EXPLAINING THE FORMATION OF INTERNATIONAL NEW VENTURES: THE LIMITS OF THEORIES FROM INTERNATIONAL BUSINESS RESEARCH*

PATRICIA PHILLIPS McDOUGALL
Georgia Institute of Technology

SCOTT SHANE
Georgia Institute of Technology

BENJAMIN M. OVIATT
Georgia State University

EXECUTIVE SUMMARY

International new ventures (INVs) represent a growing and important type of start-up. An INV is defined as a business organization that, from inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries (Oviatt and McDougall 1994). Their increasing prevalence and important role in international competition indicates a need for greater understanding of these new ventures (Oviatt and McDougall 1994).

Logitech, as described in a case study by Alahuhta (1990), is a vivid example of an INV. Its founders were from two different countries and had a global vision for the company from its inception. The venture, which produces peripheral devices for personal computers, established headquarters in both Switzerland and the U.S. Manufacturing and R&D were split between the U.S. and Switzerland, and then quickly spread to Taiwan and Ireland. The venture's first commercial contract was with a Japanese company.

Using 24 case studies of INVs, we found that their formation process is not explained by existing theories from the field of international business. Specifically, neither monopolistic advantage theory,

Address correspondence to Professor Patricia Phillips McDougall, Strategic Management Group, Ivan Allen College of Management, Policy and International Affairs, Georgia Institute of Technology, Atlanta, GA 30332-0520.

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product cycle theory, stage theory of internationalization, oligopolistic reaction theory, nor internalization theory can explain the formation process of INVs. These theories fail because they assume that firms become international long after they have been formed, and they therefore highlight large, mature firms. They also focus too much on the firm level and largely ignore the individual and small group level of analysis (i.e., the entrepreneur and his or her network of business alliances).

We propose that an explanation for the formation process of INVs must answer three questions: (1) who are the founders of INVs? (2) why do these entrepreneurs choose to compete internationally rather than just in their home countries? and (3) what form do their international business activities take?

Who are the founders of INVs? We argue that founders of INVs are individuals who see opportunities from establishing ventures that operate across national borders. They are "alert" to the possibilities of combining resources from different national markets because of the competencies (networks, knowledge, and background) that they have developed from their earlier activities. Following the logic of the resource-based view of the firm, we argue that the possession of these competencies is not matched by other entrepreneurs. Only the entrepreneur possessing these competencies is able to combine a particular set of resources across national borders and form a given INV.

Why do these entrepreneurs choose to compete internationally rather than just in their home countries? The founders of INVs recognize they must create international business competencies from the time of venture formation. Otherwise, the venture may become path-dependent on the development of domestic competencies and the entrepreneur will find it difficult to change strategic direction when international expansion eventually becomes necessary. As the founder of one INV explained, "The advantage of starting internationally is that you establish an international spirit from the very beginning" (Mamis 1989:38).

What form do their international business activities take? Founders of INVs prefer to use hybrid structures (i.e., strategic alliances and networks) for their international activities as a way to overcome the usual poverty of resources at the time of start-up.

This study has important implications for the practice of management. In financing decisions relating to INVs, venture capitalists and other venture financiers should look for entrepreneurs who have a global vision, international business competence, and an established international network. When entrepreneurs start INVs they should create hybrid structures to preserve scarce resources. Finally, given the path-dependence of competence development, founders of new ventures should consider whether establishing a domestic new venture with plans to later internationalize will be as successful a strategy as establishing a new venture that is international from inception.

INTRODUCTION

International new ventures (INVs)—firms that are international from the time of their formation—are growing in significance. This article shows that the generally accepted theories of international business fail to explain their existence. Indeed, the theories fail even to ask vital questions about INVs.

An INV *is a business organization that, from inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries* (Oviatt and McDougall 1994). A number of international entrepreneurship researchers (Jolly, Alahuhta, and Jeannet 1992; Oviatt et al. 1994; Ray 1989) have begun to focus attention on INVs, and the popular business press has reported that such firms represent a new and growing phenomenon (Brokaw 1990; *The Economist* 1992, 1993; Gupta 1989; Mamis 1989).

An example is Logitech, a manufacturer of mouse devices and other computer peripherals. As described by Alahuhta (1990), Logitech's founders (one of whom was Swiss and the other two Italian) had the strategic vision to make the new venture a global company from its inception. The venture established dual headquarters at start-up: its administration

was also split between the U.S. and Switzerland, and then quickly spread to both Taiwan and Ireland. Logitech's first commercial contract was with a Japanese company.

Whereas small numbers of INVs have actually existed for centuries, their increasing prevalence and importance in international markets indicate a need for greater understanding of these ventures (Oviatt and McDougall forthcoming). Our own attempts to understand them essentially followed the order of the major sections of this article. First, we compiled case studies of INVs and compared them with case studies of INVs written by other scholars in several countries. All these studies were exploratory attempts to discover common patterns in real-world situations rather than attempts at hypothesis testing. Such exploration is a commonly used technique to gain an initial understanding about a little-known issue (Quinn 1992).

In the second section, we analyze five generally accepted theories from international business. Since Steven Hymer wrote his pathbreaking thesis in 1960,[1] the field of international business has sought to understand why firms engage in international operations. Numerous theories have been developed, all of which seek to answer three crucial questions, first proposed by Hymer (1976) and subsequently reiterated by nearly all theorists (and textbook writers) on international business (Caves 1982; Vernon 1966; Johanson and Vahlne 1977; Knickerbocker 1973; Hennart 1982; Rugman 1981; Buckley and Casson 1976). The first question is, which firms engage in international business? Second, why do these firms choose to compete internationally rather than just in their home countries? Third, what structural form do these activities take?

The five generally accepted theories from international business which we examine in the second section—monopolistic advantage theory (Hymer 1976; Caves 1982), product cycle theory (Vernon 1966), stage theory of internationalization (Johanson and Vahlne 1977, 1990), oligopolistic reaction theory (Knickerbocker 1973) and internalization theory (Hennart 1982; Rugman 1981; Buckley and Casson 1976)—all fail to explain the formation process of INVs. The analysis presented in this article will show that they fail because they all focus on firm-level analysis of large, mature firms, rather than on individual and small group analysis of the entrepreneur and his or her social network of business alliances. In addition, the theories wrongly assume that firms become international long after formation.

To avoid these failures, the third section of the article shifts the level of analysis and combines concepts from the entrepreneurship and strategic management literatures to recast Hymer's three vital questions. First, who are the founders of INVs? Second, why do these entrepreneurs choose to compete internationally rather than just in their home countries? Third, what form do their international business activities take?

COMPILING CASE STUDIES

We examined 24 case studies of INVs. Because no directories or publicly available resources are available for identifying INVs (Brush 1992), we used business press articles and an iterative networking process to locate them. This process allowed us to identify 12 INVs that had been described in academic journals or meetings. Another 12 cases were compiled by two of this study's authors. Following the recommendations of Eisenhardt (1989), the selection of cases was not random, rather; "extreme examples" were selected. As Eisenhardt (1989:537)

[1] Although Steven Hymer's thesis was completed in 1960, and was widely read and accepted by international business scholars prior to publication, it was not actually published until 1976, two years after his untimely death.

notes, "random selection is neither necessary nor even preferable" when one is extending theory. Table 1 identifies the 24 case studies, along with each study's reference, the location of the venture's headquarters, its product or service, and the key issue in the study.

Three points are evident from the table. First, INVs are present in at least ten countries throughout Europe, North America, South America, Asia, the Middle East and the South Pacific. Thus, it is not a local phenomenon. Second, many of the firms appear to have formed in recent years, suggesting it may be a relatively new phenomenon. Third, although the ventures are primarily high-tech businesses, the presence of services and even aquaculture indicates that INVs emerge in a variety of industries.

For the 12 case studies developed by the authors, the method of investigation involved analysis of three sources of evidence: (1) documents, such as business plans, financial statements, letters, faxes, and minutes of meetings; (2) physical artifacts, such as the firm's products; and (3) personal interviews.

Semi-structured personal interviews, which were recorded and later transcribed, were conducted with either the founder or founding team of ten of the ventures. In the other two ventures, personal interviews were conducted with the chief financial officers, both of whom had joined the venture soon after it began operations. The researchers were also able to interview an additional key manager, a board member, or an investor in several of the ventures. There were follow-up personal interviews (sometimes more than one) in four cases and additional telephone interviews in all cases. In addition, there were personal interviews with three venture capitalists (one in Silicon Valley, one in New York, and one in Munich) who had been involved in financing such ventures.

The remaining sections of the article use many specific examples from this database to explore the generally accepted international theories and the questions we believe are vital to improved understanding of INVs. Major arguments are supported by multiple examples. Most of those examples are from our own case studies, because they are our richest source of data. It should be noted that although the case studies written by others did not contain all the data necessary to address each of the three crucial questions about the formation of INVs, we found no contradictions of our findings in any of those case studies.

GENERALLY ACCEPTED THEORIES FROM INTERNATIONAL BUSINESS

A core argument of this article is that the formation process of INVs cannot be explained by generally accepted theories from the field of international business. To show that the behavior of INVs is at odds with the predictions of existing theory, we discuss each of the five theories in turn. We begin with monopolistic advantage theory.

Monopolistic Advantage Theory

Monopolistic advantage theory holds that multinational enterprises[2] (MNEs) exist because a firm has unique sources of superiority over foreign firms in their own markets (Hymer 1976). The advantages belong to the MNE and cannot be acquired by other firms.

[2] We borrow Casson's (1982:36) definition of a multinational enterprise (MNE), "An MNE is any firm which owns outputs of goods or services originating in more than one country. . . . In particular it includes firms which merely operate foreign sales subsidiaries, since these subsidiaries produce market-making services and so qualify as foreign locations of production, within the terms of the definition. Note also that the MNE does not need to be a foreign direct investor, since all resources (except possibly inventories) in the foreign location can be hired rather than owned outright."

TABLE 1 Case Studies of International New Ventures

Reference and Venture Name	Headquarters	Product/Service	Key Issues
Coviello and Munro (1992)			
Cowan Bowman Associates	New Zealand	Computer software	Linkages with partners influenced the internationalization process.
Datacom Software Research	New Zealand	Computer software	
Fact International Ltd.	New Zealand	Computer software	
MANA Systems Ltd.	New Zealand	Computer software	
Jolly, Alahuhta, and Jeannet (1992)			
Conner Peripherals Inc.	United States	Computer disk drives	Features of their global strategy: global vision, industry redefinition, success in lead markets, volume built quickly, selective foreign investments, early product breadth, and tight organizational structure.
LASA Industries, Inc.	United States and and Europe	Prototyping systems for ASICs	
Logitech SA	Switzerland	PC desk-top aids	
Technophone Ltd.	United Kingdom	Hand-portable telephones	
McDougall and Oviatt (1991)			
Crytologics International	United States	Data compression and metering device	Forces driving global start-ups: resource needs, financing, market scale, competitor reactions, needs for technological standards, and domestic inertia.
International Investment Group	United States	Business consulting	
Momenta Corporation	United States	Pen-based computer	
Techmar Jones International Industries	United States	Water treatment systems	
McDougall and Oviatt (1992)			
Ecofluid Ltd.	Czechoslovakia	Waste treatment technology	Patterns of success: global vision, internationally experienced managers, international networks, preemptive technology or marketing, unique intangible assets, linked product extension, and tight organizational coordination.
EEsof, GmbH.	Germany	Computer software	
IXI Ltd.	United Kingdom	Computer software	
OASiS Group PLC	United Kingdom	Business consulting	
Oxford Instruments	United Kingdom	High field magnets	
SPEA, Software AG	Germany	PC graphics controllers	
Technomed International, SA	France	Medical equipment	
Oviatt et al. (1994)			
Heartware International Corporation	United States	Medical equipment	With strategic alliances, even the smallest new ventures can be international. However, failure is a risk.
Ray (1989)			
Camarao Brasiliensis Ltda.	Brazil	Shrimp aquaculture	Internationally oriented founders can enable a new venture to leapfrog the normally expected stages of internationalization.
Femcare International	United Kingdom	Female sterilization device	
Sci-Tex	Israel	Electro-optical systems	
Singatronics	Singapore	Medical equipment	

One type of monopolistic advantage is superior ability. Hymer (1976) argued that MNEs have superior knowledge, found in the form of superior manufacturing processes, brand names, differentiated products, organizational talents, or patented technology. Monopolistic advantage theory holds that once a firm has developed this superior knowledge, it can exploit

this advantage overseas at virtually no additional cost over that of exploiting that advantage in the home market (Caves 1971). Because local entrepreneurs have to pay the full cost of developing this knowledge, they are unable to compete with the foreign firm despite their advantage in local market knowledge, and foreign investment takes place (Caves 1982).

The difficulty in explaining the formation process of INVs through monopolistic advantage theory lies in its assumptions regarding the rationality of foreign investment. The theory is based in economic literature that assumes complete rationality and that all firms with the same monopolistic advantage will act identically. Therefore, the theory depicts internationalization as simply an optimization of costs and revenues across international borders.

Entrepreneurship theory, however, recognizes that these assumptions are unusual and that entrepreneurs are people who "are alert" to potentially profitable resource combinations when others are not (Barreto 1989:9). This means that two individuals, both possessing the same monopolistic advantage, may not both choose to engage in international entrepreneurial activity. Monopolistic advantage theory cannot explain why entrepreneurs perceive the opportunity of using their monopolistic advantage to internationalize from inception, whereas other people do not.

In addition, the tradition of monopolistic advantage theorists has been to argue that a firm will engage in foreign investment *after* some monopolistic advantage has been developed and exploited in the home country (e.g., Buckley and Casson 1976). By extending its mature operations to foreign countries, the advantaged MNE can exploit the *already developed asset* at a low marginal cost. However, that argument does not explain the establishment of INVs, because these firms often make foreign investments *before* the knowledge that provides for the monopolistic advantage has been developed and exploited in the home country market.

One example of this phenomenon is Technomed International, S.A., a medical equipment venture founded in France in December 1985. Its initial product, the Sonolith (then under development), was a machine that used lithotripsy to destroy kidney and gall stones with ultrasonic pulses and without surgery. Just nine months after establishing the parent company, and before the product even had FDA approval, Technomed established a U.S. subsidiary. Although eventual plans were for it to handle sales and after-sales support and to ensure regulatory approval of products, the subsidiary initially concentrated primarily on obtaining regulatory approval. Because Technomed International established its overseas subsidiary before its product had been approved for sale in the U.S. market, it is difficult to view this foreign investment as an extension of an existing monopolistic advantage.

Thus, although one of the purposes of monopolistic advantage theory is to explain why firms choose to compete internationally rather than just in their home markets, our analysis shows that it provides an inappropriate explanation for INVs.

Product Cycle Theory

The product cycle theory argues that MNEs exist because of the cycle of product development. According to this model, firms make direct foreign investments to protect markets that they originally served through exporting, only after products mature and competition becomes cost-based. Foreign investment in low-cost-of-production countries allows the foreign investor to compete with local entrepreneurs who enjoy low production costs and who seek to make inroads into the export market (Vernon 1966). Although Vernon (1979) himself has argued that the predictive power of the product cycle theory has waned, it

is still said to apply to "small firms or others that have not established substantial foreign operations" (Garland, Farmer, and Taylor 1990:11).

However, the product cycle theory does not explain the purchase of foreign assets by the founders of INVs for two reasons. First, many INVs engage in foreign investment to sell products for which competition has not yet become standardized and cost-based. For example, Logitech and LASA made the decision to engage in foreign investment while their products were still in what Vernon (1966) calls the "new product stage." Therefore, the foreign investment occurred when product cycle theory would argue that foreign markets would be served by exporting.

Second, the entrepreneurs founding INVs sometimes purchase foreign assets prior to exporting to foreign markets (Jolly et al. 1992). In the cases of Logitech and LASA, foreign markets are served by production from foreign investment sites even though local competitors have not yet driven down the cost of production to a point at which the products are standardized and competition is based on price (Vernon 1966). Product cycle theory would argue that exporting from the country of firm origin would be the preferred mechanism for serving foreign markets until such cost shifts had occurred. Therefore, product cycle theory does not appear to explain the direct foreign investment decisions of INVs.

One of the purposes of the product cycle theory is to answer Hymer's (1976) question concerning why firms choose international rather than exclusively home-market operations. However, our analysis shows that product cycle theory, like monopolistic advantage theory, provides an inappropriate explanation for INVs.

Stage Theory of Internationalization

The stage theory of internationalization argues that firms progress in a relatively orderly manner from local firms with ad hoc exporting to full-fledged MNEs as they become more experienced in international business. Under this model, companies begin to export because they receive unsolicited requests from foreigners to sell their products overseas (Aharoni 1966; Bilkey and Tesar 1977). As the demand for their products increases overseas, they progress to the development of an international division that exports in an organized manner (Stopford and Wells 1972). Exporting increases knowledge about the foreign markets, language, and culture of the customers, and it reduces uncertainty about foreign investment (Johanson and Vahlne 1977). Eventually, this added knowledge increases the probability of success in foreign investment (Newbould, Buckley, and Thurwell 1978) and leads companies to become MNEs.

Yet a growing number of empirical studies appear to contradict the stage theory of internationalization. For example, Welch and Loustarinen (1988) discussed reports of small English firms, Australian start-ups, and established Swedish firms that skipped important stages and were involved with unexpected speed in direct foreign investments. Ganitsky (1989) investigated a sample of 18 Israeli "innate exporters" that served foreign markets from inception. Brush (1992) found that 13% of her nationwide sample of internationalized, small U.S. manufacturers were firms that had internationalized during their first year of operation.

Sullivan and Bauerschmidt (1990) found no differences in perceived barriers and incentives to firm internationalization among the managers of 62 Swedish, Finnish, Austrian, and German forest product firms in varying stages of internationalization, even though managers of firms in varying stages of international activity should have knowledge and beliefs that vary according to those stages. Although Sullivan and Bauerschmidt (1990:27)

were "reluctant to reject this intuitively logical view of internationalization," the mounting challenges to the theory are impressive.

Johanson and Vahlne (1990) have attempted to deflect criticism of stage theory by stressing that it applies best to the earliest periods of firm internationalization. However, our evidence suggests that the stage theory of internationalization does not explain the formation process of INVs very well. None of the 24 INVs shown earlier in Table 1 followed the incremental stages of internationalization. The oldest case study in our sample, Oxford Instruments, which was founded in 1959, derived more than 50% of its revenues from international markets during its first year of operation. Oxford Instruments manufactured high-field magnets for laboratories that were conducting research in low temperature physics. In explaining his company's early internationalization, founder Sir Martin Wood stated, "[with] about 90% of our market abroad we 'thought international' from day one" (Wood 1992).

Similarly, SPEA Software AG, which manufactures graphic boards for computers, was also an early internationalizer. As Bernd Holzhauer, the President and CFO of SPEA Software AG stated, "To be successful, you have to be a global player right from the first day . . .. You have to go international or the international companies come to you, so you are fighting in your own market" (Holzhauer 1992). Therefore, he stressed international activity from firm formation and did not wait for unsolicited requests from foreign customers to internationalize.

Technomed International also had a proactive internationalization strategy. Jean-Francois Fevrier, vice president of finance and administration for Technomed International, explained why. "In the medical high-technology products industry, if we are not international we cannot survive and grow. We cannot rely on only one market, and we must be international from day one. In the United States a company might be able to make it, but a French company could not because the local market is too small" (Fevrier 1992).

In summary, the stage theory of internationalization, like the others already considered, has failed to provide an appropriate explanation for why INVs compete internationally rather than just in home markets.

Oligopolistic Reaction Theory

The oligopolistic reaction theory, as postulated by Knickerbocker (1973), holds that firms become multinational to match the actions of other members of an oligopoly. The core concept of this theory is that firms imitate one another's actions to reduce the risk of being different. If firms internationalize at the same time as their competitors, they are equally advantaged when the internationalization decision proves to be beneficial and equally disadvantaged when it proves to be detrimental. By imitating competitors, the risk associated with the decision to internationalize is reduced.

The oligopolistic advantage theory does not explain investment in INVs for two reasons. First, many times the INV is the first firm in an industry to invest internationally. And, as many observers have pointed out, oligopolistic reaction cannot explain the initial decision to invest abroad.

Many of the INVs we studied were the first in their industries to internationalize. For example, the founder of IXI did not consider its desktop windowing computer software for UNIX operating systems to be in competition with any software competitor. Rather, its founder and chairman, Ray Anderson, identified a need in the market and founded his INV to serve that need. He conceived the idea for the software product in late 1987. As Anderson explained, "UNIX computers were becoming a big thing but nobody was concerned about

making them easy to use. There was a big gap, and more and more of the big companies like NCR, IBM, and Apollo were starting to realize that they are going into UNIX but it wasn't easy to use . . .. IXI started up because these people wanted this software. They couldn't get it from anywhere, so I started IXI to deliver it" (Anderson 1992). Clearly, Anderson did not see IXI as part of an oligopoly; in fact, he did not even view his venture as having a competitor at the time he founded the company and began to market the software in the United States.

The second reason oligopolistic advantage theory fails is that oligopolists match the behavior of other firms to reduce the uncertainty of being different from their competitors only if they see the other firm as a competitor and feel that the competitor's action is truly a threat. Many INVs are formed by entrepreneurs that feel they are too small to immediately compete directly with established players in an industry. Many of these entrepreneurs formed INVs to avoid direct competition with established firms, rather than to imitate them (Jolly et al. 1992).

Thus, we have shown that oligopolistic reaction theory provides inappropriate answers for INVs to at least two of Hymer's crucial questions. First, in answer to the question of which firms engage in international business, the theory predicts that industry groups go international together. However, oligopolistic reaction theory does not even address why an INV would initiate internationalization. Second, in answer to the question of why INVs choose international rather than domestic operations, the theory cannot explain why INVs take the seemingly riskier path.

Internalization Theory

Internalization theory holds that MNEs exist because market imperfections create the opportunity for firms to earn higher economic rents by internalizing the transfer of factor goods and services across national boundaries within a single firm than they can by arm's-length transactions between firms (Hennart 1982; Buckley and Casson 1976; Magee 1977). In other words, when international markets are likely to fail, firms form to govern economic transactions by ownership of operations in multiple countries. Internalization theory holds that the decision to engage in international transactions should reduce costs. As Buckley writes, "The internalization approach to modern theory of the MNE rests on two general axioms: (1) firms choose the least cost location for each activity they perform, and (2) firms grow by internalizing markets up to the point where the benefits of further internalization are outweighed by the costs" (Buckley 1988: 181–182). We argue that internalization theory fails to explain INVs if INVs act in ways counter to these axioms.

We found that in some of the INVs, the entrepreneur does not always "choose the lowest cost location for each activity the firm performs" (Buckley 1988: 181–182). IXI's establishment of a U.S. subsidiary was not driven by cost reduction. Rather, as IXI's chairman Ray Anderson explained, "[the company] has to be over there to find out what the customers want" (Anderson 1992). In fact, he felt that because IXI had a U.S. subsidiary it actually spent more on selling its product. He explained, "Because IXI has a U.S. subsidiary, it costs more to travel in the U.S. We can't use air passes, but must buy full-price tickets. So with a subsidiary, it actually costs us more to do business in the U.S." (Anderson 1992). Anderson went on to explain that travel was one of the company's major costs. The special air passes for travel within the U.S., which he and his employees were allowed to purchase as U.K. nationals, were so much less expensive than what a U.S. traveler paid that the increased travel costs had a substantial impact on overall cost structure. Anderson further indicated that as the American office had grown, lots of other cost advantages of doing business in the U.K. had disappeared.

Similarly, cost considerations were not the primary driver of location decisions for Logitech. In order to compete successfully in the computer industry, its founders felt the company had to operate in Silicon Valley in order to be aware of technology trends and changes in customer requirements (Alahuhta 1990). This was the driving factor in their decision to establish manufacturing and marketing operations in Silicon Valley, and later in Taiwan. The Silicon Valley facility served Hewlett-Packard and AT&T, and the Taiwan facility served Apple, which had a production unit in Singapore.

There is evidence that firms do not choose the structure of their international business activities on the basis of "internalizing markets up to the point where the benefits of further internalization are outweighed by the costs" (Buckley 1988: 181–182). Most INVs favor a hybrid structure to govern transactions and make extensive use of their business and personal networks, even when they have proprietary knowledge that they risk losing by employing that business structure.

All four of the New Zealand software companies listed in Table 1 relied heavily on strategic alliances in competing internationally, even though software is one of the most difficult products to protect from expropriation by opportunistic partners. Their reasoning was that they had insufficient funding to use governance structures that provided greater control. One of these firms, MANA Systems Ltd., formed a strategic alliance with Fujitsu Australia Ltd. to market its software in Australia; whereas in Japan, MANA Systems formed a strategic alliance with Computer Engineering and Consulting Ltd. to market its product. MANA Systems also formed a strategic alliance with Fujitsu Japan for developing systems software for the worldwide market. MANA Systems' managing director, Robert Barnes, described the alliances as necessary to ensure survival of the venture (Coviello 1991a). Fact International Ltd.'s strategic alliances were also described by its management team as being critical to its very survival (Coviello, 1991b).

Like the other four theories considered here, internalization theory fails to provide an appropriate explanation for why INVs are international. Clearly, cost reduction is not the key. Moreover, the focus of internalization theory on firm-level analysis rather than on entrepreneurs and their social networks makes it unable to answer Hymer's (1976) question about the structural form of international activities in INVs.

EXPLANATION FOR INTERNATIONAL NEW VENTURES

The five theories discussed in the preceding sections all fail to explain the formation process of INVs. These theories fail because of the perspective from which they were developed. As noted in our introduction and borne out by our analysis, they all focus on firm-level analysis of large, mature firms, rather than on the analysis of entrepreneurs and their social networks of business alliances. In addition, the theories wrongly assume that firms become international long after formation.

Having shown that generally accepted theory does not explain how INVs form, it is incumbent upon us to try to provide an explanation. We propose that such an explanation must answer three questions about the internationalization of firms that are roughly analogous to Hymer's (1960) original questions, but at a different level of analysis. First, who are the founders of INVs? Second, why do these entrepreneurs choose to compete internationally rather than just in their home countries? Third, what form do their international business activities take?

Who Are the Founders of INVs?

Multi-country markets may be served by either multiple local entrepreneurs, or by an international entrepreneur who establishes an INV to serve them. An explanation for the latter case requires a combination of Kirzner's (1973) economic theory of entrepreneurship and the "resource-based" view of the firm (Barney 1990). Following Kirzner (1985), we argue that markets are not in equilibrium as neoclassical economics suggest. "At any given date a market economy is likely to be less than fully coordinated with respect to information currently possessed" (Kirzner 1985: 157–158). This lack of complete information makes entrepreneurship possible.

Entrepreneurs are people who "are alert" to information about potentially profitable resource combinations when others are not (Barreto 1989:9). The entrepreneur uses this superior information to create profit-making opportunities before others perceive them. Kaish and Gilad (1991: 48) demonstrated empirically that "not everyone looking at the same market data will come to the same conclusion about the possibility of profit. Successful entrepreneurs are those individuals who are capable of foreseeing disequilibrium profit opportunities *when they come across them.*"

Research has shown that this alertness to new business opportunity is influenced by previous experience (Casson 1982; Ronstadt 1988) because that experience provides a framework for processing information. For example, entrepreneurs usually found firms producing the same goods and services as those produced by their previous employers, and tend to target the same customers as their previous employers (Cooper and Dunkelberg 1986; Aldrich 1990). They are also more likely to have traveled overseas and to be educated (Birley and Norburn 1987). Our research also showed that the founders of INVs were often immigrants and had family and personal contacts overseas.

We argue that founders of INVs are more alert to the possibilities of combining resources from different national markets because of the competencies that they have developed from their earlier activities. Following the logic of the resource-based view of the firm, we argue that these entrepreneurs possess an unusual constellation of competencies. Only the entrepreneur possessing these competencies is able to combine a particular set of resources across national borders and form a given INV. For example, the founders of International Investment Group (IIG), a business consulting firm, considered what they refer to as their "proprietary network" to be their key competitive advantage. Their worldwide network comprised highly successful individuals, most of whom were retired. Primarily, these individuals had a personal, as opposed to business, relationship with one of the founders. The network members identified opportunities for the venture, offered business advice, assisted in negotiations, and sometimes lent their names and reputations to business deals. No compensation was paid to these individuals unless a transaction actually occurred. IIG, like most new ventures, had very limited funds. Only through this type of arrangement could this small venture achieve a worldwide presence. Their founders believed they had been able to tap into this critical resource of business knowledge and wisdom only because of their personal relationships with these individuals.

Gerald Seery discovered the technology for his venture while on a European business trip. During a business call on a client, Seery learned of recently developed cardiac medical equipment at a medical center in Holland. When his company decided not to pursue the technology, Seery purchased the technology and founded Heartware International Corporation. The venture was headquartered in the United States, with production in Holland. The first sales of the product were in Europe and South America.

Ray Anderson conceived the idea for his software while he was employed by a U.K. company that had operations in the U.S. and Canada. It was through his business interactions in the U.S. that Anderson identified the product need that led him to found IXI.

When Musa Marto took early retirement from IBM, he planned to consult for medium-sized and large corporations on becoming global. Struck by the lack of global vision among American CEOs, Marto decided instead to establish his own multinational company. Marto had no product idea he wanted to take to market; rather, he planned to build a company leveraging his international business knowledge and network. Mr. Marto stated in an interview that he considered his international business experience to be his key competence. After researching a number of previously domestic industries, he eventually secured the international rights to a water treatment product. Marto headquartered his venture, Techmar Jones International Industries, Inc., in Atlanta, Georgia, but all revenues were earned from operations overseas.

Twin brothers, Svatopluk and Vladimir Machrle, founded Ecofluid soon after the Velvet Revolution that led to the collapse of the communist regime in Czechoslovakia. Prior to the revolution, the brothers had been employed by academic institutions and had obtained a number of patents for the treatment and purification of water. Under the communist government in Czechoslovakia, all patents were owned by the state. However, both brothers had developed strong international networks. One had studied at the Massachusetts Institute of Technology in the U.S., and one had been educated in France. As academics, they had been allowed to travel to further develop their research. After the collapse of the communist regime, the brothers were able to acquire the patents they had previously earned. They then leveraged their network for access to markets, capital, employees, and other resources.

Access to superior international networks for funding has also been a factor driving the entrepreneur to compete internationally instead of just locally. The firm Momenta was able to obtain funding from the U.S., Singapore, Taiwan, and Europe primarily because of the business networks of its four founders. Its founders, who were from Iran, Tanzania, Cuba, and the U.S., each had extensive international connections. Momenta's founder and president, Kamran Elahian, had previously founded two highly successful high-tech companies, C.A.E. Systems, Inc. and Cirrus Logic, Inc. Through these companies, Elahian had developed a strong business network in the Far East.

Peter Sprague, founder of Crypotologics International, established an INV because his personal network, created as chairman of both National Semiconductor and Astin Martin, established his close relations with both European and U.S. private investors. He is also a former board member of LASA and was involved in its formation. Sprague believed that his relationship with foreign investors led him to focus on foreign opportunities more than he may otherwise have done, and more than other entrepreneurs do. He explained, "If your financing comes from abroad, they [the investors] are going to want you to move more rapidly into their own markets . . .. If 20% of your company is owned by a Frenchman, then you begin to think about going to France a lot quicker than you would if 20% of your company is owned by a guy from Peoria" (Sprague 1990).

Why Do These Entrepreneurs Choose to Compete Internationally Rather Than Just in Their Home Countries?

We draw on the resource-based view of the firm to explain why entrepreneurs chose to make their ventures international from inception. Inertia permeates organizations, and forces promoting inertia include organizational routines (Dosi, Teece, and Winter 1990; Teece,

Pisano, and Shuen 1990; Quinn 1980; Collis 1991), structural impediments to change (Hannan and Freeman 1984; Tushman and Romanelli 1985), demands of stakeholders (Hannan and Freeman 1984; Dimaggio and Powell 1983), perceptual biases of managers (Bower 1970; Milliken and Lant 1991), the location of power in organizations (Pettigrew 1987; Pfeffer 1981; Staw 1981), and market stickiness to reorganizing economic relationships (Yao 1988; Mahoney and Pandian 1992: 370).

Collis (1991) extended those concepts to the international arena when he noted that the existing physical assets held by firms, the power and influence of decision-makers, and the firm's culture and history ensure that decisions about international business activities are path-dependent.

> ... most investments are essentially incremental decisions, and firms only periodically reoptimize their system configuration. Once a plant is built, for example, its location is fixed, and as it will, within broad bounds continue to operate, it will affect the location of subsequent facilities even if, *tabula rasa*, it is incorrectly located (Collis 1991: 53).

Collis' (1991) empirical work confirmed that the foreign investment decisions of companies are influenced by unique competencies developed over their histories. Research has also shown that organizational routines and capacities that create competitive advantages in the domestic arena are not the same as those that create competitive advantages in the international arena (Ghoshal 1987).

For domestic firms wishing to enter international markets, inertia becomes a problem because it inhibits change to routines appropriate to international environments. International entrepreneurs, however, seem to recognize this, and therefore they try to avoid domestic path-dependence by establishing ventures, which, at their inception, have routines for managing multicultural workforces, for coordinating resources located in different nations, and for targeting customers in multiple geographic locations simultaneously. In its simplest terms, the founders of INVs believe that ventures will not develop international competencies except by practicing international business.

One example of this attitude was expressed by Technomed International's founder, Gerard Hascoet, whose philosophy of doing business was to establish a geocentric company from the very beginning. He chose the name Technomed because it could be understood in any language, with the exception of Japanese (McFarland 1991). Hascoet did not see Technomed International as a French company, but as a world company: "The advantage of starting internationally is that you establish an international spirit from the very beginning" (Mamis 1989: 38).

Technomed's international spirit was reflected at its Lyon, France headquarters and by its multilingual staff. The flags of the countries in which the company had offices were flown at the entrance of its French headquarters, and all conference areas carried miniature versions of the flags as centerpieces (McFarland 1991). Although it is very uncharacteristic of French companies to use the English language within the company, Technomed International conducted meetings and business in English from its inception. Annual reports were published in English. A large television monitor in the lobby of its headquarters presented information to visitors about the company, all in English. As previously noted, French-based Technomed International established a U.S. subsidiary before it had FDA approval for its lithotripsy machine. This allowed the venture to better scan its foreign environment and observe its foreign competitors.

Momenta's founder and president, Kamran Elahian, considered the establishment of a multinational work force as a key international competence. Discussing how Momenta's

hiring practices enabled Momenta to instill a global spirit within the organization, Elahian explained, "[We] hire either people who are foreign immigrants who have done work in their own cultures and have come here to work, or Americans who have lived in different foreign cultures and have learned how to have sympathy for it . . . If you hire all domestic people who were born and raised here and have not traveled around the world, then it becomes very difficult obviously . . . If you walk around within the company, you see lots of foreign faces. It's like the United Nations" (Elahian 1991). In addition, by hiring individuals from many nations Momenta could create from inception a multi-cultured workforce which would later be useful in marketing its product and servicing its customers in those countries.

Fred Nazem, a New York venture capitalist who had invested in Momenta and several other technology-based INVs, considered early internationalization to be critical. He noted in an interview with the authors that there was a need for the type of technology ventures in which his company invested to be world competitors. He felt strongly that the product must be world-class, not just good enough for the U.S. To correctly recognize the market, the venture was required to get into the international market at a very early stage of the design process. The larger and more established a domestic venture becomes, the more difficult it is to make the adjustment to world market requirements. Using a metaphor, he explained, "It's like a rowboat and the Queen Mary. You cannot turn the Queen Mary as fast as you can a rowboat. It takes you a while because your drag ratio is large" (Nazem 1990). If efficient policies and procedures are established for a domestic market over several years, employees will naturally resist the disruptive changes required to successfully address overseas markets. In addition, if the business has been successful, it will be larger and, therefore, slower to change even if employees are willing.

What Form Do Their International Business Activities Take?

We now turn to an explanation of why founders of INVs seek the form of international business activities that they do. Here again we draw on the logic of the resource-based view of the firm and add to it research on entrepreneurship. At the time that INVs make the decision to establish a structure for their international activities, they tend to have different resource endowments and historical legacies than do established firms which choose to internationalize. Key differences between established firms and start-ups lie in the amount of resources that the firms have relative to the internal demands for resources and in the way the founders go about gathering resources.

The process of founding a firm demands sufficient resources within a short period of time to avoid negative cash flows leading to firm failure. Because start-up activities demand relatively large amounts of resources, new ventures often have few resources left over for other activities. This means that entrepreneurs are unlikely to make expensive investments in the ownership of assets when alternative governance structures are possible. Thus, start-ups tend to internalize a smaller percentage of the resources essential to their survival than do mature organizations (Cooper and Dunkelberg 1986), and entrepreneurs must rely on hybrid structures for controlling many vital assets (Vesper 1990; Oviatt and McDougall, 1994).

One of the limitations of hybrid structures is that founders of new ventures face a threat of opportunism from their partners that could lead to venture failure (Larson 1992). However, if founders of these firms rely on members of their close personal networks as partners in these hybrid structures, they can often avoid these problems of opportunism. Founders depend on trust developed through repeated interaction over time to diminish opportunistic behavior in hybrid partners (Aldrich and Zimmer 1986; Larson 1992). Repeated interaction over time inhibits

opportunism because it makes the one-time gain from a single opportunistic action quite low in comparison to the damage done to one's long-term reputation (Larson 1992).

The actions of the INV founders we studied were consistent with the logic described above. For example, the founder of Techmar Jones International Industries indicated that because of very limited funds he built his entire company using strategic alliances.

Similarly, limited funding forced Heartware International to rely on a strategic alliance with the University of Maastricht in The Netherlands for R&D and for production of its electrophysiology equipment, which is sold to hospitals. Its founder, who had a marketing background and no formal technical experience, expressed a clear preference for internalizing R&D to both ready the product for the American market and to make continual upgrades. The founder had even identified and held discussions with the technical person he wished to hire for this function. However, because he had only been able to secure limited funding, he concluded that the venture did not have the resources to employ this individual and internalize the R&D function.

In contrast, ventures such as Momenta and Technomed International, which had significant capital investments, relied much less on strategic alliances. It appears that INVs that engage more in ownership of international operations, rather than in hybrid structures, tend to be ones for which resources are relatively more available. Under these circumstances, it becomes possible for the firm to make a cost–benefit analysis of the value of the internalization decision. However, under conditions of resource poverty, the case common to most start-ups, the internalization of transactions is limited.

CONCLUSIONS

In this article we show that firms exist that are international from formation. The international business activities of these firms appear to be at odds with the predictions of generally accepted theories from international business. The cases we investigated appear to follow a pattern of international activity that takes the following form: first, the founders of INVs are individuals who see opportunities for earning high returns for establishing businesses that operate across national borders. These entrepreneurs see opportunities that others do not see because of the competencies (networks, knowledge, and background) that are unique to them. Second, the founders of these firms engage in international business from the time of firm formation so as to create international business competencies and to avoid path-dependence on domestic competencies that the firm may not be able to shift out of due to inertial forces. Third, the founders of INVs tend to use hybrid governance structures for their international activities to preserve resources during the cash-draining formation process.

One of the limitations of theory development from case studies is that one may be developing specific explanations for narrow phenomena that cannot be generalized to a higher level (Eisenhardt 1989). We accept the criticism that our explanation of the formation process of INVs may explain the behavior of a much smaller subset of firms than is usually the focus of the more general theories from international business. Indeed, we do not claim to provide any general explanation of international business, but are seeking to explain only the behavior of INVs. Nevertheless, we argue that such micro explanations are necessary because the behavior of INVs are at odds with the predictions of existing theories from international business.

This article has important implications for research, teaching, and the practice of management. Researchers need to develop a richer explanation for INVs that goes beyond the concepts expressed here and by Oviatt and McDougall (1994). For example, a detailed

comparison of the networks of INVs and domestic new ventures should offer valuable insights. We have demonstrated that existing theories from international business are inadequate to the task because they focus on the wrong questions and the wrong level of analysis.

From the pedagogical standpoint, this study suggests that teaching only the existing theories of the international operations of firms to students seeking to become international entrepreneurs may provide them with an incomplete, and perhaps misleading, guide for establishing INVs. Teachers of entrepreneurship may need to design separate international entrepreneurship classes that augment traditional international business courses.

This study also has three implications for the practice of management. First, for venture capitalists and other venture financiers, the three questions are relevant in the financing decision of INVs. Venture capitalists should seek entrepreneurs who have a global vision, international business competence, and an established international network. Second, when entrepreneurs start INVs they should create hybrid structures to preserve scarce resources. Third, in light of the path-dependence of competence development, new venture founders should consider whether establishing a domestic new venture with plans to later internationalize will be as successful a strategy as establishing a new venture that is international from inception.

This research followed the direction of Eisenhardt (1989), who showed how to build theory using a theoretical sampling process where cases are identified that contradict the predictions of existing theory. We have described examples of the phenomenon of INVs that behave in ways counter to the predictions of existing theories from international business. Thus, although our conclusions are tentative, the topic appears worthy of further investigation.

The next step in the process of understanding the formation process of INVs would be to show that the predictive accuracy of our explanation of the behavior of these firms is greater than the predictive accuracy of existing theories. This statement can only be made after large-sample empirical studies have been conducted to compare the predictive validity of different explanations.

The primary objective of this article was to provoke a discussion of the limitations of existing theories from the field of international business in explaining what the business press and many investors see as an increasingly important subset of international businesses. It is our hope that this article will stimulate other scholars to undertake research on INVs.

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