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ABSTRACT

Exports are an important source of revenue, especially in transitional economies. To better understand export growth, we examine the influence of institutional development, managerial aspirations, private ownership, firm size, and age with a sample of Central and East European firms. We find that institutions affect export growth through their interaction with firm size and age, though in opposite ways. Also, while the impact of private ownership is conditional on the level of institutional development, managerial aspirations support export growth across all institutional environments examined. These results indicate the importance of institutions and their limits when behavioral factors are considered.

INTRODUCTION

Exports are an increasingly important source of firm growth. They provide the firm with additional sources of revenue and profit beyond the home market. The importance of foreign markets is particularly acute in changing institutional environments, as established market relationships can be adversely affected (Aulakh, Kotabe, & Teege, 2000; Svejnar, 2002). This effect occurs because institutions influence the formal and informal rules by which firms operate through legal, political, economic, social, and cultural codes of conduct (Makino, Isobe, & Chan, 2004; Meyer & Peng, 2005; North, 1990; Oliver, 1997). At the intersection of institutions and the firm, research has considered the impact of institutions on many firm characteristics such as group membership (Khanna & Palepu, 2000), ownership (Filatotchev, Buck, & Zhukov, 2000; Roth & Kostova, 2003), market share (Makino et al., 2004), networks (Peng & Heath, 1996), and size (Filatotchev, Dyomina, Wright, & Buck, 2001; Park & Luo, 2001). Missing from this work is an understanding of the impact of institutional forces on managerial and firm level factors that influence export growth, especially in the context of transitional economies.

Our work addresses this gap in current research by integrating institutional, behavioral, and inertia theories to understand how the institutional environment directly and indirectly may help or hinder the export growth of firms. This approach allows us to consider not *whether* institutions matter, but *how* they matter with respect to export growth. We predict that greater levels of institutional development, as reflected by the degree of free-market institutions in place, will lead to higher export growth. We build from this prediction by examining the direct impact of managerial aspirations, private ownership, firm size, and age on export growth. For each of these variables, we also develop moderating relationships with institutional development and the resulting impact on export growth. To test our hypotheses, we use a unique dataset of over 470 Central and East European (CEE) firms from four transitional economy countries: Belarus, Bulgaria, Lithuania, and Ukraine. This context provides the setting for a natural experiment, with the sample cutting across industries and founding periods. Most notably, we use the difference in the pace of transition across our studied countries to analyze the impact of institutions.

The primary variables of interest are connected by their influence on a firm's ability to undertake change. The change that we consider is the increase in a firm's exports. We focus on export growth for two reasons. The first reason is that export growth requires a change from a firm's current operations and entails a degree of uncertainty. Starting and then increasing exports were a major challenge of CEE firms; prior to the transition, international sales were often accomplished through state-owned foreign trade companies. As governments began to transition and eliminate export agencies, firms gained the right to export directly (Filatotchev et al., 2001). This opened the possibility for firm-level choices regarding exports. The second reason to consider export growth relates to the drop in domestic demand in transitional economies following the economic restructuring of the 1990s. This drop meant that foreign revenue became an important priority for firms in transitional economies (Filatotchev et al., 2001; Svejnar, 2002). Although there are different ways to increase foreign revenue, we focus on exports, as they are considered to be the first stage of internationalization (Johanson & Vahlne, 1977) and are expected to be relevant to a broader segment of the economy. Expected benefits from this step include increased sales revenue, scale advantage, scope advantage, increased market coverage, and opportunity to build market-based capabilities (Aulakh et al., 2000; Bilkey, 1978; Cavusgil & Nevin, 1981; Peng, 2003). Thus, given increased free-market incentives and opportunities for growth and decreased local market demand, export business growth was widely viewed as an important goal for many CEE firms (Filatotchev et al., 2001; Peng & Heath, 1996).

The results of our study indicate that institutions do not directly impact firms' export growth levels. Rather, the impact of institutions is through their interaction with the inertia factors of firm size and age. In more-developed institutional environments, size becomes a liability and age becomes an asset in achieving export growth for firms with export experience. The influence of private ownership was also conditional on institutional development levels and existence of previous export experience. These relationships change for firms without export experience. Managerial aspirations supported export growth across our range of institutional development levels, suggesting management can influence firm performance even in less-developed institutional environments.

We believe these results offer three contributions to our understanding of export growth. First, institutions do impact export growth, but not directly. Rather, they are influential when interacted with firm age and with firm size indicating an institutional-firm level effect on export growth. Second, the opposite impact of firm age and firm size on export growth indicates support for Peng's (2003) proposed phased-model of institutional transition regarding institutional evolution from relationship-based to rule-based structures. In particular, age and size can send different signals to foreign buyers concerning the viability of the domestic firm as a trading partner. Third, our results suggest that even in less-developed economies, managerial aspirations do impact export growth. This result highlights the possible limits on institutions in influencing managerial behavior. These three contributions highlight the continued need to consider how expected relationships may change in less-developed institutional contexts. They are steps toward addressing the need cited by Oliver (1997) of examining the impact of institutions on managerial decisions, as well as understanding the internationalization of emerging economy firms (Wright, Filatotchev, Hoskisson, & Peng; 2005).

The remainder of the paper is organized as follows: the next section provides the context and theoretical framework to develop five hypotheses. We then review the data and methods to test the hypotheses followed by our presentation and discussion of the results. The paper closes with some limitations of the study and suggestions for future research.

THEORETICAL BACKGROUND

In this section, we develop hypotheses that predict that the institutional development level, managerial aspirations, and private ownership will be positively related to export growth. Furthermore, we predict that size will be curvilinearly related, whereas age will be negatively related to export growth. We expect the predicted relationships to be weakened in an environment with less-developed institutions.

There is a broad literature investigating factors that impact exports and export growth (Cavusgil, & Zou, 1994; Ito, 1997; Lages, Jap, & Griffith, 2008; Mascarenhas, 1986). In this paper, we focus on two

behavioral factors that can overcome barriers associated with export growth. These two factors, aspirations and private ownership, can help the firm increase its export levels. In our model, private ownership represents managerial incentives and control, which are expected to be important as firms transition from Communist-controlled to free-market economies. We use two other variables, age and size, to capture the degree of inertia in the firm. Inertia makes it more difficult for a firm to change from past practices. For firms trying to increase export levels, inertia may magnify the barriers managers face. Beyond the direct effects of these four variables, we further consider how the institutional development level may interact to either increase or dampen their effect. Using these different theoretical frameworks allows us to develop a model that captures previously ignored behavioral and inertia variables that affect export growth. Figure 1 summarizes the predicted relationships with export growth as our dependent variable. We begin by considering the effect of the level of institutional development.

[Insert Figure 1 about here]

Level of Institutional Development

In our research, the fundamentals of institutional theory are that institutions create the basis for firm economic activities such as production, exchange, and distribution – in this way they set the ‘rules of the game’ (North, 1990; Park & Luo, 2001) – and that firms’ strategic decisions are facilitated or constrained by institutions (Oliver, 1997; Child & Tsai, 2005; Peng & Heath, 1996). “The major differences among nations in economic performance largely are due to differences in their institutions ... in some countries they have evolved in a way that is favorable to economic progress and in other countries not,” states Nelson (1995:82) in discussing the position of Douglass C. North regarding the evolution of economic institutions. It is generally agreed that the effects of the actions of the firm are highly dependent on the institutional environment in which they occur (Douma et al., 2006; Park & Luo, 2001; Peng & Heath, 1996). In considering the impact of the institutional framework, we focus on the degree to which institutions support a free-market economy. Institutional development includes enhancements in trade policy, property rights,

reduced corruption, reduced government regulation, and other economic aspects of efficient free-markets (Cuervo & Villalonga, 2000; Peng & Heath, 1996). In this way, the role of developed institutions is to provide a level playing field for an efficient, market based economy. Therefore, the greater the degree to which institutions support a free-market economy, the greater we consider the country's level of free-market institutional development, which for brevity, we will call the level of institutional development.

We next consider the particular reasons why the level of institutional development affects export growth. North (1990: 5-6) states that, "institutions affect performance of the economy by their effect on the costs of exchange and production." We follow this Northian perspective, as we are interested in the impact of institutions upon firm behavior. We acknowledge that researchers studying the evolution of institutional arrangements have indicated that, in a dynamic interaction process, firms may affect institutions, and institutions may affect firms. (Chiaburu, 2006; Seo & Creed, 2002). Our interest, though, is with the impact of institutions on firms. In particular, we are interested in how higher institutional development reduces the average costs of exchange, and enables exchange with foreign customers. First, the move towards free-market institutional frameworks opens access towards cross-border trading (Filatotchev et al., 2001). Greater access provides for a larger potential market beyond the home country (Aulakh et al., 2000). Having a larger potential market provides the opportunity to select better customers; this opportunity should lower the actual cost of negotiations and transactions. Also, this should lower production costs due to higher (or steady) volumes. Second, free-market institutional frameworks allow for greater information access (Kriauciunas & Kale, 2006). This greater access allows domestic firms to select customers more effectively as well as better target their products or services. This benefit should provide the opportunity to select better customers, which should lower the actual cost of negotiations and transactions. Better targeting of products or services should lower production costs since the product may require less customization. Third, foreign customers who avoided buying from countries with less-developed institutions (either by choice or domestic laws) may now become customers, providing the firm with a greater range of possible target markets (Bilkey & Nes, 1982; Pappu, Quester, & Cooksey, 2007). The impact from this greater range is the same as having a broader

market. The mechanism, however, is not only of firms searching out customers, but also of customers searching out firms as suppliers. Fourth, free-market institutional frameworks are characterized by fewer bureaucratic controls (Makhija, 2003; Svejnar, 2002). Fewer controls reduce the costs of exchange with foreign customers, as the number of approvals goes down and time to cross borders decreases (Gelbuda, Meyer, & Delios, 2008). Given the combined impact of lower costs of exchange and production, we predict:

Hypothesis 1: The more developed the country's institutions, the greater the firm's export growth.

Strength of Aspirations

We now examine how strength of aspirationⁱ may impact export growth. Aspiration levels are important because “aspiration levels have behavioral consequences” (Greve, 1998: 80). Aspiration level consequences deserve attention in transitional economies because managers in Communist firms were historically unable to choose their strategies. Rather, central planning agencies were responsible for such choices (Makhija, 2003; Peng & Heath, 1996). Although aspiration levels are recognized as being constructed by comparison with past performance or comparison to the performance of others (Greve, 2002), a different approach may be needed in transition economies. In such economies, a firm's past performance and the performance of others may be uncertain predictors of aspiration level or strength given the dynamic institutional environment. Greve (1998, 2002) also posits that aspiration levels generally assume a high commitment to the aspiration performance level. However, it has been argued that “a person who is committed to a goal will try harder to achieve it than if he is not” (Salancik, 1977: 27). Therefore, commitment (or strength) may be important as a determinant of behavior, as it refers to the organizational determination to reach an aspiration performance level (Locke, Latham, & Erez, 1988). For these reasons, we focus not on level of aspirations, but *strength of aspirations for export growth*.

Within the aspiration strength perspective, we follow Cavusgil and Nevin (1981: 114) who, based on Cyert and March's (1963) concepts, considered the “strength of managerial aspirations for various business

goals.” They argue that the importance the decision maker places on the achievement of a goal is a direct determinant of organizational behavior. Their empirical results regarding the determinants of export marketing behavior found strong support for this relationship. As the primary decision makers in firms, managers are expected to lead organizational change. “Adaptation theories of organizational action hold that organizational change reflects the decisions and strategic shifts of organizational leaders and dominant coalitions” (Haveman, 1993: 20). Peng and Heath (1996: 498) call these shifts by top managers, ‘strategic choices’. In an overview of previous studies, Bilkey (1978) identified managerial apathy as an important constraint to not initiating exports since strategic choices were not actively made. Gripsrud (1990) indirectly considered this issue and found a positive relationship between attitudes and export growth. While few researchers have studied aspirations with regard to exports, Cavusgil and Nevin (1981), as well as Cavusgil and Naor (1987), have shown a positive relationship in the strength of managerial aspiration for firm growth on the likelihood of exporting.

We go beyond previous studies to see if the strength of aspiration has an impact on export growth. We argue that higher strength of aspiration for exports will promote organizational action to achieve that performance aspiration. If an organization must make changes to accomplish an objective or adapt to a new environmental situation, it is likely that multiple changes will be required. If an organization has numerous goals, not all the goals can be given top priority simultaneously (Cyert & March, 1963). Strength of aspiration should be directly related to the focus and effort level of the organization toward a specific goal (Cavusgil & Nevin, 1981). The converse should also be true. Low aspiration strength will reflect low levels of goal importance and thus low levels of implementation (Locke et al., 1988). Since growing exports requires organizational change and competes with other changes, the stronger the firm’s aspiration for exports the higher the likelihood of the organization giving such change full effort and high priority. Aspirations are important as well since they may go beyond the stated goals of an organization. One can understand them as the internalized goals of the organization that also encompass prioritization. We accordingly posit a positive effect between aspiration strength and export growth:

***Hypothesis 2a:** The greater the strength of aspiration for export growth, the greater the firm's export growth.*

The behavioral theory of the firm (Cyert & March, 1963) suggests that the desire to achieve goals should instigate strategic changes or action within the organization. These managerial actions to change performance are expected to be fulfilled when institutions support the firm's actions. This is the underlying premise of Hypothesis 2a – developed institutional frameworks allow managers to have authority over the firms they manage and the empowerment to implement their strategic desires. In institutional environments that have not evolved towards encouraging managerial initiative, this prediction is expected to be weakened. The central planning process of the Communist system was driven by adherence to a production plan to meet domestic needs (Makhija, 2003). Profits were not the driving force behind decision-making and revenue calculations were artificial (Gregory & Stuart, 1990; Peng & Heath, 1996). Options for implementing aspirations, especially as they related to growth, were at best limited. The 'production plan' determined what actions managers should take. Other less-developed institutional contexts, even if not driven by central government planning, are characterized by greater government involvement or constraints to managerial decision making (Oliver, 1991). Thus, due to the government involvement in the economy in less-developed institutional frameworks, we argue that the impact of strength of aspiration on export growth will be lower relative to firms operating in more-developed institutional frameworks. This is because government involvement limits managers' ability to implement their choices. Also, government planning is slower to react to opportunities at the firm level. These arguments suggest that in less-developed environments a manager's ability to achieve higher export growth will be dampened. We therefore predict a moderated relationship between strength of aspiration for exports and growth in exports for firms operating in less-developed institutional frameworks:

Hypothesis 2b: In less-developed institutional frameworks, the positive relationship between strength of aspiration for export growth and the firm's export growth will weaken.

Private Ownership

We next examine how private ownership may impact export growth. Firms may be privately owned because they were founded as private firms or because they had been privatized. In privatization, portions of or entire firms (also called state owned enterprises – SOEs) were sold by the government to private investors. Private ownership (either privatized or founded private) is theorized to promote free-market behavior and entrepreneurial action (Filatotchev et al., 2001; Zahra, Ireland, Gutierrez, & Hitt, 2000). In this section, we will argue that private ownership increases export growth, due to the increased control of owners, (in comparison to bureaucratic government control). This effect is also achieved through the incentives associated with private ownership.

Ownership of an enterprise generally provides the owners with control of the firm's actions. State owned enterprises, by definition, are owned by the government. Government ownership is usually associated with less risk taking, because there is no (or an incomplete) system for failure (Filatotchev et al., 2001; Kogut & Zander, 2000). When completely state-owned, a firm's products, strategies, and core decisions are centrally controlled by a Ministry or similar government body (Filatotchev et al., 2001; Makhija, 2003). This central control reduces the speed of decision making. With the introduction of private ownership through privatization, several changes ensue. Reduced state control and diminished government subsidies require privatized firms to operate more according to free-market principles (Cuervo & Villalonga, 2000). When a firm is completely private, the government's role in controlling the firm through its ownership stake is eliminated. Elimination of government control provides the firm the flexibility to more quickly take advantage of opportunities, such as export growth, since government approval is not needed for internal/managerial decisions. Additionally, managers may be more likely to seek out opportunities since there is a greater likelihood that the firm will have the chance to implement the opportunity.

Government ownership provides for lower individual incentives, since the residual value created would go to the government as the owner. Firms with private ownership are expected to strive for the goals as defined by the owners, through the use of boards of directors and reward systems, whereas completely state owned firms generally lack these control mechanisms (Cuervo & Villalonga, 2000). The ultimate reward, firm survival, acts as a greater incentive to privately owned firms than to SOEs, as privately owned firms generally cannot turn to the government for additional funds to avoid failure. Reducing government ownership also diminishes or eliminates government constraints to private incentives. The increased private ownership allows for changes in managerial incentives leading to self-interested behavior by the owners of the firm (Douma et al., 2006). Private ownership in a transitioning economy suggests higher incentives for entrepreneurial behavior than state ownership, since state owned firms retain more of the remnants of Communist central control and offer few or negative rewards for initiative (Cuervo & Villalonga, 2000; Filatotchev et al., 2001). Incentives are important for export growth, because this type of growth is an uncertain, or at best risky, undertaking. The incentives allow the owners and managers to retain the benefits from this behavior while acknowledging that firm failure may result. The incentive of profit is one of the most accepted motivations for undertaking change (Schumpeter, 1934).

The proposed impact on export growth can occur through partial or complete private ownership, though full privatization will reduce government control the most and provide the greatest incentives and control. Given the reduced bureaucratic control and increased incentives, we predict a positive relationship between private ownership and export growth:

Hypothesis 3a: The greater the level of private ownership, the greater the firm's export growth.

We now build from Hypothesis 3a to incorporate the idea that countries that have not progressed towards a free-market system may not have institutions that support private ownership. Recall that the role of developed institutions is to provide a level playing field for an efficient, market based economy.

The previous arguments regarding the impact of incentives and control need a free-market so that the benefits of incentives and control remain with the private owners. In transitional economies, countries that have less-developed institutions will reflect the Communist system to a greater extent than countries that have made greater progress. As previously explained, the Communist system was generally based on government ownership of productive assets and greater government involvement in the economy (Oliver, 1991, Svejnar, 2002). Exceptions to this were some housing, gardens/small farms, and very small firms (Spicer, McDermott, & Kogut, 2000). The Communist government's assets and institutions were established to support state-owned and state-controlled enterprises through a central planning system.

In less-transitioned countries we expect the institutions to be a constraining force for firms with private ownership, since the institutions are largely geared towards supporting state-owned firms. Thus, though private ownership may provide greater control over the operations of the firm, the less-developed institutional framework is expected to reduce the ability of firms to implement their goals of expanding into international markets. In this way, export growth by private firms is hindered by an established institutional framework that favors state-owned institutions (cf. Chiaburu, 2006; Makhija, 2003). This favoritism occurs because the government is both the owner of some enterprises and the creator of the institutional framework by which all firms will operate. As a result, state-owned firms in less-transitioned countries will remain embedded in the Communist institutions (Newman, 2000). Since the institutional framework of the Communist system did not favor export growth, institutions that are most similar to the previous framework are also expected to not favor export growth to the extent of the more-developed institutional frameworks.

Less-developed government institutions generally take a larger portion of profits in taxes and fees, and create more regulations, dampening the incentives associated with private ownership. Lower incentives will result in less risk-taking, since the risk takers keep less of the benefits that they achieve (Brockhaus, 1980). As actions to increase export growth are one form of risk taking in transitional economies, the lower incentives will dampen export growth. The incentives related to survival are also

different, as privately owned firms that fail are less likely to be assisted by the government. In contrast, state-owned firms are more likely to be supported to avoid massive layoffs and other negative economic effects (Peng & Heath, 1996).

Accordingly, state-owned firms are more likely to benefit relative to privately-owned firms when the institutions are underdeveloped. This is either due to greater benefits to state-owned enterprises as institutions favor them, or because the dampening impact on incentives affects privately held firms much more than SOEs. We expect these benefits to reduce the advantages of private ownership over state-ownership in increasing export growth, leading to the following hypothesis:

***Hypothesis 3b:** In less-developed institutional frameworks, the positive relationship between private ownership and the firm's export growth will weaken.*

Inertia

We now move from behavioral factors that may support export growth (strength of aspiration and private ownership), to consider how inertia, as reflected by size and age, may hinder export growth. To consider this relationship, we pull upon the structural inertia theory (Hannan & Freeman, 1984; Kelly & Amburgey, 1991). In this framework, inertia can be defined as the continuation of previous behavior or practices of the firm, creating a resistance to change (Kelly & Amburgey, 1991). This is not to suggest that no change occurs but rather, that organizational change is slower than the pace of environmental change for high inertia organizations (Hannan & Freeman, 1984).

Past research indicates that inertia can be either detrimental or helpful to the firm. When a firm needs to change, organizational inertia will slow the response of firms to the “occurrence of threats and opportunities in their environments” (Hannan & Freeman, 1984: 151). Hannan and Freeman (1984) explain that managers who attempt to redesign their organizations are likely to encounter collective opposition. Higher levels of inertia constrain management options due to more rigid bureaucratic structures (Park & Luo, 2001). Higher levels of

inertia are also associated with accumulated internal friction, precedent, and political pacts that impede action (Baum & Shipilov, 2006). In addition to standardized routines, high inertia organizations also exhibit institutionalized leadership and power distributions, networks of dependencies and commitments, and formalized roles and control systems that have been found to lower the probability of change (Baum & Shipilov, 2006).

In changing environments, inertia can also be a stabilizing force in firms by reducing over-reaction (Hannan & Freeman, 1984; Haveman, 1993). Low levels of inertia should enable responsive action, since such firms are expected to quickly adapt to uncertain environmental conditions (Haveman, 1993). However, low inertia in a high-velocity, dynamic environment will be associated with over-reaction to opportunities (Wright et al., 2005). Newman (2000) utilizes the terminology ‘strategic confusion’ in relation to firms that manifest a great deal of activity with little performance enhancement, particularly during turbulent times. Low inertia is also characterized by unstable organizational politics (Park & Luo, 2001), by a lack of routines to coordinate efforts, and by a lack of operational capabilities to deal with international growth. Baum & Shipilov (2006) argue that low inertia firms will also lack broad bases of influence and endorsement, stable relationships with important external constituents, and legitimacy in comparison to high inertia firms. To therefore understand the consequences of inertia, one needs to consider whether the inertia is preventing change or providing stability.

Consideration of the consequences of inertia requires an understanding of the firm’s environment. The environment of this study, transition economies, evolved from the controlled economies of Central and Eastern Europe. These economies meet the archetypal definitions of bureaucracies that are known to generate self-reinforcing equilibriums rather than change in step with their environments (Haveman, 1993; Crozier, 1964). Given the central planning systems of the Soviet institutions, firms were required to implement plans. Even exports were commonly controlled by export agencies, rather than by the firms, due to the central control of the economy. Thus, the system in place did not support the identification or implementation of export opportunities at the firm level. Given that we are interested in the ability to increase exports, inertia is generally expected to negatively impact the ability of firms in the transitional economies to achieve export

growth. However, environmental and situational factors may affect the inertia relationship with export growth. We discuss this possibility next.

Inertia (Size). We first consider how inertia, as indicated by firm size, may impact export growth. Although both size and age are used as indicators of inertia, we consider them separately. Hannan (1998) suggested that the two indicators may show different results. Whereas size can increase or decrease, age can only increase. Also, our own theoretical development indicates that for transitional economies, the two indicators may behave differently. The differences are related to the fact that while a firm can choose its size, it cannot choose its age. Additionally; in the Soviet system, the government could choose the firm size. As such, the two factors may have different implications for the firm.

We begin by considering smaller firms in transitional economies. Smaller firms reflect either low levels, or a lack of inertia. As indicated earlier, small firms in a high-velocity, dynamic environment will be associated with over-reaction to opportunities (Wright et al., 2005) due to lack of inertia. This over-reaction will spread their limited resources and not allow them to properly implement each opportunity they pursue. Small firms will lack routines and control systems to select export opportunities and implement them successfully, leading to 'strategic confusion' (Newman, 2000). Small size is also characterized by unstable organizational politics (Park & Luo, 2001), a lack of routines to coordinate efforts such as exporting, lower legitimacy with export partners, and by a lack of operational capabilities to deal with international business, all of which will reduce the ability to grow exports (Baum & Shipilov, 2004). Therefore, small firms lack the stabilizing benefits of inertia.

In contrast, large firms will reflect a high degree of organizational inertia that will constrain their ability to take advantage of export opportunities. In large firms, organizational routines are highly embedded, thus reducing organizational flexibility (Hannan & Freeman, 1984; Haveman, 1993). The solidified routines in large firms make it more difficult for firms to take advantage of opportunities in international markets. Large firms display reduced entrepreneurial management approaches due to more rigid bureaucratic structures (Park &

Luo, 2001). Large firm size is also associated with accumulated internal friction, precedent, institutionalized leadership and power distributions, and political pacts that impede action (Baum & Shipilov, 2004). These factors lower the probability of change that limits the ability of a firm to increase export growth, as export business required significant change in a firm's actions in transitional economies.

In contrast, medium-sized firms will be less hindered by inertia than large firms. They are theorized to have more flexible or fewer routines, more flexible leadership, fewer power distributions, and fewer formalized roles and control systems (Baum & Shipilov, 2004). We argue that these characteristics will provide for greater export growth relative to large firms, since medium-sized firms will be able to make the changes required to capture opportunities. In comparison to small firms, medium-sized firms are theorized to have more stability, present greater legitimacy with export partners, have increased operational capabilities, more stable organizational politics, and better developed routines to address export growth opportunities. We argue that these characteristics will increase the export growth relative to small firms, due to these firms having needed core systems. Together, medium levels of inertia provide some stability to the firm, but allow sufficient flexibility to take advantage of international opportunities in a high-velocity, dynamic environment. This argument indicates a non-linear relationship between size and export growth, which is consistent with Haveman's (1993) work concerning deregulation in the U.S. savings and loan industry. As a result, we predict:

***Hypothesis 4a:** Firm size will be curvilinearly related to the firm's export growth. Specifically, as firm size increases, the firm's export growth will increase and then decrease indicating an inverted U-shaped relationship.*

Hypothesis 4a's argument is predicated on too little or too much inertia restricting the firm's ability to adjust to the environment. We believe the relationship in Hypothesis 4a will change in transitional economies in which institutions are not yet developed. In transition economies, in which the former Communist

institutions are starting to be dismantled, but few free-market institutions are being created, the institutions in place will continue to primarily reflect the Communist system in practice, if not in name. This creates a situation in which institutional voids (Khanna & Palepu, 2000) coexist with remnants of the previous Communist institutional system. The result is a predicted U-shaped relationship between size and export growth in less-developed institutional frameworks. To understand this relationship, we first discuss the impact of this framework on the relationship between large firms and export growth.

In less-developed institutional environments, large size is expected to reflect less change within the firms, due to inertial resistance. Therefore, these large firms will continue to work according to Communist institutional norms and will reflect higher embeddedness with the minimally changed institutional framework (Granovetter, 1985; Roth & Kostova, 2003). Governments with less-developed institutional frameworks are also characterized by a greater involvement in the economy. This involvement is frequently targeted at larger firms, given their impact on the economy and the historical Soviet emphasis on economies of scale. Larger firm size will also result in greater government support for the firm's export activities, since a primary goal of transition economy governments is employment and revenue growth in larger firms (Park & Luo, 2001). Institutional support is required, particularly in less-developed environments, to achieve international growth (Wright et al., 2005). This institutional support manifests in the form of ease to obtain permits, tax advantages, subsidies, and regulation relief (Makhija, 2003). Thus, institutional support from the minimally changed (Communist) institutions, would allow large firms to grow exports more than medium and small-sized firms.

Small firms, in less-developed institutional environments, may not be able to take advantage of the institutional benefits (permitting ease, tax advantages, subsidies, regulation relief, etc.) offered large firms, given their small economic and employment impact. However, their smaller size provides them with other advantages not available to medium and large sized firms. These advantages emerge because in less-developed transitioning economies, small firms are most likely to be entrepreneurial ventures (Dess, Ireland, Zahra, Floyd, Janney, & Lane, 2003). Leveraging the arguments of North (1990), Spicer et al. (2000) argue that

these entrepreneurs may benefit by exploiting opportunities created during institutional change. The entrepreneurial firms were often formed by pre-existing businessmen or government officials who used their networks, view of the business situation, and knowledge of institutional voids to create firms (Chiaburu, 2006). We argue that these ‘institutional entrepreneurs’ (Chiaburu, 2006) in a less-developed transitioning economy, given their decision to create a firm, will be cognizant of the institutional constraints and institutional voids and will restrain from actions that conflict with the institutional framework. Their small size also allows them to garner less attention from the government (cf. Newman, 2000) which is beneficial when trying to take advantage of institutional voids. Medium and large sized firms do not share these characteristics of small firms, as such firms are too big to avoid the attention of institutions and managers. The larger firms have less ability to take advantage of institutional voids given their lower preponderance towards entrepreneurial behavior (Park & Luo, 2001). In this way, these institutional entrepreneurs of the small firms could take advantage of weak rule of law to pursue export opportunities identified through their inherited relationships with government officials.

In summary, medium-sized firms will be at a disadvantage in less-developed free markets in comparison to small and large firms, in that they will not gain the full support attracted by large firms, they have changed more than large firms, and they cannot undertake institutional entrepreneurship activity as effectively as small firms. We therefore predict:

***Hypothesis 4b:** In less-developed institutional frameworks, the inverted U-shaped relationship between firm size and the firm’s export growth will weaken, resulting in a U-shaped relationship.*

Inertia (Age). We next consider inertia as reflected by firm age. Age has been traditionally used as a proxy for inertia (Hannan & Freeman, 1984) as time enables entrenchment in bureaucratic systems (Park & Luo, 2001), and history is a determinant of the range of potential strategic behaviors (Kelly & Amburgey, 1991). Age is correlated with rigid organizational politics, political coalitions, and solidified routines (Baum &

Shipilov, 2004; Levinthal & March, 1981; Park & Luo, 2001), preventing the firm from adjusting effectively to the opportunities in export markets. Older firms exhibit reduced entrepreneurial management approaches due to more rigid bureaucratic structures (Park & Luo, 2001), and political pacts that impede action (Baum & Shipilov, 2004). In addition to standardized routines, older organizations also exhibit institutionalized leadership, and formalized roles and control systems that have been found to lower the probability of change (Baum & Shipilov, 2004). These characteristics hinder a firm's ability to change. As growing exports is a type of change, we argue that older firms will have a more difficulties *growing* their exports relative to younger firms.

Growing exports requires several skills, including the ability to connect with customers and strong marketing skills (Cavusgil, & Naor, 1987; Cavusgil, & Zou, 1994). Given the lack of marketing functions in the Soviet system, inertia related to lack of this skill will have a negative impact on export growth. Further, Hannan and Freeman (1984) defined marketing strategy and goals as two of the four core aspects of organizations most subject to inertia.

We believe, though, that age and size may not reflect the same characteristics regarding inertia. Whereas a firm or a government can choose the firm's size, they cannot realistically control its age. The result is that the liability of newness (Stinchcombe, 1965) may have a different impact than liability of smallness with respect to inertia. Further, as indicated by Hannan (1998), age and size may have different magnitudes of impact on the firm. As explained, greater age will reflect higher levels of inertia and resistance in adjusting to the transitional economy environment. The effect of low age, however, will be different than small size. Low age indicates that the firm was recently created. Stinchcombe's (1965) theory states that firms are founded to match their environment. In this way young firms are expected to be best positioned to take advantage of opportunities available in the transitioning environment. This suggests a linear relationship for age versus the predicted curvilinear relationship for size.

Given the impact of inertia towards hindering change, and with respect to export growth in particular, we predict the following:

Hypothesis 5a: The greater the firm age, the smaller the firm's export growth.

Hypothesis 5a is based on the idea that inertia will restrict a transitional economy firm's ability to grow exports, since the Soviet system, unlike the new economic environment, did not encourage exports. In Hypothesis 5a we built on the idea that inertia acts as a force to prevent change. We now consider whether this constraint will hold in less-developed institutional contexts. Previous studies suggest that in less-developed markets, the institutions will constrain a firm's internationalization growth (Peng & Heath, 1996). In less-evolved transitional economies, few free-market institutions have been created. This lack of free-market institutions can be expected to hurt export growth for all firms. In our context, though, lack of free-market institutions means not a lack of institutions overall, but that the institutions continue to primarily reflect the Communist system. In these less-developed economies, institutions will favor those firms that reflect the Communist system due to the well established historical relationships (Peng, 2003). Also, those firms that fit with the institutions will be able to operate more effectively within the constraints of the given institutions, as they have a better understanding of the institutional environment's requirements and limits. Hannan (1998) refers to this concept of fit as alignment between a firm and the demands of its external environment. Although he notes that inertial forces may restrict a firm's ability to re-align with its new environment, inertial forces may also prevent a firm from over-adjusting to what managers believe will be the future institutional framework. The support and fit arguments are predicted to extend towards various business decisions requiring institutional support, such as increasing exports. We predict that older firms will have the best fit with the minimally changed institutions in less-developed institutional frameworks. Older firms are expected to exhibit less change within the firms, due to inertial resistance. In relation to the initial discussion on inertia, the inertia will act like a stabilizing force to prevent firms from acting in advance of the institutional evolution. Therefore, these older firms will continue to work according to Communist institutional norms. Thus, higher inertia (as reflected by age) will be beneficial to firms in this environment. In contrast, low age will not only

reflect low inertia, but also may reflect a lack of legitimacy and a lack of relationship with the institutions. While young firms, founded recently, may match the current environmental situation (Stinchcombe, 1965), the less-developed institutional environment requires relationships and legitimacy that require time to establish. As a result, young firms will not be as readily able to take advantage of opportunities that require institutional support. The integration of these arguments suggests a linear relationship with export growth being higher for older firms. We therefore predict:

***Hypothesis 5b:** In less-developed institutional frameworks, the negative relationship between firm age and export growth will weaken.*

We have predicted that institutional development levels, managerial aspirations, and private ownership will support export growth, that size will have an inverted U-shape relationship, and firm age will impede progress in export growth. Furthermore, we argue that the level of institutional development will moderate the impact of aspirations, ownership, size, and age across different transitioning economies.

DATA AND METHODS

This analysis is based on a novel data set developed through a survey of firms in four transitional economy countries: Belarus, Bulgaria, Lithuania, and Ukraine. Transition economies are countries in Central and Eastern Europe that experienced a Soviet-type central planning regime through 1990, but have since moved towards a market-based economy, with weakened bureaucratic control and an introduction of widespread private ownership (Peng & Heath, 1996; Svejnar, 2002). The countries have undertaken different transition approaches with varying degrees of progress to privatization, government reform, and development of a free-market economy. The four countries were selected to provide a wide variance in institutional

development. These countries were in different stages of progress toward European Union accession, with Lithuania and Bulgaria expecting earlier admittance. These countries represent both the northern and southern part of the region. At the start of the transition process, these four countries were at similar levels of institutional development. However, at the time of the study, they reflected a wide variance for the region regarding institutional development, especially for those countries that had not experienced war (e.g. former Yugoslavia).

A target sample of 1662 non-financial firms in the four countries - 300 from Belarus, 350 from Ukraine and approximately 500 each from Lithuania and Bulgaria - was created using an initial list of firms using the Amadeus database developed by Bureau Van Dyck. This list was checked and updated using local sources. The exception to this process was the work in Belarus, since the country is not part of the Amadeus database. A cooperating research partner had a database of 5000 Belarus companies from which 300 firms were randomly selected. This approach for developing a random sample has been used in transition economies when established databases are not available (Filatotchev et al., 2000; Filatotchev et al., 2001).

The survey instrument was based on interviews with managers in Lithuania, Ukraine, and Bulgaria in October 2001. It examined four areas of operation identified as important to firms in the region - quality assurance systems, human resource management, marketing, and technology – with a parallel set of questions examining each of the four areas. To address language issues, the survey was translated from English into the particular foreign language and then back-translated into English (Filatotchev et al., 2000; May, Stewart, & Sweo, 2000). The original English version was compared with the double-translated version to identify and resolve any issues. The survey was pre-tested prior to large-scale launch with no issues identified.

One difficulty with surveys in transitional economies is that information was concentrated in a few individuals in the firm (Hoskisson, Eden, Lau, & Wright, 2000). As a result, this survey relied on one qualified person or a small set of qualified individuals in each firm to provide the required data. This is consistent with prior survey research in similar contexts (Lyles & Baird, 1994; May et al., 2000; Zander & Kogut, 1995). The survey was sent to the senior director of the firm and requested that s/he identify the person

who would be the most appropriate respondent to provide information pertaining to each area (Hoskisson et al., 2000). Since the survey was divided into four sections, the appropriate specialist could complete each section. On average, two respondents participated in completing each survey, thus reducing single-respondent bias.

Survivor bias was tested by comparing firm size for the top 500 firms in each country for 1997 and 2001. The average firm size increased in Ukraine ($p < 0.01$), and decreased in Bulgaria ($p < 0.05$) and Lithuania ($p < 0.01$). These trends may be capturing different transition effects. For Lithuania and Bulgaria, there may have been continued restructuring occurring within firms, whereas for Ukraine, a consolidation among the firms may have been occurring. As such, there was no consistent pattern regarding survivor bias. Any survivor bias, though, should result in more conservative results, since firm failure should reduce differences across firms. For non-response bias, we compared firm size (number of employees) of the respondents against the group that received the survey, but did not respond (Armstrong & Overton, 1977; McEvily & Zaheer, 1999) using a t-test. This was done for Bulgaria and Lithuania, the two countries for which we had data on respondents and non-respondents (Ukraine and Belarus were of less concern given their high response rates). The results indicate that non-respondents were smaller than respondents (Lithuania: $p < 0.05$; Bulgaria: $p < 0.10$). Given the use of size for some of the hypotheses, this non-response bias will result in more conservative results – decreasing the ability to show predicted curvilinear relationships from Hypothesis 4. We discuss these implications further in the discussion section regarding Hypothesis 4b.

In total, 601 usable surveys were returned, for a 36.2% response rate. The response rate by country was Belarus (83.3%), Bulgaria (16.8%), Lithuania (19.3%), and Ukraine (79%). We adjust for the different response rates in our regression analysis as explained in the Methods section. The response rate for Lithuania and Bulgaria compares favorably with the average response rates typically observed for mail-based surveys in transitional economies (Hoskisson et al., 2000). The significantly higher response rates for Belarus and Ukraine reflect the use of face-to-face interviewers rather than a mail-based survey to collect the data, as managers in these countries did not want to participate in mail-based surveysⁱⁱ (Filatotchev et al., 2000;

Filatotchev et al., 2001). These interviews were structured and involved completing the same survey that was used in all countries. Influential outliers in the dataset were removed to improve the reliability of the resulting model. Specifically, two firms were removed. One firm had a founding age of 428 years, with the next closest firm at 142 years, and one firm had employment of 31,000, with the next closest firm under 11,000 employees – these two firms overly influenced the results and were outside of the scope of the model. Observations with missing data were also removed from the data set to bring the final sample size to 473.

Measures

The measures for our research study are shown in Table 1 and are described in the ensuing paragraphs.

[\[Insert table 1 about here\]](#)

Dependent Variable

Export Growth. To measure export growth, we calculated the change in the percentage of sales that came from exports over a two year period. This information was reported on the survey instrument. Exports are one of the initial steps towards internationalization, they are easily measurable, and applicable to both large and small firms (Cavusgil, 1982; Johanson & Vahlne, 1977; Sullivan, 1994). Also, for our context, exports required a change in how the firms operated (Cavusgil, & Naor, 1987; Filatotchev et al., 2001) and export growth was important to these economies. From 1993 to 1999, merchandise exports as a percent of GDP fell in all four countries and all of the countries except Bulgaria had a negative trade balance in each of these years. Although a negative trade balance was expected for these economies, the ability of firms to change their export levels was an important goal at the government and firm level in 1999.

Our measure subtracts the 1999 export percent of sales from the 2001 export percent of sales. The correlation between the export growth measure and the initial measurement point is extremely low at 0.057. This indicator value increases our confidence in the appropriateness of the export growth measure (Bergh &

Fairbank, 2002). Approximately 38% of the firms in the sample had export business in 2001, 23% of the firms increased their exports over our period of study, and 9% dropped their export level.

Independent Variables

Level of Institutional Development. The level of institutional development variable (H1, H2b, H3b, H4b, H5b) quantifies the level of business freedom in the economic environment. The measure attempts to capture the differences across the countries in the study regarding their development of free-market institutions that result from the transitions occurring at different rates (Svejnar, 2002). To measure this variable, we used the Heritage Foundation Index of Economic Freedom measures (www.heritage.org) for 1999-2001. The measures are on a 100 point scale, with higher numbers indicating greater economic freedom. These measures, calculated annually, capture nine characteristics that reflect a country's adherence to free-market principles: business freedom, trade freedom, monetary freedom, freedom from government, fiscal freedom, property rights, investment freedom, financial freedom, and freedom from corruptionⁱⁱⁱ. Trade policy (now called trade freedom), had the potential for endogeneity with our dependent variable, export growth. Thus, we recalculated the index by removing the trade policy component of the score and averaging the remaining eight parameters over the three year period of interest: 1999-2001^{iv}. The resulting scores for each country were 59.9 for Lithuania, 48.9 for Bulgaria, 42.0 for Ukraine, and 33.1 for Belarus. We utilized these average scores directly as our measure of the level of institutional development.

Strength of Managerial Aspiration for Exports. Our measure for strength of aspiration for exports (H2a, H2b) is the average of a seven point Likert scale rating from each of the four functions of the firm: quality assurance, human resource management, technology, and marketing. Our measure rates the importance of firm specific actions and is based on the response to the survey instrument. This retrospective measure, regarding actions taken, is consistent with Salancik's (1977) argument that action is the ultimate proof of commitment and as such is an accurate measurement of commitment (Locke et al., 1988). Following Cavusgil & Nevin (1981), the survey asked the respondents to indicate the importance of increasing exports as a reason

for implementing change to *<their functional area>* from January 1999 to December 2001. Incorporating responses across the four organizational functions helps to ensure a measure that reflects a widely held aspiration of the firm. In cases where less than four responses were received, the measure is based on the responses that were given. If no responses were provided across any of the four functions, then that firm was dropped from the analysis. The Cronbach's alpha for this measure was 0.93.

Private Ownership. To measure private ownership (H3a, H3b), we calculated the average percent privately owned over a three year period - from 1998 to 2000 using - end of year data. This time frame is one year in advance of our evaluation period, given the expected lagged impact of private ownership regarding export growth (Filatotchev et al., 2001). This information was reported on the survey instrument.

Size. We used the number of employees to measure size (H4a, H4b), as revenue is not a consistent measure in transitional economies, due to currency changes and inflation levels (Baum & Wally, 2003; Hoskisson et al., 2000). We used the three year average number of employees based on end of year data, one year in advance of our evaluation period -- from 1998 to 2000 (Filatotchev et al., 2001; Hitt, Dacin, Levitas, Arregle, & Borza, 2000). We utilized the natural logarithm of the number of employees (Baum & Wally, 2003) as the distribution is skewed in our data set.

Age. To measure age (H5a, H5b), we subtracted the date of firm founding from the year 2002. Firms founded in 2000 or 2001 were deleted from consideration due to incomplete data in our time period of interest. We utilized the natural logarithm of age (Douma et al., 2006) as the distribution is skewed.

Control Variables. We control for seven variables given their possible impact on export growth. **Export experience** is an 'initial export' dummy which allows us to control for whether a firm did or did not have export sales at the start of our evaluation period. Presence or absence of exports may indicate different firm capabilities and knowledge needed for export growth (Filatotchev et al., 2001; Lages, Jap, & Griffith, 2008). We measure export experience with a dummy variable indicated by: 1 = non-zero export percentage in 1999 and 0 = zero export percentage in 1999. **Foreign ownership** may impact firm performance in different ways than domestic private ownership, since foreign owners may have broader networks and experience with

international trade (Filatotchev, et al., 2001). Past research has indicated that foreign ownership is important in privatized firms in Central and Eastern European countries (Filatotchev et al., 2001; Frydman, Gray, Hessel, & Rapaczynski, 1999). Our measure of private ownership includes foreign ownership; however, we control for foreign ownership as it may have differential effects. We measured foreign ownership by averaging end of year foreign ownership percentages, one year in advance of our evaluation period - from 1998 to 2000 (Filatotchev et al., 2001). The *founding environment* can influence future growth of firms (Stinchcombe, 1965; Kriauciunas & Kale, 2006). We control for this with a dummy variable indicating 1 = founded before 1990 and 0 = founded in 1990 or later. We control for broader national economic factors in two ways. First, domestic demand may affect export growth since increasing domestic sales is a clear alternative to increasing exports. We measured domestic demand growth as *GDP growth* (Coccari, 1978; Bevan, Estrin, & Meyer, 2004). We used the average growth in country GDP between 1999 and 2001 from the EBRD – The European Bank of Reconstruction and Development (www.ebrd.com). Second, the level of country export growth may affect firms' export growth performance. We evaluated *country export growth* using the EBRD data that reports total country export sales by year (www.ebrd.com). Our measure is a ratio of the difference between 1999 and 2001 divided by the 1999 value. Firm resources may also affect the level of export growth. Firms that possess research and development capability are known to have a higher likelihood of capturing new opportunities (Jaffe, 1986) and to have a higher market credibility that may affect capability to grow export business. We control for this with *R&D density* which is measured as number of employees in R&D divided by the total number of employees (Helfat, 1997). To operationalize R&D density, we calculated this ratio by averaging end of year values, one year in advance of our evaluation period - from 1998 to 2000 (Filatotchev et al., 2001). We control for *industry* using four categories: 'service' (wholesale, retail), 'processing' (light industry, heavy industry, food processing), 'capital intense' (utilities, chemicals, petroleum), and 'other' (Khanna & Rivkin, 2001). Rather than using dummy variables, the survey respondents indicated the percentage of revenue from each of the industry sectors. For each of the categories, the

contribution of the particular industrial category to the firm's revenues is measured on a 0% to 100% scale. This allows for a finer analysis of the impact of industry on the overall results.

Methods

We utilized a weighted least squares regression analysis to test our hypotheses. In order to reduce the multi-collinearity of the squared and the interacted terms, we mean centered the appropriate variables (Aiken & West, 1991) utilizing the "PROC STANDARD" procedure in SAS version 9.1 Statistical Analysis Software. In order to account for the variation in response rates across countries given their relative size, we utilized the "PROC SURVEYREG" procedure in SAS version 9.1. We adjusted the country strata weights based on the population of each country in 2002 (Heston, Summers, & Aten, 2006) in relation to the number of observations in each strata (country) ^v.

The choice of a firm to export may indicate an endogenous managerial choice or it may indicate different firm capabilities. If the latter, it may not be a choice at all but rather the result of a failed export growth attempt. Our data includes firms that had growth, decline, or remained unchanged. Our data also includes firms that did not have exports initially (1999) as well as those that did have exports. We could discard the non-exporting firms, but this would bias our regression parameter estimates. Firms that were non-exporters initially could provide meaningful information, as some may have aspired to export but were unable to do so, some may have not aspired to export, and some may have achieved some level of export growth. Therefore, we first tested for differences in the exporter/non-exporter dichotomy using a Chow test (Chow, 1960). This was accomplished using the "AUTOREG" Procedure in SAS version 9.1 Statistical Analysis Software. The Chow test confirmed that the groups were significantly different, with p-value comparisons significant at 0.01 or better for all models tested. This indicates that some type of selection treatment was required for the exporters versus the non-exporters. Therefore, we used a procedure that combines both exporters and non-exporters to produce unbiased estimates of the regression parameters (Graen et al., 2006). We utilized our dummy control variable for export experience as an interaction term to statistically capture this difference. This provides us

with five models; Model 1 includes only the control variables, Model 2 adds the variables of interest to create a full model, Model 3 adds the export experience double-interactions, Model 4 adds the institutional development double-interactions without the export experience interactions, and Model 5 includes all the variables, double-interactions, and triple-interactions. In this way, the interaction terms with the variable *export experience* allow us to evaluate the differences in firm behavior as a function of the firm's starting export performance.

EMPIRICAL RESULTS

The means, standard deviations, and correlations for all variables are reported in Table 2. We utilized variance inflation factor analysis (using OLS regression without stratification) to check the possibility of collinearity issues among the variables (Aiken & West, 1991). No variables indicated scores over 10, with the highest score being 9.47, suggesting no concerns. As a secondary test of the collinearity between the variables age and founding environment which had 86 percent of their variance in common, we ran the models with the founding environment variable removed. All major findings were preserved^{vi}. Therefore; given the stability of the results and the specification error that would result from dropping the founding environment variable, we maintained this control variable in our models. The results of the regression models are shown in Table 3 and explained in the following paragraphs.

[Insert Table 2 & 3 about here]

Model 1 contains only control variables. The export experience dummy variable and R&D density are both positive and significant as would be expected. The coefficients for process industry and service industry are negative and significant. The negative coefficients indicate these industries are less likely to be associated with increases in export levels as compared to the capital intensive and the 'other' industry categories. Also, we observe that the foreign ownership control variable is not statistically significant in any of our models.

The hypotheses use export growth as the dependent variable. As such, our theory primarily focused on firms that had exports at the start of our observation period. Although the underlying ideas may also be

appropriate for firms that were not exporting, we believe that managerial behavior and inertia for firms that begin to export are likely to be different than those that are trying to increase exports (cf. Haveman, 1993). Thus, coefficients related to variables that were interacted with export experience are most appropriate for interpreting our results.

Models 2 and 3 contain the results to examine hypotheses 1, 2a, 3a, 4a, 5a. We first test Hypothesis 1 that predicts the institutional development level will have a positive relationship with export growth. The coefficient for institutional development, although positive in both models, is not significant; therefore Hypothesis 1 is not supported. Hypothesis 2a predicted a positive relationship between strength of aspiration for exports and export growth. The coefficients of 1.01 in Model 2 and 0.44 in Model 3 are positive and significant ($p < 0.01$, $p < 0.05$ respectively), indicating strong support for Hypothesis 2a. Furthermore, in Model 3 the coefficient of 2.59 for the export-aspiration interaction is significant ($p < 0.01$). This interaction relationship of Model 3 is graphically depicted in Figure 2 and suggests that the aspirations-growth relationship is stronger for firms that had export experience. Hypothesis 3a states that private ownership levels will have a positive relationship with export growth. In Model 2, the coefficient (0.02) is positive and significant ($p < 0.10$), as predicted, providing some support for Hypothesis 3a. However, the main effect coefficient (0.01) and the export-private interaction coefficient (0.05) in Model 3 are not significant. This model suggests that export experience does not influence the private ownership-export growth relationship. Hypothesis 4a states that firm size will have an inverted U-shaped relationship with export growth. The coefficients for size and size squared are not significant in Model 2; however, in Model 3 the export-size interaction coefficient (-2.97) is negative and significant ($p < 0.10$). The size squared coefficient (0.48) is not significant. This means that size has a negative linear relationship with export growth for firms that had export experience, which is different than predicted. Hypothesis 5a states that firm age will be negatively related to export growth. The coefficient for age in Model 2 (-0.01) is negative, but not significant. In Model 3, the

export-age interaction is not significant. Therefore, neither inertia-based hypothesis is supported in these models; however, we shall reconsider these hypotheses in Models 4 and 5.

[Insert Figure 2 about here]

Model 4 adds the interactions of institutional development with each of the main variables. Model 5 adds the export interactions and the triple-interactions of exports and institutions with our main variables of interest. Recall that with the Heritage Foundation data, higher institutional development levels indicate more-developed institutional environments and the export experience dummy is valued at 1 for firms with export experience in the initial period. The relationships in Hypotheses 2b, 3b, 4b, and 5b predicted a weakening of the relationships in less-developed environments. Therefore, positive coefficients on the interacted aspiration, private ownership, and size squared terms will be consistent with our hypotheses, as will a negative coefficient on the interacted size and age terms. This applies to both double and triple interactions.

Hypothesis 2b predicted a weakened relationship between strength of aspiration for exports and export growth. The coefficient for the interaction terms of institutions and aspirations in Model 4 (0.05) is not significant. Also, in Model 5 the coefficients for institution-aspiration (0.002) and for export-aspiration-institution (0.13) are not significant, indicating a lack of support for Hypothesis 2b. Hypothesis 3b predicted a weakened relationship between private ownership and export growth. In Model 5 the coefficient on the export-private-institution interaction is negative (-0.01) and significant at $p < 0.05$. These triple-interaction relationships are graphically depicted in Figures 3a and 3b for firms with and without export experience. Hypothesis 3b is partially supported as the predicted relationship holds for firms which did not have export experience but is opposite of our prediction for firms which had export experience. This means that for firms that were already exporting, greater private ownership was associated with *lower* export growth in more developed institutional frameworks (Figure 3a). For firms that were not exporting, greater private ownership was associated with *higher* export growth in more developed institutional frameworks (Figure 3b).

[Insert Figure 3a, 3b about here]

Hypothesis 4b predicted that size would have a U-shaped relationship with export growth in less-developed institutional environments. The interaction of institutional development with size is negative (-0.18) and significant ($p < 0.01$) in Model 4, with size-squared interaction not significant. In Model 5, the export-size interaction (-2.94) is significant ($p < 0.10$) as is the export-size squared-institution interaction (-0.12) at $p < 0.05$. These triple-interaction relationships are graphically depicted in Figures 4a and 4b for firms with export experience and without. Therefore, as reflected in Figure 4a, we find support for Hypothesis 4b – size has curvilinear consequences in a U-shape for the firms with export experience in less-developed institutional environments. Also in support of Hypothesis 4a, we find an inverted U-shape for more-developed institutional environments. Figure 4b indicates opposite curvilinearity for firms that did not have export experience. Hypothesis 5b predicted that the negative relation of firm age with export growth of Hypothesis 5a would weaken in less-developed institutional environments. The coefficient, in Model 4, for the interaction between institutional development and age is positive (0.30) and significant ($p < 0.10$). This interaction relationship is graphically depicted in Figure 5. The age relationship does not show a significant interaction with export experience, therefore only the significant and highest level interaction graphs are presented. These results suggest that age is an asset in more-developed institutional frameworks, counter to both our Hypothesis 5b and Hypothesis 5a.

[Insert Figure 4a, 4b, 5 about here]

Overall, our models indicate that the level of institutional development, when interacted with private ownership, size, size-squared, and age, is significant in explaining export growth. The strength of aspiration for exports was important in all the models but was not significant when interacted with institutional development level. The significant interactions with export experience indicate that aspirations, private ownership, size, and size-squared relationships change as a function of prior export experience. Since the variables for the primary relationships in Models 4 and 5 have been mean-centered, the interaction variables leave the main effects to reflect values conditional on the institutional development level being at its mean. Due

to the complexity of triple interaction interpretation, the graphed relationships are provided to assist interpretation.

DISCUSSION

The goal of this study was to examine the direct and indirect impact of institutions on growth in firm exports. We began by predicting a positive relationship between the institutional development level and export growth. We did not find support for this prediction, which is quite surprising given past research on the impact of institutions (Makino et al., 2004; Roth & Kostova, 2003). For example, Makino et al. (2004) found that the impact of institutions on firm performance was twice as great in emerging nations as in developed nations. However, our results may be due to the desire of both more-developed and less-developed economies for export growth as exports can increase job creation, improve balance of trade, and provide for economic growth. These improvements would be welcomed by both more-developed and less-developed economies.

The finding that foreign ownership, a control variable, was not significant in any of our models was unexpected. Past research has indicated that foreign ownership is important in privatized firms in CEE (Filatotchev et al., 2001; Frydman, Gray, Hessel, & Rapaczynski, 1999). We suggest four potential reasons for this lack of significance. First, the population of firms with foreign ownership was small (~12%) at the time of our study, with many firms having only minority foreign ownership. Second, our private ownership variable and the foreign ownership variable, while not collinear, are significantly related, as every firm with foreign ownership also has some portion privately owned by our measurement approach. This could lead to the lack of significance in the foreign ownership variable (note that private ownership was significant at the $p < 0.10$ level). Third, foreign ownership may have differential effects across institutions and export experience. Just as strength of aspirations and private ownership need a conducive institutional framework, so too foreign ownership may need a particular institutional framework. Fourth, foreign ownership has been argued to be a multi-dimensional construct and as such may not directly correlate to control. Foreign ownership may or may not indicate degree of control, resource contribution, or scope of control (areas of the operation where control

is exercised) (Karhunen, Löfgren, & Kosonen, 2008). This is an area deserving of future detailed investigation.

In testing Hypothesis 2a, we found that the strength of aspiration has a positive impact on export growth. The importance of this finding becomes clear in Hypothesis 2b, which predicted that in less-developed institutional environments, the relationship between aspirations and export growth would weaken. We did not find a significant difference, suggesting that even in a less-developed institutional environment, strategic managerial action is positively related to export growth. This finding supports Peng & Heath's (1996) proposition that posits firm growth will be driven by the *strategic choice* for growth adopted by top managers. Our results may be further understood by considering mechanisms through which institutions influence firms indirectly via managerial behavior. Institutions, through government policies, can impact managerial attitudes towards business decisions, as indicated by various export promotion and education programs. This relationship may indicate that institutional environments can impact managerial aspiration strength as well. In our sample, the average aspiration strength level on a seven point scale was: Lithuania (5.0), Bulgaria (4.1), Ukraine (3.6), and Belarus (3.3). T-tests indicate that the mean for Lithuania is significantly different from the other countries and Bulgaria is significantly different from Belarus ($p < 0.10$ with a Bonferroni correction). These averages are consistent with the ordering of the level of free-market development, therefore we conclude that institutions affect the level of export growth aspired by managers. This effect on managerial orientation is consistent with Makhija and Stewart (2002), who found that managers in free-market environments had higher comfort with uncertainty than managers from planned institutional environments. However, the lack of a significant interaction with a highly significant main effect suggests that firms with high aspiration strength were still able to achieve export growth irrespective of the institutional constraints. So, institutions appear to constrain the *desire* to increase export levels and not to affect the *ability* to do so for those who maintained high aspirations in the face of potential institutional constraints. These results imply that, *ceteris paribus*, strong managerial aspirations can result in increased export growth even in a less-developed transitioning economy.

Hypothesis 3a considered the relationship between private ownership and export growth. Private ownership had a moderately significant, positive main-effect relationship. Just as managerial aspirations can impact a firm's actions, the incentives and managerial control associated with private ownership appear to provide the expected positive effect regarding export growth, irrespective of the institutional constraints. However, the relationships are quite complex, as we can see in the unexpected triple-interaction effects. We believe these results can be explained by considering the limits of the influence of institutions on the incentives and control of private ownership. In our sample, the average private ownership percentage was: Lithuania (85.5%), Bulgaria (81.1%), Ukraine (78.9%), and Belarus (77.0%). Since T-tests indicated no statistical difference for these averages, we are cautious in our conclusions. However, we believe that they suggest that while institutions may limit the amount of the economy in private hands, they are less adept at preventing firms from acting on the incentives associated with private ownership. The interaction plots of Figure 3a and 3b suggest the predicted relationship holds for firms which did not have export experience (Figure 3b), but opposite our prediction for firms which had export experience (Figure 3a). The logic for firms that initiated export growth without having existing export business in 1999 follows our hypothesis development. These firms initiated (increased from zero) exports, as foreign sales were viewed as beneficial sources of revenue and profits. We also note that these firms cannot decrease exports, as they started with no export sales. We believe the opposite results for firms with previous export experience reflect a different way to improve performance than export growth. Specifically, in the more-developed institutional environments, export growth may not be the best way to improve profits since the firm may have already come close to an optimal export level. As a result, if increasing exports is not profitable and given that government support is not expected for export growth, then export growth is not likely to occur. In less-developed institutional environments, firms with higher private ownership will still respond to incentives. However, the incentives may be profitability associated with export growth or they may be related to government support for employment. Firms may have pursued exports because export growth can provide greater employment levels, especially given the support of governmental institutions (favorable regulations, subsidies, or other advantages). In consequence, the 'more is

better' thought process for exports may not be appropriate at this stage for firms in the more-developed institutional environments. Overall, these results suggest that private ownership stimulates both actions for growth and actions for profit enhancement. Due to the complexity of the relationships observed, we suggest the conclusion that the incentives and control created by private ownership can overcome institutional constraints deserves further study. Even though institutions were theorized to constrain the ability to increase export levels, the benefits of private ownership were observed across our sample of institutional levels. Accordingly, we conclude that private ownership matters (Filatotchev et al., 2000; Filatotchev et al., 2001).

We predicted an inverted U-shaped relationship between firm size and export growth in Hypothesis 4a, and a U-shaped relationship in Hypothesis 4b in less-developed institutional environments. We found support for both of these predictions when firms had export experience (see Figure 4a), but opposite results for firms that did not possess such experience (see Figure 4b). A potential reason for the inversion of the relationships is linked to the difference in firm capabilities required to *initiate* exports without experience. In more-developed environments, small and large firms without export experience have higher export growth than medium sized firms. This result may be explained if small firms were able to unleash the entrepreneurial spirit suggested by Zahra et al. (2000) and thus overcome the lack of established routines and strategic confusion. For large firms, this result may be related to size reflecting other characteristics of the firm besides inertia, such as higher levels of slack, market power, customer credibility, and scale economies (Haveman, 1993; Park & Luo, 2001; Pfeffer & Salancik, 1978). These characteristics may lead to larger firms having greater ability to initiate export growth with international customers. In contrast, for firms in less-developed environments without export experience, export growth was about zero and size did not have a significant relationship with export growth. This means that firms that were not exporting in 1999 were not successful in initiating and then growing exports. Given this is occurring in a less-developed institutional environment, lack of permits or second mover disadvantages with respect to working with institutions may explain this result. As explained in the Methods section, there may be an under-representation of small and medium sized firms. Although that under-representation has not diminished our ability to identify a curvilinear relationship, if these firms did not

have exports in 1999, then their absence may contribute to our inability to identify a size-export growth relationship for this sub-set of firms.

Hypothesis 5a, which predicted that firm age would be negatively related to export growth, was not supported. Hannan (1998) suggests that there are inconsistencies in age effects in organizational research and that the level of volatility in the environment may reverse the relationships. In our case, with multiple institutional environments and very dynamic economies we may be observing this type of volatility regarding age. However, in Hypothesis 5b, we predicted a negative interaction of institutional development and firm age. We found a statistically significant, positive coefficient for the interaction, which is graphically shown in Figure 5. This result, opposite of our prediction, suggests that age is an asset when institutions are more developed and a liability when they are not. Furthermore, age did not have a significant interaction with export experience unlike the other main variables. This interesting result may be explained by institutional embeddedness for older firms. Older firms in less-developed environments may be laden with inertia as previously explained. This age-related inertia and embeddedness in the historical institutions may become higher with time irrespective of the level of export experience. With age, though, a firm may develop capabilities to undertake change (Kelly & Amburgey, 1991). This capability to change could be unleashed with the developing of free-markets. Once again, this capability would exist with or without export experience, as there is no *a priori* reason to expect a relationship between age and export experience. Given the variables of interest in our study, this capability came into play through export growth.

The contrasting results, when interacting institutional development with age and size, are surprising. Older firms in *more*-developed institutional environments had higher export growth than younger firms, yet larger firms in *less*-developed markets had higher export growth than did medium-sized firms (considering firms that had export experience). While the size interaction follows our theoretical expectation, age acts in the opposite direction. Not only is this surprising given our predictions, but many inertia studies have shown that size and age have a similar impact on the firm (Hannan & Freeman, 1984; Kelly & Amburgey, 1991; Zhou et al., 2006). The results, though, do appear to reflect the refined arguments of Hannan (1998), which suggest age

and size may not have proportional effects in certain situations. Hannan (1998) suggests that variation in other factors may impact the age relationship, such as endowments, capabilities, and positional advantages. We believe that Peng's (2003) phased-model of institutional transition may provide additional insights to our results. He suggests that the first phase of institutional transition will exhibit a relationship-based transaction structure and that this will gradually shift to a rule-based transaction structure. As the countries in our sample were at different levels of institutional progression, it is possible that the more-developed economies in our sample were operating a more rule-based structure and that the less-developed economies were operating in a more relationship-based structure. This would create a situation where larger firms in less-developed institutional environments with a relationship-based structure would use their powerful relationships to gain advantage relative to smaller firms. Similarly, in a rule-based structure, greater age may be an indication of legitimacy and influence (Baum & Shipilov, 2004), as well as true organizational capability. Youth in a more-developed economy may result in a liability of newness (Stinchcombe, 1965) and an ensuing lack of legitimacy. Given our dependent variable of export growth, age in more-developed economies may be an indicator for foreign customers of reliability and viability. In contrast, size might be a remnant of the past regimes that manipulated employment to achieve Communist Party goals. Thus, our results align with Peng's (2003) phased-model in suggesting that large size acts as a positive indicator in relationship-based institutional environments and age acts as a positive indicator in rule-based institutional environments.

LIMITATIONS AND FUTURE RESEARCH

This paper's foundation is comprised of its novel consideration of how inertia changes as institutions develop, its consideration of managerial aspirations in firms evolving through dynamic change, the unique data including multiple former Communist countries, and the richness of the firm-specific information that enables us to test our theoretical model. Nevertheless, this research is not without limitations. First, an important element of all research is generalizability. Although we focus on CEE countries, we believe our institutional

development measures and multi-industry sample provides the foundation for generalizability to similar conditions. Many countries, such as Russia, China, Vietnam, Cuba, and Venezuela, still have strong government intervention in market operations, with varying degrees of movement towards free-market institutions. As these countries move towards or return to free-market systems, our results should inform them of the institutional frameworks and managerial strategies that need to be considered to improve growth through exports.

Second, our data set included only four countries with four resulting levels of institutional development. Although a positive step from using binary measures, the study could be enhanced by increasing the variance in the institutional framework measure through a larger sample of countries. Future research should consider increased cross-country comparisons. Finally, our study could benefit by distinguishing between firms with private ownership due to being established private, and private ownership through privatization. Since privatization does not always involve restructuring or a change in management, the predicted impact of private ownership may be weakened in privatized firms. Considering this difference could enhance future studies.

In the future, we would like to address foreign ownership. While not significant in any of our analyses, it is one of the most significant performance factors in previous research (Cuervo & Villalonga, 2000). Foreign ownership may enable firms to overcome inertia faster, especially in an appropriate institutional environment. In some cases, foreign ownership may result in special incentives and allowances not granted to domestic owners. We believe that understanding the effect of foreign ownership in transitioning institutional environments is an important international business topic. A second line of research is to better understand the impact of management across a broader range of institutional levels. A third area to research is a full set of internationalization modes (sales offices, manufacturing sites, and foreign employees) across a broader range of institutional levels. Such research should address the limitations mentioned above while gaining additional insight regarding the managers, firm strategies, and actions taken over time.

Future researchers should also consider the different types of institutions and their presence and effect at different levels. We are curious about the possibilities and limits of the effect of institutions on firm-level

actions. As many of the countries in the region have changed their institutions to achieve EU membership, it is worth considering how those changes relate to firm behavior. This includes various macro, national, regional, and micro aspects of institutions.^{vii} Future researchers should also consider more detailed analysis of export destination country. Particularly in former Communist countries, it would be helpful to distinguish among exports to former Communist countries, emerging economies, and developed economies. A richer understanding of the transition of networks and a more detailed firm-level understanding of the antecedents to export growth to various regions could be derived from such a study. We expect that the network of relationships could be a significant influence on firm performance during major institutional transition. This could be important, as trade patterns in the region have significantly changed over the past 10-15 years. This type of research could provide several contributions to the international business literature as well as to the theories regarding institutions and organizational strategic change in dynamic environments.^{viii}

CONCLUSION

These results provide several important contributions to our understanding of institutions and export growth. First, our results suggest that even in less-developed economies, managerial aspirations and private ownership matter. This result is a step towards addressing the need cited by Oliver (1997) of examining the impact of institutions on managerial decisions. The findings also suggest that institutions do not affect managerial aspirations as much as theory seems to indicate, suggesting limits of institutions in controlling managerial behavior. Our second contribution is that institutions do impact export growth, through interaction with private ownership, size and age. This result adds to the understanding of the internationalization of emerging economy firms (Wright et al., 2005). Third, the contrasting results of the size and age relationships offer support for Peng's (2003) phased-model of institutional transition. These two seemingly similar variables may provide different information to export partners when the institutional development level varies. Taken together, this work highlights the importance of considering the multiple factors that may simultaneously affect the export growth of firms.

Past research has indicated that institutions matter (North, 1990; Makino et al., 2004). However, the effect of institutions may vary in emerging and transitioning economies (Peng & Heath, 1996; Makhija & Stewart, 2002). This research continues to develop our understanding of the varied direct and indirect impact of institutions on export growth. We have accomplished this by studying an integrated set of variables with empirical analyses in the context of transition economies. The results suggest that the factors impacting export growth need to be considered both individually and jointly. Governments should note that institutions do matter, although in ways that may be different than they believe. Managers should be heartened to know that aspirations and incentives associated with private ownership do matter, even in less-developed institutional contexts. Consequently, firms that adapt their strategic aspirations consistent with the dynamics of the institutional environment and the incentives of private ownership will increase aspiration accomplishment – in our case, export growth. Therefore, even though institutions matter, managerial actions can yield substantive results. Institutions and management are both important across different types of institutional environments.

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TABLE 1
Definition of Export Growth Model Variables

Variable	Description
Dependent	
Export Growth	Δ % Export Sales (2001-1999)
Independent	
Institutional Development	Heritage Foundation Index of Economic Freedom (without trade policy component)
Managerial Aspirations	Strength of Aspiration for Exports (7-point Likert scale)
Private Ownership	% Privately Owned (three year average of 2000-1998)
Size	Natural Logarithm of Number of Employees (average over three years 2000-1998)
Size ²	Square of Size (as above)
Age	Natural Logarithm of Years Since Founding
Control	
Export Experience	Firm Export Sales in 1999 Dummy
Foreign Ownership	% Foreign Ownership (three year average 2000-1998)
Founding Environment	Pre-transition Founding Date Dummy (pre 1990)
GDP Growth	% GDP Growth (2001-1999)
Country Export Growth	% Growth in Exports (2001-1999)
R&D Density	R&D Employees/Total Employees (average 2000-1998)
Industry	Industry Sector (% each in four sectors: processing, service, capital intensive, other)

TABLE 2
Descriptive Statistics for Export Growth Model

Variables	Mean	s.d.	Min.	Max.	1	2	3	4	5
1. Export Growth	2.27	10.04	-32.5	80					
2. Institutional Development	42.10	8.99	33.1	59.9	0.03				
3. Aspiration for Exports	3.78	2.30	1	7	0.25***	0.24***			
4. Private Ownership	79.81	34.97	0	100	-0.02	0.10**	-0.02		
5. Size (logged)	4.91	1.72	0.51	9.26	0.14***	0.15***	0.35***	-0.37***	
6. Age (logged)	3.04	1.02	1.10	4.96	0.09**	0.15***	0.28***	-0.32***	0.66***
7. Export Experience (dummy)	0.43	0.50	0	1	0.21***	0.30***	0.56***	-0.01	0.23***
8. Foreign Ownership	4.29	16.57	0	100	-0.01	0.26***	0.11***	0.11***	0.07
9. Founding Environment (dummy)	0.66	0.47	0	1	0.07	-0.02	0.18***	-0.34***	0.64***
10. GDP Growth	4.45	0.62	3.14	4.97	0.01	-0.77***	-0.21***	-0.09**	0.04
11. Country Export Growth	0.33	0.09	0.28	0.55	-0.01	0.77***	0.21***	0.09**	0.14***
12. R&D Density	0.07	0.15	0	1	0.10**	0.01	-0.04	0.11**	-0.35***
13. Process Industry	42.62	47.24	0	100	-0.05	0.09**	0.18***	0.09**	0.28***
14. Service Industry	30.22	43.00	0	100	-0.12***	-0.08**	-0.26***	0.14***	-0.47***
15. Capital Intensive Industry	12.64	32.46	0	100	0.08*	0.08**	0.09**	-0.20***	0.19***

Variables	6	7	8	9	10	11	12	13	14
7. Export Experience (dummy)	0.13***								
8. Foreign Ownership	-0.07*	0.17***							
9. Founding Envir. (dummy)	0.86***	0.05	-0.10**						
10. GDP Growth	0.11***	-0.28***	-0.28***	0.23***					
11. Country Export Growth	0.08**	0.19***	0.25***	-0.02	-0.83***				
12. R&D Density	-0.22***	0.01	-0.04	-0.22***	-0.07*	0.01			
13. Process Industry	0.23***	0.08**	0.05	0.21***	0.01	0.10***	-0.13***		
14. Service Industry	-0.40***	-0.13***	-0.02	-0.40***	-0.13***	-0.02	0.04	-0.54***	
15. Capital Intensive Industry	0.11***	0.10**	-0.02	0.09**	0.01	-0.03	0.01	-0.35***	-0.25***

*p<0.10, ** p<0.05, *** p<0.01

TABLE 3
Stratified Regression Model Results for Export Growth^A

Variables	Model 1		Model 2		Model 3		Model 4		Model 5	
Intercept	7.72	(18.55)	15.64	(22.67)	21.05	(22.86)	14.41	(22.22)	18.68	(22.64)
Institutional Development			0.09	(0.11)	0.05	(0.12)	0.14	(0.17)	0.003	(0.15)
Aspiration for Exports			1.01***	(0.35)	0.44**	(0.19)	1.05***	(0.37)	0.37**	(0.19)
Private Ownership			0.02*	(0.01)	0.01	(0.01)	0.02	(0.01)	0.01	(0.01)
Size			0.15	(0.83)	0.78	(0.86)	0.08	(0.83)	0.79	(0.86)
Size ²			0.11	(0.34)	0.19	(0.31)	0.06	(0.37)	0.23	(0.32)
Age			-0.01	(1.67)	0.04	(1.10)	0.01	(1.66)	0.12	(1.12)
Interactions										
Institution x Aspiration							0.05	(0.04)	0.002	(0.04)
Institution x Private							-0.002	(0.001)	0.001	(0.002)
Institution x Size							-0.18**	(0.08)	0.01	(0.07)
Institution x Size ²							-0.01	(0.04)	0.05	(0.04)
Institution x Age							0.30*	(0.17)	0.16**	(0.08)
Export x Aspiration					2.59***	(0.99)			2.65***	(0.96)
Export x Private					0.05	(0.04)			0.04	(0.04)
Export x Size					-2.97*	(1.78)			-2.94*	(1.73)
Export x Size ²					0.48	(0.59)			0.37	(0.60)
Export x Age					3.75	(3.22)			3.12	(2.95)
Export x Aspiration x Institution									0.13	(0.08)
Export x Private x Institution									-0.01**	(0.00)
Export x Size x Institution									-0.20	(0.18)
Export x Size ² x Institution									-0.12**	(0.05)
Export x Age x Institution									0.11	(0.23)
Controls										
Export Experience	4.73**	(2.23)	1.41	(2.40)	-2.84	(3.27)	1.24	(2.39)	-2.40	(3.30)
Foreign Ownership	0.02	(0.05)	-0.03	(0.04)	0.01	(0.04)	-0.02	(0.04)	0.02	(0.05)
Founding Environment	2.13	(1.43)	2.24	(3.29)	1.53	(2.95)	2.30	(3.33)	1.40	(2.99)
GDP Growth	-0.64	(2.81)	-1.37	(3.22)	-2.17	(3.33)	-0.98	(2.86)	-1.69	(2.97)
Country Export Growth	-8.28	(18.81)	-21.56	(20.93)	-28.17	(20.75)	-23.51	(25.74)	-28.71	(26.37)
R&D Density	16.88*	(8.96)	16.82	(10.69)	16.30	(10.10)	16.55	(10.56)	15.49	(9.83)
Process Industry	-0.05*	(0.03)	-0.04*	(0.03)	-0.04*	(0.02)	-0.04*	(0.03)	-0.04	(0.02)
Service Industry	-0.05*	(0.02)	-0.04*	(0.02)	-0.03	(0.02)	-0.04*	(0.02)	-0.03	(0.02)
Capital Intensive Industry	0.01	(0.04)	-0.03	(0.03)	-0.04	(0.03)	-0.03	(0.03)	-0.03	(0.03)
<i>n</i>	514		473		473		473		473	
F	6.76***		5.97***		6.09***		4.94***		4.52***	
Adjusted R ²	0.092		0.137		0.177		0.143		0.183	

^A Sample sizes differ because observations with missing values were omitted.
Standard errors in parentheses * p<0.10, ** p<0.05, *** p<0.01

FIGURE 1

Export Growth Model

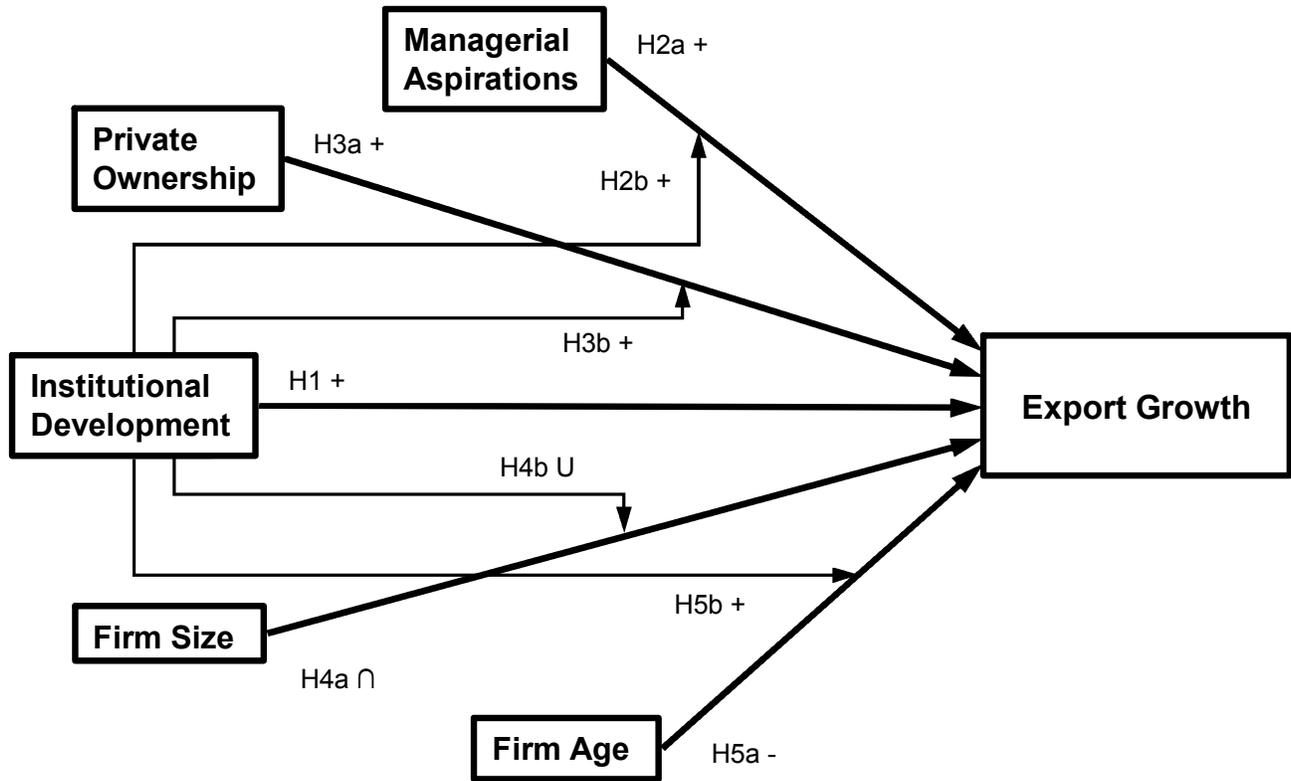


FIGURE 2
Export Growth versus Aspiration: Interaction with Export Experience

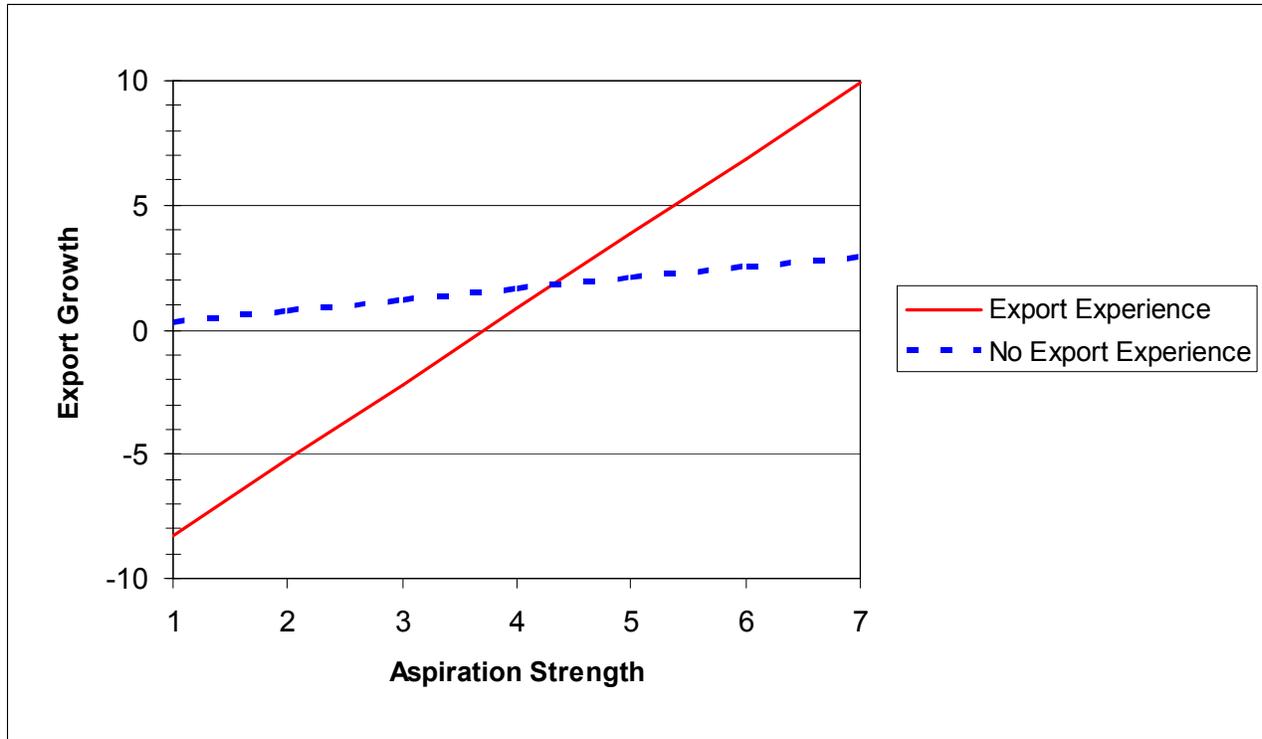


FIGURE 3a
Export Growth versus Private Ownership: Firms with Export Experience

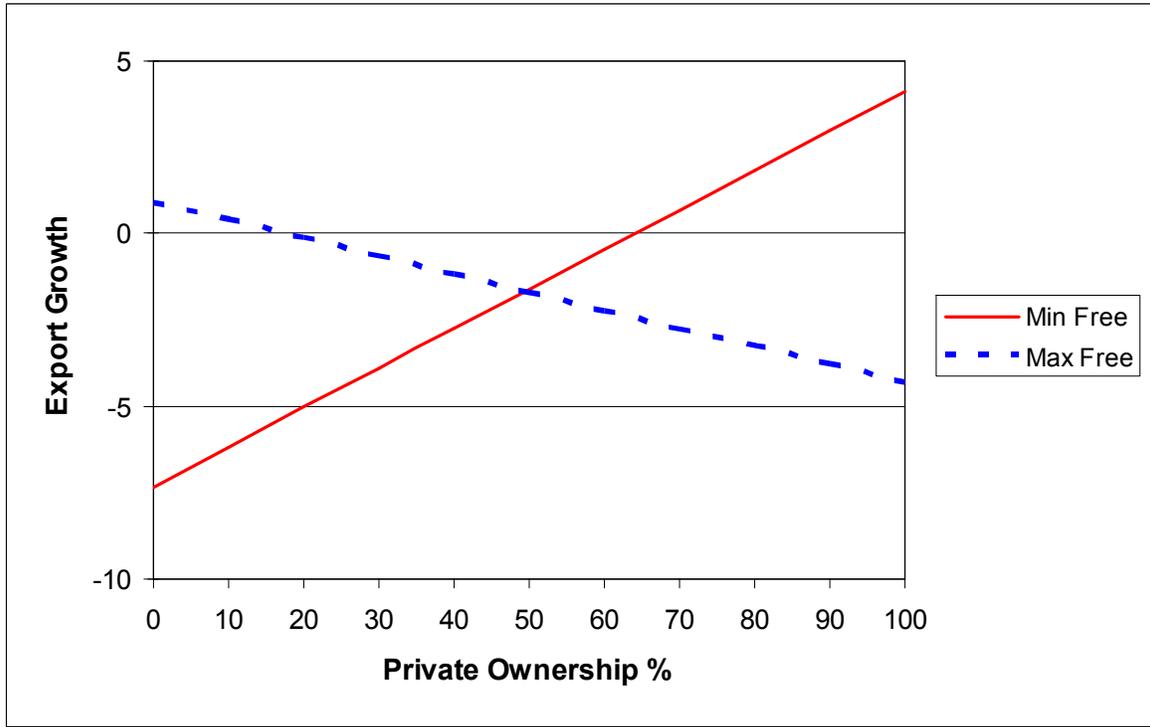
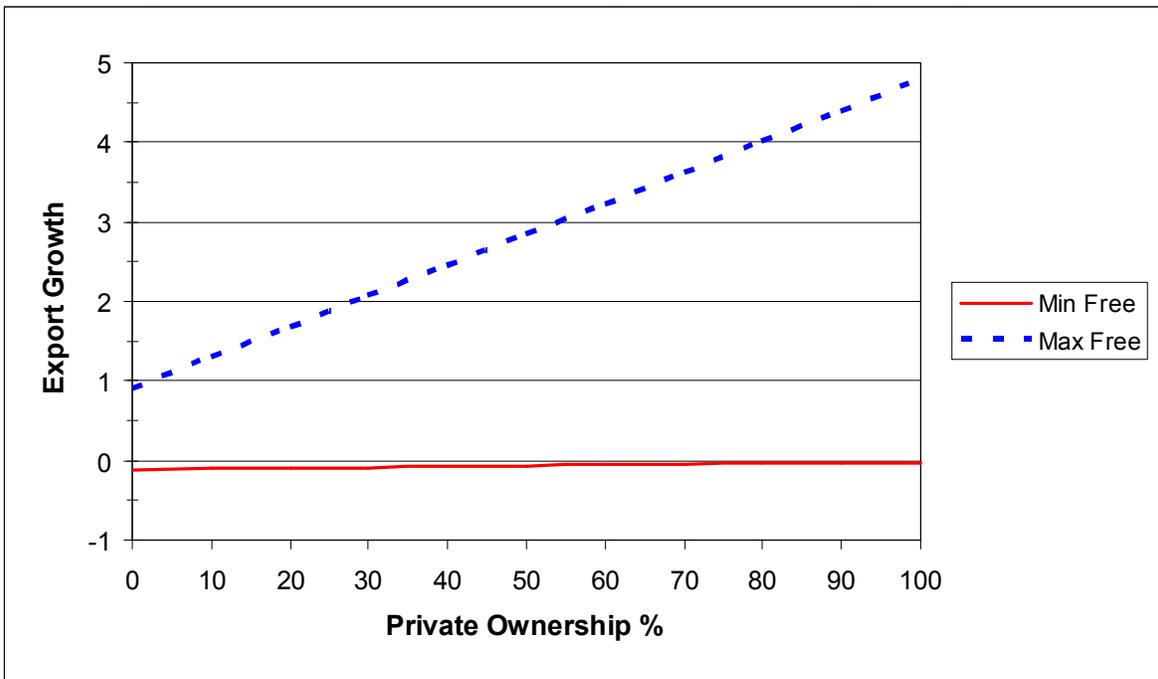


FIGURE 3b
Export Growth versus Private Ownership: Firms without Export Experience



Note: The figure shows export growth versus private ownership at the maximum and the minimum institutional development levels of our sample set.

FIGURE 4a
Export Growth versus Natural Logarithm of Size: Firms with Export Experience

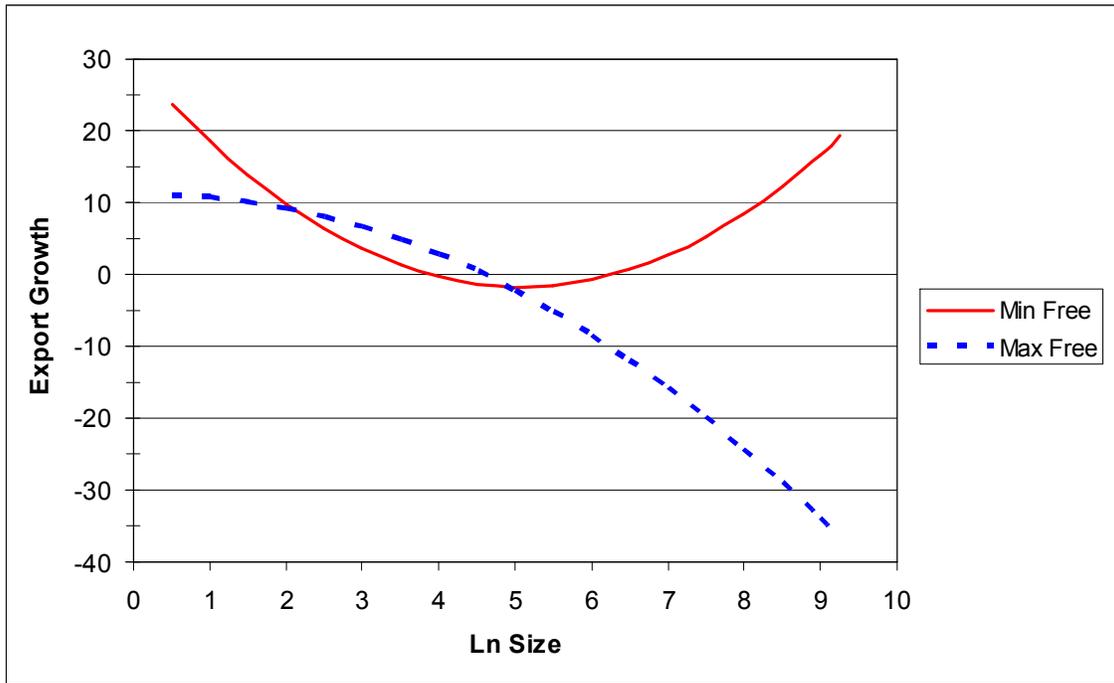
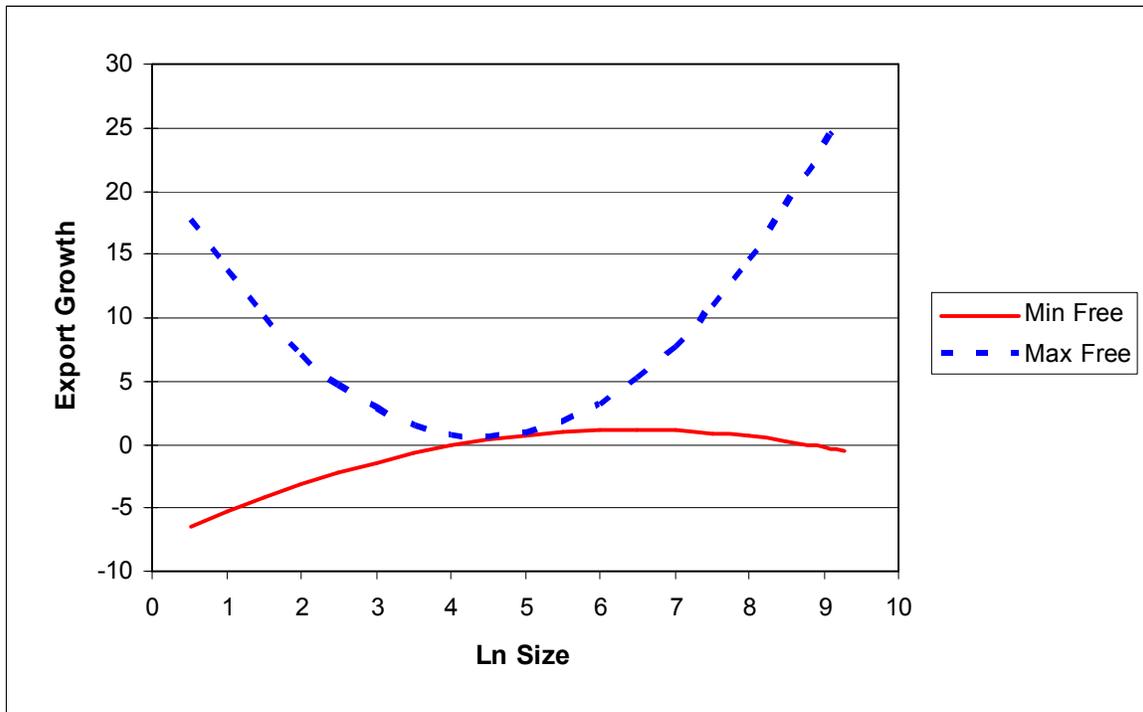
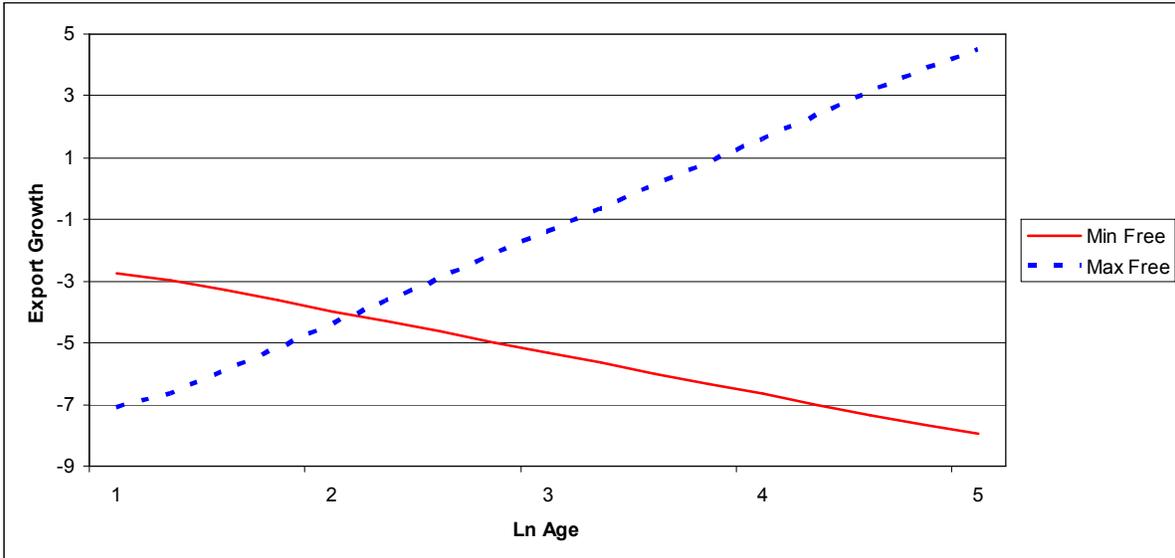


FIGURE 4b
Export Growth versus Natural Logarithm of Size: Firms without Export Experience



Note: The figures shows export growth versus the natural logarithm of size at the maximum and the minimum institutional development levels of our sample set.

FIGURE 5
Export Growth versus Natural Logarithm of Age: Institutional Development Interaction



Endnotes:

- ⁱ Aspiration strength is analogous to goal importance or goal commitment in the psychology literature.
- ⁱⁱ The sample determination and data collection methods were different across countries as discussed. This was necessary to simultaneously obtain responses and minimize expenses. We follow the example set by others (Filatotchev et al., 2001).
- ⁱⁱⁱ A tenth characteristic, labor freedom, was added to the index in 2006, which is after the time period of interest.
- ^{iv} Dropping the 'trade policy' component did not alter the statistical significance of our independent variables.
- ^v When country population weighting was not utilized countries with larger sample representation were over represented.
- ^{vi} We note that the relatively high collinearity of the variables will increase the standard errors and reduce the probability of significant findings.
- ^{vii} We appreciate this suggestion from an anonymous reviewer.
- ^{viii} We appreciate this suggestion from an anonymous reviewer.