effect of internal and external ownership on the scale and scope of SMEs' internationalization. This section discusses the study's key findings.

Internal Ownership and SME Internationalization

The results confirm the risk-aversion tendency among SME owners. Indeed, as the CEO and TMT ownership increases, both the scale and scope of internationalization decline, supporting hypotheses 1a, 1b, and 2a, but contradicting hypothesis 2b. When the ownership of the CEOs and TMTs increases, these individuals become reluctant to pursue substantial internationalization. Counter to hypothesis 2b, it appears that the risks associated with greater international scope outweigh the potential gains in terms of greater job opportunities and compensation for the TMT. Managers understand that foreign expansion is a costly and risky activity and that failure abroad can undermine their wealth, careers and reputations. Consequently, increased ownership by SMEs' managers can induce risk aversion, as proposed by Beatty and Zajac (1994). These results also suggest that conflicts arise between the long-term interests of owners and their SMEs. Such divergence of interests might induce conservatism that undermines the SMEs' ability to exploit opportunities in foreign markets.

External Ownership and SME Internationalization

One of this study's contributions is documenting the effect of external owners on the scale and scope of internationalization among SMEs. As theorized, institutional investors and VC ownerships are positively associated with the scale of SME internationalization. Thus, institutional investors and VCs' long-term focus is conducive to a larger scale of internationalization. Conversely, the results do not support the predicted positive effect of institutional and VC ownership on the scope of internationalization. Thus, institutional investors and VCs appreciate the importance of internationalizing the SMEs' different operations but consider scope as unimportant to their management of risk. Although entering multiple markets may create greater expansion opportunities for SMEs, it also entails considerable capital outlays, investments in learning, building multiple distribution channels, and managing the complex interdependencies that exist across national borders (Bartlett & Ghoshal, 1998). For VCs and institutional investors, the potential risks associated with increased foreign scope may neutralize the perceived opportunities, a plausible explanation for the insignificant results observed in this sample.

Internal and External Ownership Interactions and SME Internationalization

The results also support agency theory by showing that as internal and external ownership increases, so does the alignment of the goals of key players in the SMEs (cf. Eisenhardt, 1989). This goal alignment appears to mitigate the risk aversion of the CEO. Examining main effects only, greater CEO ownership was associated with smaller international scale and scope. We found, as hypothesized, that the simultaneous consideration of institutional and VC ownership changes this picture. Scale of SME internationalization increases with institutional and VC ownership but at a faster rate for those with a higher level of CEO ownership (figures 1a and 1b). A comparison of the main effect and contingent relationships involving institutional ownership indicates that the influence of CEO ownership on the scale and scope of SME internationalization might be misinterpreted if only the main effect relationships are examined, or if the ownership of institutions and VCs are excluded. These results add to the literature by showing that the involvement of institutional investors in SMEs' strategic decisions might reduce the risk-aversion bias of their CEOs.

The results regarding the interaction of TMT ownership and VC and institutional ownership on the scale of SME internationalization are weaker. As hypothesized and consistent with the results for CEOs, greater VC ownership overcomes the risk aversion of the TMT such that the scale of internationalization increases with VC ownership but at a faster rate for those with a higher level of TMT ownership. However, the interaction effect of TMT and institutional ownership on scale is insignificant. When scope of internationalization is considered, the interaction effect of TMT and institutional ownership is negative, which runs counter to our hypothesis while the negative interaction between TMT and VC ownership is not supported. It is possible that in most small firms, the CEO has the dominant influence on strategic decisions. Consequently, external investors tend to influence the CEO more so than the TMT.

This being said, the support for three out of four hypotheses concerning the ownership interaction on scale of SME internationalization suggests that external investors indeed overcome the risk aversion of both the CEO and the TMT. VCs appear to be somewhat more successful at this than institutional investors. The non-significant direct effects of institutional and VC ownership on scope suggest that external owners are less concerned about international scope, but still, their presence as owners overcomes the risk aversion of the CEO.

Limitations and Future Research Directions

The care exercised in the design of this research and data collection efforts using mail and telephone surveys from nearly 900 firms help to overcome some of the shortcomings associated with cross-sectional SME studies. Earlier internationalization studies in SMEs have used case studies or nonrandom sampling procedures and small sample sizes. These factors have limited the generalizability of prior findings. Our study overcomes some of these concerns. Still, the study has limitations because it was conducted in a single country. Risk-taking preferences may have cultural roots, and restricting the sample to a single country also limits the generalizability of the findings (Hayton, George & Zahra, 2002). The active involvement of institutional investors may also be particularly strong in Sweden because of their generally long-term investment horizon. Similarly, incidence of public institutional activism is limited in Sweden. Consequently, future research would benefit from examining multiple countries, representing multiple cultural groups and institutional environments.

Even though some have suggested that limited home market size could be one of the factors that influence SMEs to go international (Zahra & George, 2002), this does not appear to be the case in the current sample of Swedish SMEs. Although there was a considerable range in the scale of internationalization (0% to 79%), the SMEs examined appeared to have a lower mean scale of internationalization (mean = 6.9%, s.d. = 12.35) than would be expected because of the small home market in Sweden. The limited resources of the SMEs, the perceived riskiness of foreign expansion, and management conservatism are plausible explanations for the limited scale of internationalization observed in the data. Future research could help delineate the origins of, and motivations for, internationalization by comparing SMEs from multiple industries and countries with greater variance in home market sizes. Such analyses would allow us to draw specific conclusions about the factors that pull or push SMEs to internationalize their operations.

Some SMEs might internationalize their operations because of the attractive opportunities that exist in foreign countries (Dunning, 2001). Entrepreneurship research would benefit from examining how SMEs locate and define those opportunities that they ultimately pursue (Ireland et al., 2003). Managerial perceptions of the magnitude and attractiveness of these opportunities manifest in the scale and scope of SME internationalization merit further investigation. Researchers should also consider other explanations of SMEs' internationalization decisions such as the need to capitalize on monopolistic advantages created in the domestic market, leverage their intangible assets, or reap the benefits associated with their global networks (Liesch & Knight, 1999).

The finding that external owners influence SMEs' internationalization invites additional research. For example, the experience of VCs and other external owners with internationalization might influence their contributions to SMEs' decisions. The length of the relationships these owners have with SMEs and prior experiences with their founders might also have an effect. These relationships can increase communications between external owners and SME managers, making it possible to share assessments of the potential risks and rewards of internationalization.

The results suggest several avenues for future research on the scale and scope of internationalization. We need more research on the firm, business, and functional strategies SMEs use to internationalize their operations. Such research will help answer several questions. For example, are there important strategic trade-offs between scale and scope of SMEs' internationalization? Do they influence SMEs' success in international operations differently in terms of growth and profitability? How do the scale and scope influence nonfinancial measures of SME internationalization success such as reputation, access to resources, and participation in global networks? Finally, does SMEs' entrepreneurial orientation moderate the relationship between scale and scope of internationalization and firm performance?

Managerial Implications

The relationship between institutional owners and managers can be challenging. Yet, the results show that increased institutional ownership is conducive to a larger scale of internationalization among SMEs. Some managers may view aggressive internationalization as undermining SMEs' survival and successful performance. If this occurs, these managers might not support international efforts. The results show that institutional investors might encourage managers to do otherwise, fostering a willingness to internationalize their operations and create new sources of revenue that lead to profitability and growth. Consequently, senior managers should seek to cultivate their relationships with the various institutions that hold equity positions in their firms. Keeping these institutions informed of SMEs' strategic plans and soliciting their input and feedback are two ways to cultivate this important relationship. Theory and our results suggest that top management teams of SMEs tend to be risk averse, with regard to internationalization, especially when they have high ownership in the firm. Institutional owners and VCs might mitigate such risk aversion and encourage managers to take bolder steps in building an international presence.

Conclusion

This study analyzes the effects of SME ownership on the scale and scope of SMEs' internationalization. The results support agency theory arguments that managerial risk aversion increases with high CEO and TMT ownership in SMEs, lowering the scale and scope of internationalization. Institutional and VC ownership increases the scale of SMEs' internationalization, signaling the important role these investors play in these firms. VCs and institutional owners play different governance roles and can align the interests of the CEO and TMT, promoting a larger scale of internationalization among SMEs. The results for scope of internationalization highlight the argument for risk aversion by CEO and TMT. Even here, the CEO's behavior changes in the presence of institutional and VC ownership, with greater scope of internationalization. The results invite future studies across countries and industries to enrich our understanding of the effect of internal and external ownership on the various dimensions and outcomes of SME internationalization.

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Table 1: Correlations and Descriptive Statistics

No.	Variables	Mean (S.D.)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Firm age (years)	31.4 (27.5)	-																	
2	Firm size (log employees)	3.65 (1.01)	.10	-																
3	Manufacturing	.25 (.43)	.23	.07	-															
4	Service	.51 (.50)	-.21	.07	-.58	-														
5	Retail	.21 (.41)	-.00	-.18	-.30	-.52	-													
6	Other industry	.03 (.17)	.07	.06	-.10	-.17	-.09	-												
7	Past performance (survey)	10.5 (2.16)	-.02	.13	-.02	-.02	.04	.02	**.76**											
8	Number of profitable years in past five years	3.90 (1.49)	.12	.08	.01	-.01	.01	-.00	.35	-										
9	Industry opportunity	11.74 (3.37)	-.24	.09	-.09	.18	-.13	.00	.08	-.07	**.70**									
10	New market development	5.96 (13.5)	-.11	.07	.11	-.01	-.10	-.00	-.00	-.08	.13	-								
11	External board members composition (%)	.33 (.32)	.01	.17	-.01	.02	-.00	-.00	.00	-.07	.01	.01	-							
12	Founder-managed (0/1)	.24 (.42)	-.35	-.11	-.12	.16	-.04	-.04	.06	.08	.13	.10	-.09	-						
13	Managerial involvement	.82 (.37)	-.00	.27	.05	-.02	-.03	.01	.07	.01	.07	.02	.10	-.06	-					
14	CEO ownership (%)	34.0 (41.5)	-.03	-.31	-.11	-.11	.26	-.01	.03	.10	-.07	-.05	-.13	.33	-.20	-				
15	TMT ownership (%)	12.3 (25.7)	-.03	-.01	.05	.03	-.08	-.03	-.01	.01	.02	.03	-.06	.15	-.02	-.06	-			
16	Institutional ownership (%)	2.38 (14.17)	.05	.06	.08	-.03	-.05	.03	.04	.02	.03	.03	-.00	-.05	.06	-.10	-.06	-		
17	VC ownership (%)	.44 (5.69)	.05	.06	-.02	-.02	.03	-.01	-.04	-.06	.00	-.00	.03	-.04	.03	-.05	-.00	-.01	-	
18	Scale of internationalization (%)	6.90 (12.35)	.15	.25	.36	-.23	-.13	.06	.01	.01	.03	.13	.03	-.11	.12	-.18	-.07	.12	.06	-
19	Scope of internationalization (number of countries)	3.89 (10.88)	.13	.21	.19	-.06	-.15	.01	-.01	.01	.04	.06	.05	-.10	.10	-.15	-.03	.04	.00	.54

N = 889 observations; observations with values of .05 and above are significant at $p < .05$, values between .07 and .09 are significant at $p < .01$, above .10 are significant at $p < .001$; Alphas for scales are reported in bold.

Table 2: OLS Regression Estimates of Scale of Internationalization

Variables	*Scale of Internationalization*				
Constant	3.47	6.02*	6.16*	5.93*	6.04*
	(2.74)	(2.84)	(2.84)	(2.84)	(2.83)
Firm age	-.003	-.004	-.005	-.004	-.005
	(.015)	(.015)	(.015)	(.015)	(.015)
Firm size	2.62***	2.39***	2.40***	2.39***	2.40***
	(.42)	(.43)	(.42)	(.42)	(.42)
Service	-10.8***	-10.8***	-10.8***	-10.7***	-10.8***
	(.92)	(.93)	(.93)	(.93)	(.93)
Retail	-9.14***	-8.51***	-8.43***	-8.41***	-8.38***
	(1.15)	(1.20)	(1.19)	(1.20)	(1.20)
Other industry	-6.17***	-6.78***	-7.71***	-6.80***	-7.70***
	(2.31)	(2.31)	(2.34)	(2.30)	(2.34)
Past performance	-.17	-.16	-.13	-.12	-.11
	(.19)	(.19)	(.19)	(.19)	(.19)
Profitable years in past 5 years	.16	.13	.13	.10	.11
	(.29)	(.30)	(.29)	(.29)	(.29)
Industry opportunity	.14	.11	.09	.10	.09
	(.12)	(.12)	(.12)	(.12)	(.12)
New market development	.04	.04	.04	.04	.04
	(.03)	(.03)	(.03)	(.03)	(.03)
External board members (%)	-.98	-1.32	-1.64	-1.48	-1.72
	(1.16)	(1.17)	(1.17)	(1.16)	(1.16)
Founder-managed	-.98	-.02	-.13	-.02	-.10
	(.95)	(1.03)	(1.03)	(1.03)	(1.02)
Managerial involvement	1.11	.89	.84	.87	.83
	(1.09)	(1.10)	(1.08)	(1.10)	(1.09)
CEO ownership		-.027**	-.030**	-.027**	-.030**
		(.01)	(.01)	(.01)	(.01)
TMT ownership		-.034*	-.035*	-.036**	-.036**
		(.01)	(.01)	(.01)	(.01)
Institutional ownership		.057*	.047†	.06*	.05*
		(.02)	(.02)	(.02)	(.02)
VC ownership		.12†	.07	.05	.03
		(.06)	(.07)	(.07)	(.07)
CEO * Institutional ownership			.004*		.004*
			(.002)		(.002)
CEO*VC ownership			.016*		.011
			(.007)		(.007)
TMT * Institutional ownership				-.005	-.005
				(.004)	(.004)
TMT*VC ownership				.01**	.01**
				(.005)	(.005)
Observations (N)	854	833	833	833	833
F	19.89***	16.55***	15.31***	15.29***	14.12***
Adjusted-R^2	.21	.23	.24	.24	.24
Change in R^2		.02**	.01*	.01*	.03***

Note: Unstandardized coefficients reported (standard error in parentheses); † p <.10, *p <.05,**p <.01,***p <.001

Table 3: Zero-Inflated Negative Binomial Regression Estimates of Scope of Internationalization

Variables	*Scope of internationalization*		
Constant	.97	-1.23†	-1.20†
	(.63)	(.63)	(.63)
Firm age	-.07	-.09*	-.09*
	(.05)	(.04)	(.04)
Firm size	-.46†	-.33	-.33
	(.27)	(.26)	(.26)
Service	-.75***	-1.02***	-1.03***
	(.22)	(.31)	(.22)
Retail	-2.10***	-2.23***	-2.24***
	(.63)	(.53)	(.52)
Other industry	-.77***	-1.01***	-1.21***
	(.30)	(.31)	(.32)
Past performance	.05	.05	.06
	(.04)	(.04)	(.04)
Profitability in past 5 years	.08	.09	.09
	(.08)	(.09)	(.09)
Industry opportunity	.03	.03	.03
	(.03)	(.03)	(.03)
New market development	-.004	-.005	-.005
	(.005)	(.005)	(.005)
External board members (%)	.26	.26	.20
	(.29)	(.30)	(.30)
Founder-managed	-.42†	.35	.35
	(.26)	(.26)	(.26)
Managerial involvement	-.006	-.03	-.04
	(.40)	(.40)	(.40)
CEO ownership		-.01***	-.01***
		(.002)	(.002)
TMT ownership		-.006*	-.002*
		(.003)	(.003)
Institutional ownership		-.001	-.002
		(.003)	(.003)
VC ownership		-.001	-.02†
		(.001)	(.008)
CEO * Institutional ownership			.0003***
			(.0001)
CEO * VC ownership			.001**
			(.0005)
TMT * Institutional ownership			-.0007***
			(.0001)
TMT*VC ownership			.0003
			(.0002)
Log-Likelihood	-1639.49	-1589.30	-1587.73
Chi-squared statistic	36.97***	88.13***	173.07***
Observations	886	865	865

Note: Unstandardized coefficients reported (standard error in parentheses); †p <.10, *p <.05,**p <.01,***p <.001

Figure 1a
Interaction Effects of CEO and Institutional Ownership on Scale of Internationalization

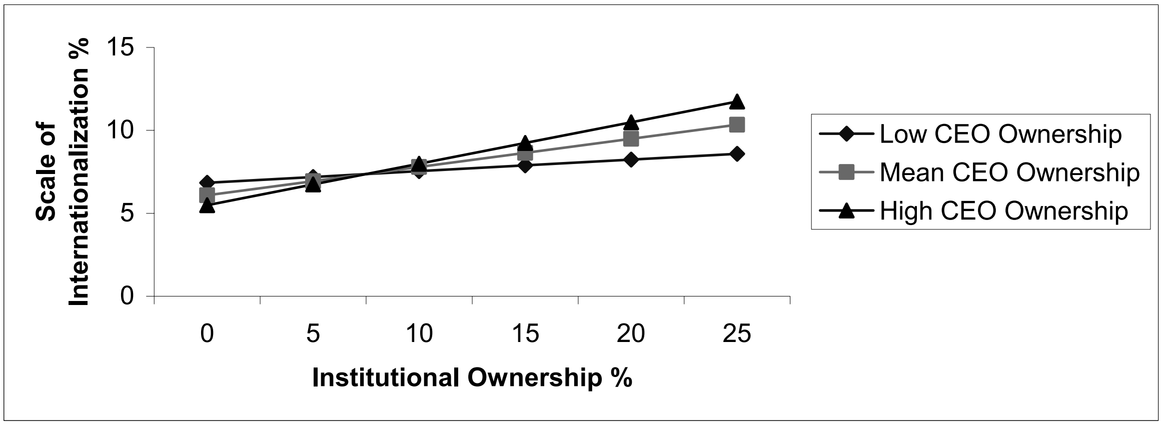
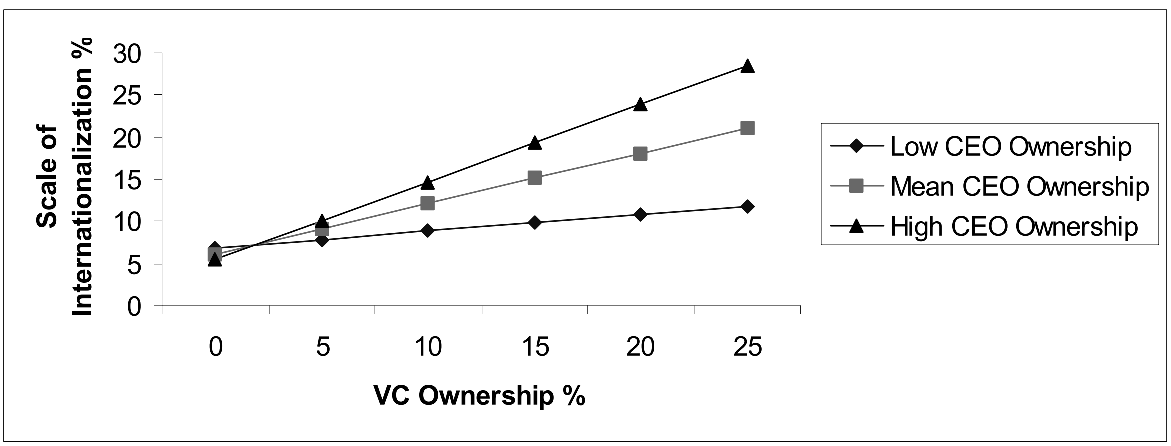


Figure 1b
Interaction Effects of CEO and VC Ownership on Scale of Internationalization



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