

**GEOGRAPHIC ORIENTATION AND PERFORMANCE  
OF GLOBAL VERSUS REGIONAL MNEs**

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### **ABSTRACT**

Research on multinational enterprises (MNEs) has been preoccupied with the concept of “global strategy” based on the assumption that a global presence is a natural endpoint for internationalizing firms. Recent research, however, has suggested that very few global firms exist and, in fact, those MNEs that orient their business interests towards their home regions experience superior performance. We bridge the gap between these opposing viewpoints on the nature of MNE geographic orientation (i.e., global versus regionally-based MNEs) by examining the drivers that differentiate between these organizational archetypes. We argue that the liability of foreignness creates conditions under which proprietary assets affect an MNE’s propensity to organize globally versus regionally as well as the suitability of that strategic choice. Using a large data set of MNEs, our results suggest that, in low technology industries, most firms tend to internationalize regionally and only those firms with a combination of strong marketing assets, extensive international experience, and focused product lines tend to take on a global orientation. MNEs in more technology intensive industries, on the other hand, and especially those with the strongest technical assets, are more likely to have a global presence.

## INTRODUCTION

As noted by various authors (see e.g., UNCTAD, 2000), the current unprecedented trend of international economic growth has been precipitated by the foreign direct investments (FDI) of MNEs. Advances in communication and transportation technologies are enabling firms to move products and information more efficiently across large physical distances. Increasingly, product and process technologies favour global scale and scope and political reforms are transforming the macroeconomic landscape making national boundaries less significant as investment barriers. Scholars from a variety of disciplines are interested in this process, often subsumed under the label of economic globalization, and have begun to develop the concept of “global strategy” (Govindarajan & Gupta, 2001; Jeannet, 2000; Yip, 2002).

Other researchers, however, have argued recently that global firms are extremely rare and that globalization, as generally conceptualized, has never existed (Rugman, 2000, 2001; Rugman & Brain, 2003; Rugman & Hodgetts, 2001; Rugman & Verbeke, 2004a). By examining firm-level data on worldwide sales patterns, these researchers show that world trade occurs predominantly within, rather than between, the Asian, European, and North American economies, suggesting that “global” business is dominated by MNEs with revenues derived largely in the countries of their home region. This evidence has led Rugman and colleagues to suggest that the most successful companies take a geocentric orientation when making their strategic and structural choices. Thus, “not only is globalization a myth; global strategy is a myth” (Rugman, 2001).

As pointed out by Rugman & Verbeke (2004a: 5), however, an examination of sales distributions of MNEs “should be considered a starting point for introducing systematically a regional component in international business research.” In fact, anecdotal evidence of the

distribution of MNEs' international operations reveals that there is a great deal of heterogeneity among firms in terms of their geographic orientation. To illustrate this point, consider the contrast between Matsushita Electronics and Pioneer Electronics. Both are major Japanese firms operating in the household audio and video industry; yet their pattern of international activity differs significantly. Pioneer has 70% of its foreign subsidiaries and 96% of its foreign capital invested outside the Asia-Pacific region, with extensive operations in Europe and the US. Conversely, only 46% of Matsushita's foreign subsidiaries and 57% of its foreign capital are outside its home region and about half of its operations remain distributed among fourteen different countries in the Asia-Pacific. Hence, when evaluating the international strategy of these two companies it appears that Pioneer is more globally oriented whereas Matsushita has a strong focus on the Asian region.

Given varying international profiles such as these, it is important to understand the conditions under which MNEs pursue a global strategy while others focus on their home region, and what the performance implications are. To address this we develop a contingent framework of MNE *global versus regional orientation*—defined here as the distribution of FDI between home region (a regional orientation) and host regions (a global orientation). Our interest here is in analyzing the conditions that underpin the global versus regional profiles of MNEs, using the determinants of geographic scope which have been theorized in prior literature. Since much of the international diversity research has been criticized for not taking into account the MNC's proprietary assets (Dess, Gupta, Hennart, & Hill, 1995), we incorporate this important variable as a key predictor of global versus regional orientation.

This paper is intended to extend the analysis of MNE investment location by making several contributions to this literature. First, by examining a different sample and alternative

measure of MNE location, we examine the generalizability of Rugman & Verbeke's (2004a) assertion that MNEs are rarely global and, those that are, experience inferior performance. The second contribution of this research is to provide new insight as to some of the key features that distinguish the structure and performance of regional versus global MNEs. We begin, therefore, by developing our theoretical perspective on the spatial location patterns of MNEs. Subsequently, we analyze firm-level data on 258 Japanese MNEs—firms that originate in one of the key economic triad regions—to test our hypotheses. We then discuss the implications of our findings with some suggestions for future research.

### THE CONCEPT OF GLOBAL STRATEGY

While the concept of economic globalization, i.e., the comprehensive interconnection of worldwide markets, is invoked in both international management research and the popular press, it is often conflated with internationalization, i.e., the process of firm expansion beyond home countries into foreign markets. Hence, the questions most often asked by researchers interested in the MNE have focused on the drivers of the degree of firm internationalization, ignoring the spatial distribution of these international activities perhaps on the assumption that a global presence is an inevitable outcome. More than three decades of research has examined internationalization, providing insights into the process of firm, country, and location-specific advantage exploitation and of the nature of economies of scale and scope.

Recently, however, scholars have started to challenge the notion that a global presence is a valuable geographic orientation or even a logical outcome of the internationalization process. These scholars are re-examining the concept of internationalization by differentiating explicitly between the degree and pattern of foreign involvement in recognition that these are distinct notions with different antecedents and consequences (Goerzen & Beamish, 2003; Vermeulen &

Barkema, 2002). To illustrate, two firms can have an equal degree of internationalization by having 50% of their assets in foreign countries yet, at the same time, these firms can have completely different internationalization patterns in which one firm has all of its FDI in a single foreign market whereas the other's operations can be spread across all corners of the world. Thus, the degree of the foreign operations of these two hypothetical firms may be identical but they are nevertheless completely different in terms of their spatial organization.

This difference is significant because firms that vary in their degree and pattern of FDI would be quite different in terms of the managerial challenges and opportunities. While there is often an implicit assumption that bigger is better, more is not always an unmixed blessing for international business managers in terms of global presence. A case in point is Wal-Mart's recent withdrawal from the European market as the competitive advantage enjoyed by the retail giant in the US failed in Germany. This example suggests that the normative assertion that all firms must implement global strategies must be flawed. Thus it has become increasingly clear that, to improve our knowledge of MNE strategy, we need to understand not only the macroeconomic, political, and technological foundations of globalization but also the drivers and inhibitors of this process for individual firms.

#### INTERNATIONALIZATION AND LIABILITY OF FOREIGNNESS

The basic premise of the theory of the MNE (Buckley & Casson, 1976; Rugman, 1981), is that the growth of MNEs, both in number and size, can be attributed to their abilities to internally organize, control, and transfer assets across political boundaries. In essence, inefficient markets—largely for knowledge-based assets such as technology, patents, and human capital—encourage firms to appropriate the value from these resources in foreign markets through internal use and development. Unless comparative advantage or other factors restrict operations to a

single country, MNEs are encouraged to exploit their firm-specific advantages through a network of operations abroad (Dunning, 1988).

Thus, the underlying factor that propels MNEs toward international operations is that their core firm-specific advantages are non-location bound (Rugman & Verbeke, 1992) and are, therefore, easily transferable across borders as an intermediate product. Companies possessing non-location bound firm-specific resources and capabilities are able to overcome imperfections in foreign markets leading to benefits of scale, scope, or exploitation of national differences through internationalization (Rugman, 1981). Yet, among the factors that escalate the costs of internationalization are host market conditions including local stakeholder discrimination against outsiders as well as foreign firms' lack of important local knowledge (Hymer, 1976; Kostova & Zaheer, 1999), a phenomenon often labelled as the liability of foreignness (LOF). Zaheer (1995) and Mezias (2002) provided empirical evidence of the existence of the LOF as an inhibitor of MNE performance.

This view of firm-specific advantages (FSAs) as drivers of firm internationalization that are constrained by the LOF is an argument that suggests no limitation to firm internationalization. As long as the MNE's proprietary assets retain their value, rarity, inimitability, and non-substitutability, they can in principle be applied anywhere in the world. Perhaps as a result of this, the internationalization endpoint assumed in much of the literature has been that of a global presence in which the MNE enacts a global strategy (Ghoshal, 1987; Govindarajan & Gupta, 2001; Jeannet, 2000; Yip, 2002) and strives to create a worldwide corporate identity (Bartlett & Ghoshal, 1989)<sup>1</sup>.

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<sup>1</sup> While Bartlett & Ghoshal (1989), and others, have sometimes defined global strategy to include product standardization and administrative centralization, this paper uses the term in referring exclusively to the scope of the MNE's international operations.

Recently, however, the viability of global strategy has been challenged, as international management scholars have begun to explore the prevalence and the performance impact of different geographic internationalization patterns. Some studies have indicated that the complexity and costs of pursuing a global scope may outweigh the benefits in certain circumstances. For example, Goerzen & Beamish (2003) show that cultural and economic diversity among the countries in which the MNE has international operations inhibits its performance. Vermeulen & Barkema (2002) find that the geographic dispersion of the MNE's international expansion path diminishes the performance benefits of internationalization. These studies imply that MNEs, instead of pursuing a global strategy, should internationalize within a proximate set of similar countries to maximize the returns on their foreign investments.

A similar idea emerges from the literature on regional strategy, which contends that the effects of both FSAs and the LOF may be moderated by regional borders (Rugman, 2005; Rugman & Verbeke, 2004a, 2004b). These authors suggest that most FSAs may not be as location-independent as previously assumed and that MNEs may, therefore, reach the limits of organization before exhausting the value of their proprietary resources and capabilities. For example, the failure of Wal-Mart in Europe has been attributed to the discrepancies between the retailer's business practices, which provide it with a competitive advantage in the US, and European shopping preferences (The Economist, 2006). Furthermore, they contend that MNEs will also encounter a liability of inter-regional foreignness (Rugman & Brain, 2003) as they venture outside their home region, leading them to incur relatively higher costs than those they would face in foreign markets closer to home. For example, a Japanese MNE may find it somewhat more difficult to adapt to the French market than would a Spanish MNE—whereas both would be at a disadvantage compared to a French firm.



This inter-regional LOF can thus be defined as the difference between the costs of doing business outside the MNE's home region relative to the costs of doing business in foreign countries within the home region; and these costs diverge because the LOF is largely determined by the diversity and distance between home and host markets (Zaheer, 1995). Taken together, these arguments suggest that most MNEs should be neither completely overwhelmed by the LOF, nor able to fully overcome it by means of their FSAs, but rather caught in varying states of "semi-globalization" (Ghemawat, 2003).

### THE DRIVERS OF MNE GLOBAL VERSUS REGIONAL ORIENTATION

The central premise in our paper is that, even though all MNEs have an incentive to internalize foreign markets through FDI, their investment patterns vary because of their configuration of FSAs. These differences drive the firm-specific costs and benefits of globalization and lead to different kinds of spatial orientation. The literature has established that one important way of understanding MNE FSAs is through their spending on technical and marketing assets. In fact, previous studies have shown that the strength of these intangible assets is correlated with the global orientation of MNEs' foreign activity (Delios & Beamish, 2005; Rugman & Sukpanich, 2006). We build on that research by incorporating these FSAs into our framework, showing how their effects on global orientation are moderated by the industry. Our conceptual framework is summarized in Figure 1 and elaborated in the following sections.

\*\*\*insert Figure 1 about here \*\*\*

### **The Effect of Proprietary Assets on Global versus Regional Orientation**

*Marketing and Technical Assets.* FSAs are functional or production-related proprietary assets that can be generally categorized as either technological or marketing know-how (Dunning & Rugman, 1985). The essential question for the MNE is whether their FSAs can overcome the

inherent cost disadvantage relative to local competitors that are related to the LOF in foreign markets (Hymer, 1976; Zaheer, 1995). Technological assets are often considered one of the major enablers of global strategy (Dhanaraj & Beamish, 2003). Technological know-how enables firms to achieve cost-efficient production and higher product functionality, which may be valuable in most foreign markets independently of cultural differences.

In addition to technical FSAs, marketing capabilities may be an important determinant of the MNE's ability to expand globally. On one hand, it could be argued that brand equity is closely associated with normative, cognitive, and affective processes in the minds of the customer, and when significant psychic distances exist, it may be more difficult to exploit this type of asset abroad. However, country-specific brand equity is created by the underlying marketing capabilities of the firm—capabilities which may themselves be less location-bound than the brand equity that they generate. Such capabilities may include experience with distribution networks, ability to read consumer trends, and understanding of cultural adaptation issues. It is precisely when the firm lacks these skills that it could face globalization barriers because it would inadvertently try to apply branding and positioning from its home country to other markets where these tactics may not be suitable.

The implication of this argument is that both marketing and technical FSAs should propel firms towards a global orientation, as summarized in the following hypotheses:

*Hypothesis 1: The strength of an MNE's intangible asset base, i.e. technological and marketing assets, is positively related to the extent to which the firm has a global versus regional orientation.*

### **The Moderating Effect of Industry**

Prior research has not converged on the question of the extent of regional versus global reach of a given FSA. Rugman & Sukpanich (2006), for example, found that marketing assets are not

related to regional orientation, and that technological assets are in fact more valuable to regional firms than to global firms. In contrast, Delios & Beamish (2005) find that global firms have both stronger marketing and stronger technological assets than do regional firms. These mixed findings may reflect the difficulty of generalizing across industries with different characteristics and, therefore, different key success factors. Even though technology and brands are often treated as universal FSAs, the extent to which firms benefit from each of these types of assets is likely to vary among contexts. Brock, Yaffe, & Dembovsky (2006) argue that the relationship between international diversification and performance may be highly industry-specific, and that this may explain why the extant research—using samples from different industries—has reported divergent results. We extend this argument to the relationship between proprietary assets and geographic orientation, proposing that both the antecedents and consequences of geographic orientation is moderated by the firm's industry.

Prior research suggests that technological intensity is an important discriminator between industries (Almor & Hirsch, 1995; Kobrin, 1991; Zahra, 1996). High-technology industries are characterized by economies of scale and network economies—characteristics which often create winner-takes-all type of markets where concentration ratios are high (Varian, 2001). In these industries, therefore, technology leadership may be sufficient to enable firms to overcome the LOF in even the most distant markets. Indeed, the seven global high-tech companies identified by Rugman & Verbeke (2004a) are all technology leaders in each of their segments of the computer, electronics, or communications industries<sup>2</sup>. Arguably, the technologies in these industries are relatively non-location bound, since the value proposition of these individual products (e.g., MP3 players or LCD screens) reside in the underlying technology rather than in

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<sup>2</sup> The seven companies are IBM, Sony, Philips, Nokia, Intel, Canon, and Flextronics. The remaining two global companies are Coca-Cola and LVMH.

the adaptation to local customer preferences. In contrast, while technological assets may be beneficial also to firms in low-tech industries—fashion and consumer goods, for example—it is no guarantee for global market access as these industries would tend to be more fragmented and hence may allow local and regional incumbents to retain market share against technologically superior global competitors. In these markets, a fundamental understanding of how customer needs vary by location is crucial. The global MNE must be able either to target these needs with locally adapted marketing efforts, generate global brand equity spillovers, or both (Takeuchi & Porter, 1986). The marketing capabilities of the MNE are an important determinant of its ability to execute this strategy.

Another important difference is that the motives to pursue a global strategy may differ between low-tech and high-tech industries. Firms from high-tech sectors are generally more perceptive to knowledge spillovers and clustering benefits (Audretsch & Feldman, 1996) and may therefore emphasize resource-seeking FDI (Dunning, 1993). For example, Hagedoorn (1993) finds that firms in high-tech industries are motivated by access to technological resources through R&D collaboration when they choose strategic alliances. However, to acquire technological knowledge from the environment these firms would presumably need strong technical capabilities in the first place in order to absorb and utilize the external knowledge. Hence, in high-tech industries, “by sustaining R&D spending, an organization increases its absorptive capacity to learn and take advantage of technological knowledge that is available *by scanning the external environment*” {Balkin, 2000 #1189: 1119, emphasis added}. This suggests there is a complementarity between technological capabilities and global orientation in these industries. Global firms are able to scan a much larger and more diverse external environment for technological knowledge than are regional firms, and in order to profit from that they need

absorptive capacity based on technological assets. In contrast, in low-tech industries market access often supplant technological knowledge as the main motivating factor (Hagedoorn, 1993). If that is the case, technological assets may not be necessary to reap the benefits of global expansion, and the correlation we observe between the two variables should be weaker. Taken together, these arguments suggest the following hypotheses:

*Hypothesis 2a: Greater industry technological intensity positively moderates the impact of an MNE's technological asset base on the firm's propensity to have a global orientation.*

*Hypothesis 2b: Greater industry technological intensity negatively moderates the impact of an MNE's marketing assets base on the firm's propensity to have a global orientation.*

### **The Relationship of Geographic Orientation and Firm Performance**

Ohmae (1985) suggested that MNEs with global penetration, i.e., no “blind spots” in any of the triad economies, would be in a superior position to recover the firm's investment on its unique and diversified products. As firms increase their global capacity to gather relevant information, they would be “better able to avoid surprises from foreign or domestic competitors” (Ohmae, 1985: 165). This reasoning suggests that those firms with a balanced presence in each triad (i.e., “insiders”) experience superior performance (Hamel & Prahalad, 1985). Thus, a large global market share and global balance need to be combined with presence in key or globally strategic country-markets. As suggested by Yip (1992: 71) these key global markets are important beyond their stand-alone attractiveness and are strategic due to the fact that they represent a large source of revenues or profits, are the key markets of global customers or of global competitors, or are a significant source of industry innovation.” Delios & Beamish (2005) provide anecdotal evidence for this proposition by showing that global firms generally outperform firms oriented towards their home regions.

Counter to this positive perspective on global orientation, Rugman & Brain (2003) suggest that home region-based MNEs are more successful since a relatively close geographic proximity permits these firms to achieve the economic advantages of scale and scope without exacerbating the LOF. According to this reasoning, this effect is reinforced within triad economies that pursue policies political harmonization such as the European Union or the North American Free Trade Agreement. To the extent that a regional focus decreases the liability of foreignness and, at the same time, enables the firm to deploy its FSAs more efficiently, global firms should suffer a performance penalty compared to regional firms. Hence, the literature contains conflicting arguments based on both the benefits and the costs of globalization for MNEs. Ultimately, it is an empirical question which of these, if any, prevails. Therefore, we suggest the following competing hypotheses:

*Hypothesis 3a: MNEs with a more global versus regional orientation experience superior performance.*

*Hypothesis 3b: MNEs with a more global versus regional orientation experience inferior performance.*

*Fit and Performance.* The ambiguity concerning global orientation may reflect the lack of attention to the individual firms' context, such as its intangible assets. Hence, one could in fact argue that global orientation should have no positive or negative effect on performance *per se*—instead, it is the *fit* between the intangible assets and global orientation which characterize successful firms. We believe that proprietary FSAs will not only push MNEs towards certain geographic profiles (as described in hypothesis 1) but also can describe a contingent configuration. The question is how to operationalize this fit in the form of testable hypotheses. We have argued above that firms with strong FSAs have both higher ability and incentive to pursue a global strategy. The corollary to this argument is that firms with a global orientation

should have better ability to translate their FSAs into high performance. While both regional and global firms presumably benefit from technological and marketing capabilities, global firms should benefit more because they could potentially use these FSAs to gather diverse knowledge and reduce the high liability of foreignness they face in distant markets. This suggests that global orientation, rather than exerting a direct effect on performance, would act as a moderator of the relationship between intangible assets and performance. This is captured by the following hypothesis.

*Hypothesis 4: Having a global rather than regional orientation positively moderates the performance impact of technological and marketing assets.*

## **METHODOLOGY**

### **Data Description**

The primary source of data used in this study was a 1999 survey of the subsidiaries of Japanese corporations listed on the Tokyo stock exchange. The survey results were published by *Kaigai Shinshutsu Kigyou Souran*, a publication of Toyo Keizai Shinposha (Toyo Keizai, 1999). Toyo Keizai (which translates to Oriental Economist) was formed in 1895 and currently publishes more than 100 volumes annually as well as a variety of data covering economic conditions, stock markets, and Japanese corporations. Our choice to examine Japanese data responds to the call of many previous authors including Lincoln (1990) and Tallman & Li (1996) who suggested that research on Japan is lacking and that our collective understanding of Japanese firms falls substantially short of what might be expected of the world's third largest economy.

The surveys, which were sent to the subsidiaries through their parent firms, were completed by the subsidiary general managers with a response rate of 60%. The survey requested

basic facts such as subsidiary location, industry, employees, annual revenue, capital investment, and equity partner identities. These subsidiary-level data were then aggregated using a FORTRAN program into a database of the geographic distribution of FDI.

Based on Stopford & Wells (1972) definition that MNEs have operations in six or more countries, we tested our theoretical framework summarized in Figure 1 above with a data set of 258 Japanese MNEs that have a total of 13,529 subsidiaries. The core corporate-level data were augmented with corporate and industry details from Compustat and the Analysts' Guide (Daiwa Institute of Research, 1999).

### **Dependent Variables Description and Measurement**

***Geographic Orientation.*** The focal variable of this study, geographic orientation, is defined as the share of the MNE's foreign operations located outside the home region which, in our case, is defined as the Asia-Pacific region given our sample firms are of Japanese origin. We argue that this is a simple yet theoretically meaningful measure, since it reflects our definition of the inter-regional liability of foreignness, i.e., the relative difficulty of penetrating host region versus home region markets.

We used four items for geographic orientation including the host region share of foreign employees, of capital invested, of subsidiaries, and of the revenue generated by those subsidiaries. Since these shares are by definition confined to the range of [0, 1], logit transformations were performed in order to use geographic orientation as a dependent variable in linear equations.

Note that our measure of geographic orientation differs from that of Rugman & Verbeke (2004a) and Rugman & Sukpanich (2006), who include home country operations in their measure of home region operations. As we are interested in the pattern of internationalization



rather than the degree, we instead follow the approach of Delios & Beamish (2005) by decomposing foreign instead of total operations in order to control for home country bias. The distribution of foreign operations is what tells us something about the internationalization strategy of the MNE—i.e., whether it’s FDI regionally or globally oriented. We therefore also exclude exports from our measure of foreign revenue. Also, where some previous studies have classified MNEs into archetypes based on their regional orientation, we follow the approach of Rugman & Sukpanich (2006) and operationalize geographic orientation as a continuous variable.

One limitation of this geographic orientation measure is that it does not incorporate information about how the MNE’s host region operations are distributed between different host regions. Therefore, we also constructed a model where we replace the above measures of geographic orientation by “triad power” measures, defined as the propensity to have an equally strong presence across all three triad regions. We measure this by a partial entropy index, adapted from Hitt et al. (1997), among others. This measure is defined by  $\sum_{i=1}^3 p_i \ln(1/p_i)$ , where  $p_i$  is the share of the firm’s operations—employees, revenues, capital invested, or subsidiaries—located in triad region  $i$ <sup>3</sup>. Triad power will be maximized if the firm has 33% of its international activity in each of the three triad regions, and it is therefore a direct measure of the globalization concept used by Rugman & Verbeke (2004a), based on Ohmae’s triad power concept. On the other hand, it does not have the same strong connection to the liability of inter-regional foreignness as does our more simple measure. Also, we believe the focus on the triad economies has underplayed the significance of an MNC’s presence in certain key markets, namely Africa/Middle East and South America. While these regions are much poorer, they nonetheless

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<sup>3</sup> Note that unlike most entropy measures  $p_i$  need not sum to 1 here because the MNE can have operations *outside* the triad region.

present significant opportunities from a variety of perspectives including improving efficiency, innovativeness and, because these markets are in the earliest stages of economic development, revenue growth for MNCs entering them can be extremely rapid (Prahalad & Hammond, 2002). For these reasons, we employ host region shares as measures of global orientation by default and used triad power only as a robustness check. In any case, both the fit statistics and the causal paths were similar for each of the two measures of global orientation.

**Performance.** The economic performance of the MNE is measured by three items: Jensen's alpha, Sharpe's Measure, and market-to-book value. All three measures are market-based in the sense that they incorporate information about the stock market's reaction to the firms' strategies. Although accounting-based performance measures have been common in strategic management research, the strategy literature is increasingly using market-based measures that adjust for levered and unlevered market risk (Farjoun, 1998) since they are more "forward looking" as compared to accounting-based measures that are retrospective, based on historical information (Meyer, 1994). Also, the effects of intangible assets, which are a central object of this study, are not well captured by standard accounting procedures. Market-based performance measures, which include investor expectations of future growth opportunities, better captures the returns to these assets.

Jensen's alpha (Jensen, 1968) is defined by  $\alpha_i = \bar{r}_i - [\bar{r}_f + \beta_i (\bar{r}_M - \bar{r}_f)]$  where  $\alpha_i$  is firm  $i$ 's "excess" return over and above that predicted by the Capital Asset Pricing Model,  $\bar{r}_i$  is firm  $i$ 's average stock market return (i.e., capital gains/losses plus dividends),  $\bar{r}_f$  is the risk-free rate of return defined by the 10-year Japanese Corporate Bond Benchmark Rate,  $\beta_i$  is the firm's beta (derived from the firm's stock price variance), and  $\bar{r}_M$  is the average Nikkei Stock Exchange return, all over the sample period.

The second market-based measure of economic performance is Sharpe's Measure (Sharpe, 1966), calculated as  $(r_i - \bar{r}_f)/\sigma_i$  where  $\bar{r}_i$  is firm  $i$ 's average rate of return and  $\bar{r}_f$  is the risk-free rate of return, and  $\sigma_i$  is the firm's standard deviation of returns. Following prior research (e.g., Nayyar, 1993), the third measure of market-based economic performance is the market-to-book ratio.

### **Independent Variables**

**Technical and Marketing Assets.** Following prior research (Delios & Beamish, 1999; Kogut & Chang, 1991), proprietary technological assets was measured by R&D intensity and proprietary marketing assets by advertising intensity—i.e., the firm's R&D or advertising expenditures, respectively, as a share of its total sales.

The main theoretical rationale is not that these expenditures in themselves produce intangible benefits, but that firms possessing tacit and immeasurable capabilities may reap a higher return from such expenditures. For example, the success of some global brands has been attributed to their ability to tell stories about contemporary cultural change and conflict rather than to expenditure *per se* (Holt, 2004). Hence, high marketing intensity should be seen as a signal rather than a cause of such tacit capabilities. This is reflected in the causal structure of the confirmatory factor analysis where the latent variable marketing assets determines the manifest variable advertising intensity.

### **Control Variables**

The proprietary capabilities of the MNE are necessary but not sufficient resources underpinning geographic diversification and performance. As noted by Kor & Mahoney, firms create economic value “not due to mere possession of resources, but due to effective and innovative management of resources” (Kor & Mahoney, 2004: 184). Hence, strong FSAs need not translate

into global expansion, as the deployment of those capabilities globally can be a daunting task in itself. Even though proprietary assets may offset the LOF in each individual host market, the MNE still faces the challenge of coordinating these diverse and distant markets and implement the corporate strategy across them. It is therefore important to control for firm-specific factors which may support or inhibit that endeavour.

***Size of International Operations.*** The more extensive are the foreign operations of the MNE, the more experiential knowledge is likely to have been acquired by managers. This in turn increases managerial capacity for globalization and enables the penetration of markets with high psychic distance ((Johansson & Vahlne, 1977; Johansson & Wiedersheim-Paul, 1975), as is necessary to succeed with a globally oriented strategy. To capture this, we include the absolute size of international operations as a control variable. Originally we obtained the same four dimensions as for global orientation, i.e., the total number of foreign employees, subsidiaries, assets, and revenues. However, the number of subsidiaries and employees turned out to less reliable than the two other measures and had to be removed from the model, leaving the total foreign capital invested, and total foreign revenue as indicators of this construct.

***Industry Diversity.*** Another factor that could influence managerial capacity for the added complexity of globalization is the degree to which the firm's business interests are diversified across industries. On the one hand, both geographic and industry diversification tax top managers' absorptive capacity (Vermeulen & Barkema, 2002), leading to a potential trade-off between the degree of diversification that can be achieved on each dimension. On the other hand, it could also be argued that industry diversification builds a managerial capacity for managing complexity from which the MNE subsequently benefit when pursuing global expansion. This may explain why previous studies have found both positive (Goerzen & Beamish, 2003) and

negative (Hitt et al., 1997) correlations between international and product diversification. Either way it is necessary to control for this variable, which is measured here by the number of SIC2 and SIC3 codes reported by the firm. The former item is mainly an indicator of conglomerate diversification, while the latter would also capture firms moving into more closely related markets, e.g. expanding from newspaper into book publishing.

### **Empirical Methods**

To test our hypotheses we developed a series of structural equation models (SEMs) based on our theoretical model depicted in Figure 1. We chose an SEM approach as it is a powerful generalization of earlier statistical approaches with the key virtue of having a less restrictive assumption of measurement error (Bollen, 1989). In addition, SEMs allow for multiple indicators of the theoretical constructs, which is a more realistic representation of the variables under study and makes each construct less susceptible to the potential measurement error inherent in the individual indicators. Also, SEMs enable us to fit a series of causal relationships between the variables in the framework, which is important since our focal variable, global orientation, is both an independent and a dependent variable in our framework.

We used the two-step procedure proposed by Anderson & Gerbing (1988), which is a widely used application of SEM in the literature (see e.g., Simsek, Veiga, Lubatkin, & Dino, 2005). This procedure consist of first estimating measurement models that link the latent with the manifest variables, and then proceeding to estimate a series of nested models with structural relationships. In the first step, we estimated an independence model (model 1) where no covariances between the latent variables were allowed, and an unrestricted model (model 2) with all latent variable covariances allowed. The ‘null’ model (model 3), then, is a hypothetical model which is calculated by combining the  $\chi^2$  value from the unrestricted model with the degrees of

freedom from the independence model. It can be seen as an upper bound for the potential fit of any structural model and must therefore be acceptable in order to proceed to the second step.

After ensuring that this was indeed the case, we proceeded to fit the hypothesized model containing only the main effects described by our theory (model 4). Then, in models 5 to 7, we added three groups of theoretically justified paths involving the control variables. First, given previous research into the antecedents and outcomes of internationalization, it is reasonable to assume that proprietary assets, industry diversity, and the size of the MNE's foreign operations will be related (Delios & Beamish, 1999); hence one group of control paths includes correlations between these variables. Second, based on the argumentation in the section describing the control variables, industry diversity and the size of foreign operations are included as predictors of global orientation. Finally, we know that these variables may also affect performance (Delios & Beamish, 1999). It is important to assess whether the relationship between global orientation and performance is altered when controlling for this, so we include a third group of paths from the control variables to performance. Models 1, 4, 5, 6, and 7 are hence hierarchically nested models ranging from the independence model (1) to a fully saturated model (7).

We used a two-way group analysis to test the moderating effect of industry technological intensity. The sample was divided into two sub-samples: a high-tech sample consisting of firms in the computer, electronics, communications, and software industries, and a low-tech sample consisting of all other firms. The segmentation was based on the definition by the American Electronics Association<sup>4</sup> and used the main SIC2 code reported by the companies as grouping variable. The results from the two sub-samples were then compared to determine the moderating effect of industry. We also used a group analysis to test the contingent hypothesis, by dividing the sample into regional and global firms based on the median value of our four-item global

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<sup>4</sup> for more information, visit [http://www.aeanet.org/Publications/IDMK\\_definition.asp](http://www.aeanet.org/Publications/IDMK_definition.asp)

orientation factor, and looking at the performance antecedents for each of those groups. Table 1 presents descriptive statistics and inter-item correlations for the variables in the study.

\*\*\*insert Table 1 about here \*\*\*

## RESULTS

### Validity and Reliability of Estimates

Before evaluating the structural models it is important to confirm the fit of the measurement models which describe the relationships between latent and manifest variables. Table 2 shows the factor loading for each indicator, measuring the strength of these relationships, and the *t*-values indicating the significance of each relationship in the model. Note that one item is for each construct is set to have an unstandardized loading of 1, so *t*-values are not reported for that item and the loadings of the other items are measured relative to that item.

\*\*\*insert Table 2 about here\*\*\*

First we can confirm that each item loads with at least 0.5 on its assigned construct and that these loadings are significant at the  $p < 0.001$  level. To assess convergent validity, i.e., the internal coherence of the constructs, we report both the reliability and the Average Variance Extracted (AVE) for each latent variable having multiple indicators. In all cases, reliability and AVE exceed the recommended thresholds of 0.70 and 0.50, respectively (Gerbing & Anderson, 1988). This indicates that each construct can be considered homogeneous. We also calculate Cronbach's alpha for each scale and get a similar result as each scale exceeds 0.70.

To assess discriminant validity, i.e., whether the latent variables can be considered conceptually distinct from one another, we constructed 99.9% confidence intervals around each correlation and causal path in the model (Anderson & Gerbing, 1988; Burnkrant & Page, 1982) and confirmed that none of them contained unity. Another test of discriminant validity is to see if

the AVE of each construct exceeds the squared correlations linking it with the other constructs in the model (Fornell & Larcker, 1981). The lowest AVE in the model is 0.63, and the highest squared correlation is 0.40, telling us that the discriminant validity of the measurement model is acceptable.

\*\*\*insert Table 3 about here\*\*\*

Table 3 presents overall fit statistics for all estimated models. It is generally considered good practice to compute a wide range of fit statistics when evaluating the nomological fit of a SEM. For each model, we thus looked at the  $\chi^2$ -value, the Goodness of Fit Index (GFI), and the Normed Fit Index (NFI), all of which are measures of the distance between data and model (Jöreskog & Sörbom, 1996). Since the models have different degrees of freedom, we also looked at the Parsimonious GFI and the Root Mean Square Error of Approximation (RMSEA) values, which take this into account. All the fit statistics for the null model are indeed very good, with a RMSEA value well within the ‘good’ range. In combination with the reliability and validity estimates for our indicators, this tells us that we can have confidence in the measurement model and proceed to the nested models with structural relationships. Among these we can see that model 6 with correlations and global orientation controls yields the best RMSEA value. In other words, adding the performance controls (as done in model 7) improves the fit of the model but not enough to justify the sacrifice of degrees of freedom from model 6.

As model 6 seemed to offer a good compromise between fit and parsimony, we further looked at the modification indices for this model. Only one of these was theoretically meaningful: allowing for error covariance between “Foreign Capital Invested” and “Host Region Share of Foreign Capital Invested.” These measures share a common method as they are both aggregated from the same raw numbers, i.e. subsidiary capital invested levels. It is thus likely



that they have the same measurement biases, which would require us to allow their error terms to correlate. The other measures of foreign experience and global orientation are based on revenues, subsidiaries, and employees which may be easier than capital to estimate objectively.

Allowing this error covariance resulted in the final model 8. This model has a RMSEA value of 0.0397, which is well within the 0.05 range for ‘good fit’, and within the 0.08 range for ‘adequate fit’ with higher than 90% confidence. The GFI and NFI statistics are both 0.96, which indicates good fit compared to the recommended 0.90 threshold. A graphical inspection of the residuals confirms that they seem normally distributed with two tails and a peak around zero. All of this reinforces the impression that model 8 provides a highly accurate description of the structure of the data. The  $\chi^2$  statistic for this model is statistically significant, but only at  $p < 0.05$ , and as this statistic is highly sensitive to sample size we have more confidence in the RMSEA value, which controls for sample size. Figure 2 shows the causal relationships contained in model 8.

\*\*\*insert Figure 2 about here\*\*\*

### **Hypothesis Tests**

Having assessed the nomological fit, validity, and reliability of the SEM we can now proceed to evaluate our hypotheses. We have seen that model 8 fit the data best; however the estimated paths are actually robust across all models. Based on Figure 2 we find support for Hypothesis 1 that technological and marketing assets increase the global orientation of the firm. Also, we reject both Hypotheses 3a and 3b as global orientation seems to have no significant effect on performance.

## Group Analyses

The moderating effect of industry was tested by the group analysis reported in Table 4. These results lend strong support for Hypotheses 2a and 2b: technological assets influence global orientation only for high-tech firms, and marketing assets only for low-tech firms. In addition, we can see that also the effects of the control variables are moderated by industry. The relationship between industry diversity and global orientation, which was insignificant for the total sample, is actually negative for low-tech firms. Similarly, the relationship between international operations and global orientation is driven by low-tech firms and it is not significant in the high-tech subsample. In other words, the globalization of high-tech firms seems to be contingent only on technological assets, while a combination of marketing assets, industry focus, and international experience drive globalization of low-tech firms.

\*\*\*insert Table 4 about here\*\*\*

Finally, hypothesis 4 is evaluated by the group analysis in Table 5. The contingent fit hypothesis is partly confirmed, as the link between marketing assets and performance is stronger for global firms. However, regional firms seem to have a stronger ability to translate technological FSAs to performance than do global firms, contradicting our hypothesis.

\*\*\*insert Table 5 about here\*\*\*

## DISCUSSION

We have argued that, in order to elaborate on the theory of the MNE, we must understand what drives strategic heterogeneity. Our results indicate that firm-specific resources influence the globalization of the firm's foreign operations. This finding has implications for our view of the internationalization process of the firm as it suggests that firms without strong proprietary capabilities should constrain their international expansion to their home region. In that sense, our

study supports some of the contentions of the regional strategy literature (Rugman, 2005; Rugman & Verbeke, 2004a), namely the importance of regional borders as an inflection point for the internationalization process and the existence of an inter-regional LOF. In another sense, however, our results refute some of the basic assertions of that literature. We find no evidence that global strategies are rare (Rugman & Verbeke, 2004b) or that they are associated with lower performance (Rugman & Brain, 2003). Instead, it seems to depend on the individual firm's FSA strength and international experience.

Yet the most important message is perhaps that it is not possible to make valid inferences about globalization across all industries, as the antecedents of global orientation are industry-specific. For example, if we were to draw conclusions from the main model which looks at firms from all industries, we would get the impression that global firms have both strong marketing and technological assets. However, as soon as we split the sample it becomes evident that the prerequisites differ by industry.

For firms in high tech industries, global orientation is related only to technological capabilities. This means that even firms with relatively little international experience and with diverse industry portfolios attempt global strategies, perhaps reflecting the winner-takes-all characteristics of these markets and the relative homogeneity of consumer tastes. For firms in low tech industries, on the other hand, the picture is more complicated as a combination of marketing capabilities, international experience, and industry focus are needed to achieve a global orientation. Industry diversity is strongly related to the size of foreign operations and thus seems to enhance intra-regional expansion while inhibiting global expansion, at least in low tech industries.

A post-hoc ANOVA indicates that firms in low tech industries have significantly higher industry diversity and that they are more home region oriented, indicating that organizational complexity and exhaustion of managerial capacity may be an important inhibitor leading to lower globalization for this group of firms. This confirms the trade-off between industry and international diversification. The apparent absence of this trade-off in high tech industries may indicate that technological capabilities are more generic than marketing assets and can hence be deployed more easily across different industry markets.

Even though global orientation and performance are correlated on a bivariate level, we could not find evidence that global strategy *per se* leads to better performance. Our results hence inform on the study of Delios & Beamish (2005), who also report a positive relationship between global orientation and performance, as we show in a comprehensive latent variable model that both of these variables are in fact influenced by proprietary assets. Instead, it seems performance is more strongly related to the fit between marketing assets and global orientation. The best performing firms are those that choose a global orientation consistent with their marketing capabilities. This implies that marketing assets are a critical success factor for global firms: those that are able to adapt locally while coordinating globally, managing a global portfolio of brands while scanning the environment for global trends, will succeed where other firms fail.

Surprisingly, technological assets do not exhibit the same effect. It seems that technological leadership, especially in high-tech industries, is more like an entry cost into the global market—an asset which is necessary to possess in order to compete on a global scale but, once acquired, cannot offer any vehicle for profitable differentiation from other global firms. Perhaps technology is not as tacit and causally ambiguous as marketing capabilities are, and therefore more easily imitable by global competitors who themselves possess strong

technological skills, and more prone to dissipation through local knowledge spillovers. On this note, it is interesting that all the global high-tech companies in the Rugman & Verbeke (2004a) sample are not only technology leaders but also distinctly branded companies with large marketing operations.

Finally, our study indicates that it is both necessary and useful to break down MNE geographic scope into the two dimensions of internationalization, i.e., the extent of its foreign operations, and its geographic orientation which captures the distribution of these operations between proximate and distant markets. Our tests of discriminant analysis indicate that these are indeed two distinct properties of geographic scope, and our model shows that they have different antecedents, in the sense that industry diversity is positively related to internationalization and proprietary resources lead to a global orientation.

Clearly there is a relationship between the two variables, since large international operations enable the MNE to build managerial capacity for handling and reducing the LOF and therefore may be a precursor of global strategy. But our empirical tests show that this relationship only holds for low tech firms; that internationalization is only one of several precursors of globalization; that the path is far from strong enough to qualify as a deterministic relationship; and that high-performing firms seem to be able to pursue global scope irrespective of their level of accumulated international experience. Hence, whereas prior literature has implicitly treated geographic scope as a one-dimensional variable ranging from local to global, perhaps with regional as an intermediate point, we show that firms appear to internationalize in highly idiosyncratic ways.

## CONCLUSION

As our study indicates, feasible international strategic options may be greater than previously believed. MNEs are apparently characterized by a wide range of different internationalization patterns ranging from purely regional to almost completely global. The question raised in recent studies is whether globally oriented firms are pursuing flawed strategies or whether they are merely different from regional firms in ways which enable them to exploit the potential of globalization. Our findings point to the latter explanation. We found that the globalization of MNEs in technology intensive industries is associated with the possession of technological assets while, in other industries, it is a combination of marketing assets, international scale, and industry focus that leads firms towards a global orientation. We find no relationship between global orientation and performance, indicating that both variables are instead caused by intangible assets. However, firms with a strong fit between marketing assets and global orientation perform well.

Upon reflection on these findings, one may ask whether home region oriented firms are in fact following deliberate strategies to focus on their home region, or whether they are regional merely because they lack important firm-specific resources. In most cases the two explanations are of course likely to coincide: managers may prudently focus on proximate markets in recognition that their firms do not possess the capacity for a global strategy yet. In this context the marketing assets of the firm seem particularly important: even if managers believe they possess the technology to penetrate global markets in short order, doing so may be detrimental to performance if they do not also have the marketing capabilities to navigate these markets profitably. All of this suggests the need for managers to focus their attention closer to home even in a world where the forces of globalization seem to run rampant around them. If they are

tempted by global strategy, they should first and foremost be concerned with priming their organization for globalization, by building the resources for global strategy and superior performance.

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Table 1  
Descriptive Statistics and Item Correlations

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
<i>Technological Assets:</i>														
1. R&D Intensity	0.025	0.03												
<i>Marketing Assets</i>														
2. Advertising Intensity	0.011	0.02	0.12*											
<i>Industry Diversity</i>														
3. No. of SIC2 codes	5.5	4.44	0.10	-0.08										
4. No. of SIC3 codes	8.3	9.91	0.13*	-0.07	0.95***									
<i>International Experience</i>														
5. Foreign Revenue	1011	3880	0.18**	-0.01	0.39***	0.41***								
6. Foreign Capital Invested	465	1788	0.09	-0.03	0.54***	0.58***	0.50***							
<i>Global Orientation</i>														
7. Host Region Share of Foreign Subsidiaries	0.45	0.20	0.31***	0.20***	-0.04	-0.03	0.06	0.05						
8. Host Region Share of Foreign Capital Invested	0.58	0.29	0.23***	0.13*	0.05	0.05	0.10*	0.14**	0.67***					
9. Host Region Share of Foreign Employees	0.40	0.29	0.30***	0.12*	0.02	0.01	0.05	0.09*	0.70***	0.71***				
10. Host Region Share of Foreign Revenue	0.55	0.28	0.26***	0.11*	0.04	0.02	0.10*	0.09*	0.67***	0.73***	0.78***			
<i>Performance</i>														
11. Sharpe's Measure	-0.04	0.23	0.24***	0.11*	-0.02	-0.01	0.02	0.03	0.11*	0.03	0.05	0.03		
12. Market-to-Book Ratio	1.83	1.74	0.10	0.06	-0.02	-0.02	0.02	0.02	0.05	-0.00	0.00	-0.00	0.33***	
13. Jensen's Alpha	0.00	0.03	0.17**	0.08	-0.08	-0.06	-0.00	0.01	0.14**	0.09	0.09	0.08	0.79***	0.29***

\*p < 0.05; \*\*p < 0.01; \*\*\* p < 0.001

Table 2  
Measurement Model (Model 2)

Latent Variable	Indicators	Loading	<i>t</i>	Reliability	AVE	<i>Cr. α</i>
Technological Assets	R&D Intensity	1.00	-	-	-	-
Marketing Assets	Advertising Intensity	1.00	-	-	-	-
Industry Diversity	No. of SIC2 codes	0.92	-	0.96	0.92	0.97
	No. of SIC3 codes	1.00	25.1***			
International Experience	Foreign Revenue	0.78	-	0.85	0.75	0.85
	Foreign Capital Invested	0.94	12.8***			
Global Orientation	Host Region Share of Foreign Subsidiaries	0.77	-	0.91	0.71	0.90
	Host Region Share of Foreign Capital Invested	0.82	14.2***			
	Host Region Share of Foreign Employees	0.93	16.0***			
	Host Region Share of Foreign Revenue	0.84	14.4***			
Performance	Sharpe's Measure	0.98	-	0.83	0.63	0.78
	Market-to-Book Ratio	0.54	8.4***			
	Jensen's Alpha	0.80	12.1***			

\*p < 0.05; \*\*p < 0.01; \*\*\* p < 0.001

Table 3  
Structural Equation Models

Model	Description	$\chi^2$	df	NFI	GFI	RMSEA
1	Independence model	316***	67	0.84	0.84	0.1202
2	Unrestricted model	83**	52	0.96	0.95	0.0483
3	Null model	83	67	-	-	0.0304
4	Hypothesized model	271***	62	0.87	0.81	0.1145
5	Hypothesized w. correlations	90**	56	0.96	0.92	0.0483
6	Hypothesized w. correlations, global orientation controls	83**	54	0.96	0.95	0.0459
7	Hypothesized w. correlations, global orientation and performance controls	83**	52	0.96	0.95	0.0483
8	Hypothesized w. correlations, global orientation controls, error covariance	74**	53	0.96	0.96	0.0397

\*p < 0.05; \*\*p < 0.01; \*\*\* p < 0.001

Table 4  
Industry Group Analysis

Sub-Sample:		Low-Tech MNEs	High-Tech MNEs
H1	Technological Assets to Global Orientation	0.04	0.29**
H1	Marketing Assets to Global Orientation	0.21*	0.17
Control	Industry Diversity to Global Orientation	-0.27*	-0.01
Control	International Experience to Global Orientation	0.40**	0.03

\*p < 0.05; \*\*p < 0.01; \*\*\* p < 0.001

Table 5  
Global versus Regional Group Analysis

Sub-Sample:	Regional MNEs	Global MNEs
Technological Assets to Performance	0.27**	0.03
Marketing Assets to Performance	0.12	0.30***

\*p < 0.05; \*\*p < 0.01; \*\*\* p < 0.001

Figure 1  
Theoretical Framework

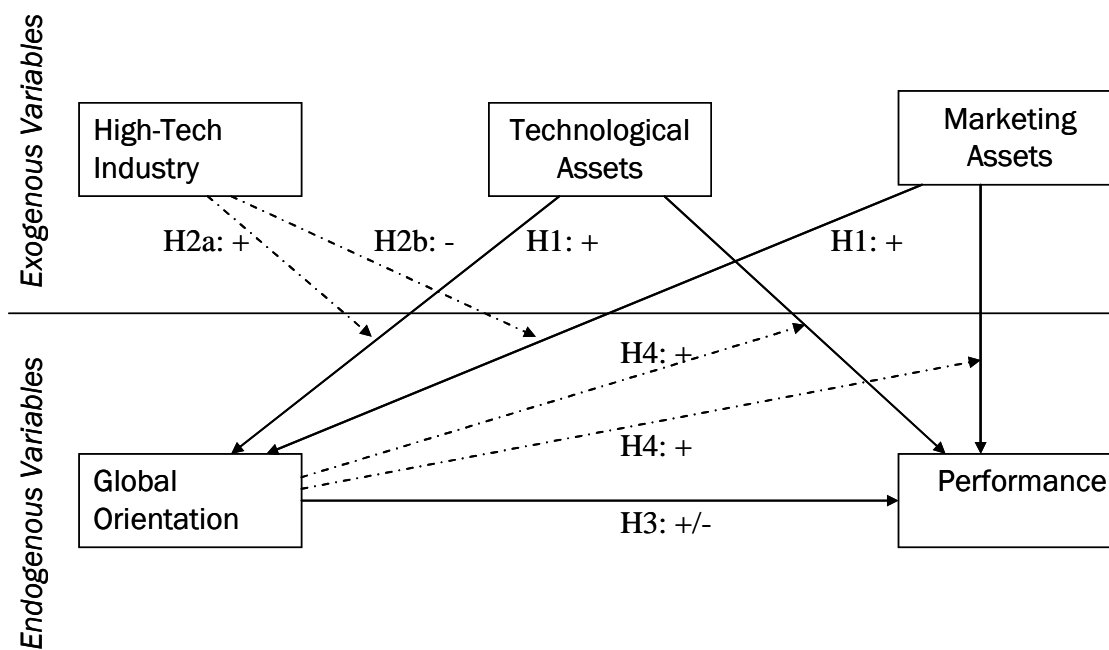
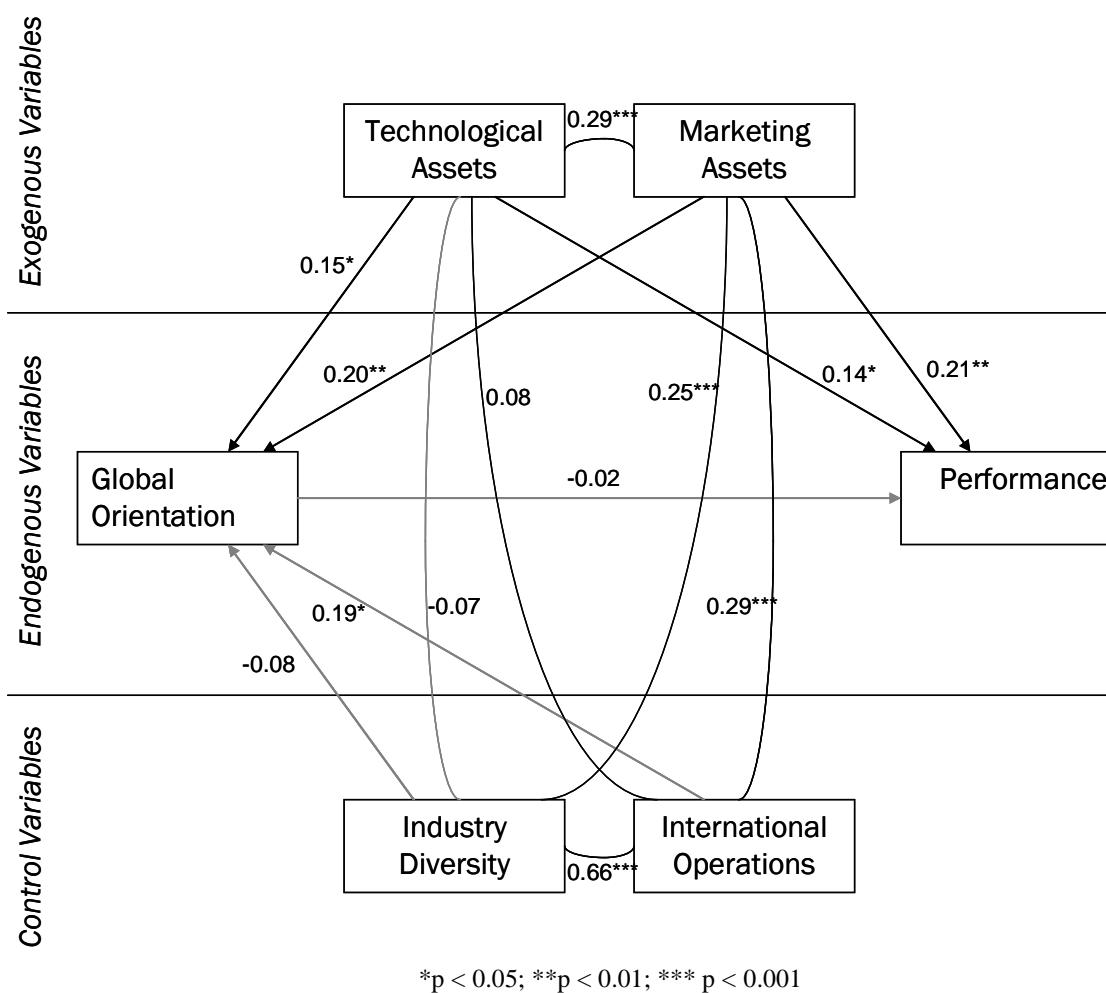




Figure 2  
**Empirical Model (Model 8<sup>5</sup>)**



<sup>5</sup> This is a simplified version of the model, suppressing manifest variables, factor loadings, error terms, and error covariances. Reported path coefficients are standardized betas.