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Department of Applied Economics and Management
Cornell University, Ithaca, New York 14853-7801 USA

**Foreign Production:**
The Weak Link in Tests of the Internationalization Process Model

James M. Hagen and Jean-Francois Hennart
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Foreign Production: The Weak Link in Tests of the Internationalization Process Model

by

JAMES M. HAGEN and JEAN-FRANCOIS HENNART*

ABSTRACT

This paper reviews empirical tests of two of the main implications of the internationalization model: that firms, as they gain international experience, enter markets of increasing psychic distance and that they enter a given market with successive entry modes that reflect increasing commitment. One problem with much of this literature is that it fails to control for economic variables that affect the choice of target market and that of entry mode. Another is the overemphasis on exports, and the relative neglect of foreign production. Yet, because it is more risky and less reversible, foreign production would seem to provide a better test of the model.

* James M. Hagen is an Assistant Professor in the Department of Applied Economics and Management Cornell University, Ithaca, NY. Jean-Francois Hennart is a Professor in the Department of Strategy and Organization Tilburg University
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Introduction:

The internationalization process model presented by Johanson and Weidersheim-Paul (1975) and formalized by Johanson and Vahlne (1977) is one of the most widely referenced models for explaining the development of a firm's international activities (Anderson, 1993).

In this paper we review the main empirical and conceptual studies of the model and argue that they overly emphasize the export stages of the process. Foreign direct investment is an increasingly important component of international activity, and for several reasons we believe it should receive greater focus in empirical studies of the internationalization process.

After a description of the model, we address its limitations and key criticisms. The next section describes possibilities for operationalizing the model and critically reviews several empirical studies which have attempted operationalization. We then discuss the importance of foreign direct investment as an emphasis for future studies, suggesting ways in which the operationalization of the model could be improved.
The Internationalization Process Model:

The internationalization process model identifies two general patterns taken by this process: The first is that firms which engage in international activity do so by a sequence of incremental steps, each of which leading to an increased commitment to international activities. Johanson and Vahlne (1977) listed the steps, collectively referred to as the establishment chain, as (1) no regular export activities, (2) export via independent representatives, (3) establishment of a sales subsidiary, and (4) commencement of production or manufacturing. Other authors have offered slight variations on the number of steps and their descriptions (See appendix). The model's second pattern is that, when firms venture into other countries, each subsequent country is of progressively greater psychic distance from the home country.

The driving force behind the model is that market knowledge and market experience are gained from initial international experiences, and that this knowledge in turn leads to decisions to commit to international activities. Those activities contribute to yet more knowledge and experience, and the process continues. While this incremental learning-increasing commitment process has relevance to growth theories in general, it is widely applied to international expansion because of the especially high level of uncertainty that accompanies border-crossing activities.

The model, first articulated in the mid 1970s, fits in the behavioral paradigm of Cyert and March (1963), Aharoni (1966), and Wind, Douglas and Perlmutter (1973). Specifically, it describes firm behavior outside of the context of optimal resource allocation. The process is one of "incremental adjustments to changing conditions of the firm and its
environment" (Johanson and Vahlne, 1977: 26). The model also references the business history writings of Wilkins (1970, 1974). The process is presented as an evolutionary one, and in a manner identified by Mintzberg, Raisinghani, & Theoret (1976), it proceeds with one stage leading to another even in the absence of conscious planning. Johanson and Vahlne (1977) phrased the process as a marketing phenomenon, but importantly maintained that it had general application and would also be suitable for describing the internationalization of purchasing, to take one example.

Johanson and Vahlne have often acknowledged that the model is only a partial one. Among the other variables affecting the internationalization process are firm size and available technology. In a later (1990) paper, the same authors affirmed that their model was compatible with, but not comparable to, Dunning's (1988) eclectic theory of multinational enterprise. They would leave it to others to explain the reason for the initial step down the international road.

As much as this paper refers to the process identified by Johanson and Vahlne as the model, ownership of the model does not entirely rest with those scholars and their co-authors. Johanson and Vahlne themselves suggested that other scholars may wish to contribute different configurations of the stages (1977). For convenience we may think of the model as a collection of models all of which are variations on the establishment chain and/or psychic distance theme. Also, the model itself has been continuously evolving as different scholars have tested it. Anderson (1993) identified two distinct lines of scholarship related to the model. One (which he acknowledged as the likely basis for the other) is the Uppsala School, named after Johanson and Vahlne's University in Sweden and the locus for
a large stream of internationalization research. The other, which he characterized as "innovation-related," focuses on internationalization as an innovation of the firm. For our purposes, we will consider the model in its most general sense as proposed by Johanson and Vahlne in 1977, without distinguishing between these two lines.
Criticisms and Limitations of the Model:

This section reviews some of the criticisms that have been levied against the model. The main one is that the model is only partial, a fact which Johanson and Vahlne (1977) readily acknowledged. More specifically, the model neglects location and strategic factors (Melin, 1992; Anderson, 1993). In addition to experience there are many economic factors that affect internationalization (Reid, 1983). Because there are many variables influencing export behavior of a firm, a partial model lacks predictive power (Bilkey, 1978; Dichtl, Liebold, Koglmayer, & Muller, 1983). Furthermore, while the model identifies internationalization as sequential, it doesn't offer an operationalizable explanation for the dynamic progression from one stage to another, nor does it explain the process's beginning (Anderson, 1993). Anderson further charged that there is no practical way to measure market knowledge without making the model's core argument (that increased market knowledge will lead to increased market commitment) a mere tautology.

Johanson and Vahlne stated that "once (the internationalization process) has started, (it) will tend to proceed regardless of whether strategic decisions in that direction are made or not" (1990: 12). The deterministic ring to that statement was refuted by Welch and Luostarinen (1988) who insisted there is no inevitability about the process's continuance. Others have criticized the model's establishment chain as too deterministic (Reid, 1983; Turnbull, 1987; and Rosson, 1987). A common concern is that the model addresses just the early stages of internationalization (Melin, 1992). Indeed Johanson and Vahlne (1990: 14)
acknowledged that most of the empirical support for the model comes from studies of the "early stages of internationalization."

Johanson and Vahlne (1977) noted three circumstances which can render their incremental stages model inapplicable: the firm has large resources; market conditions are stable and homogenous; and the firm has considerable experience from other markets that are similar. Thus, concerns that the process may be relevant primarily to the dynamics of the small firm or medium-sized firm (Cavusgil, 1982; Bilkey & Tesar, 1977) may be restatements of the model's acknowledged limitations. McKiernan (1992: 96) has argued that the relatively narrow focus of internationalization research on Europe may have "constrained the nature of the research process and its outcomes," suggesting that research in other geographic areas and/or at other times may have given different results. Johanson and Vahlne, while acknowledging this possibility, doubt its validity.

The very central incremental feature of the model's process is challenged by Bane and Neubauer (1981) who offered an international expansion model that occurs in bursts. McKiernan (1992) noted that Taiwanese firms went directly from OEM exports to acquisition and argued that this "leap frogging" contradicted the internationalization model.

Of the model's various limitations, it is the failure to address economic variables that is most problematic for tests of the model's implications. We propose that some of these variables can be controlled for and that it is the absence of controls that has led to the mixed results of the empirical studies presented in the next section. The concern that the model fails to explain the first step toward internationalization and is generally too deterministic is a concern left for a later paper.
Operationalization of the Model:

In its most reduced form, the model as described above includes two concepts which have frequently been operationalized separately or together: (1) psychic distance, and (2) establishment chains. This section presents several of the key operational studies and considers how they address some of the limitations mentioned above.

(1) Psychic Distance: This feature of the model is probably the most easily tested once an acceptable measure of psychic distance can be established. Johanson and Vahlne (1977) defined psychic distance as "factors preventing or disturbing the flows of information between firm and market," such as differences in language, culture, political systems, level of education, and level of industrial development (1975: 308). This concept is far from clear. For example, considering all the possible measures suggested above, is Japan psychically closer to the United States than to China?

It would seem that many variables must be controlled for. The specific knowledge of a given country by some of the firm's managers is one. For example, if the spouse of the V.P. finance is Brazilian, the psychic distance to Brazil will be reduced for that particular firm. For some industries, psychic distance may be overwhelmed by industry characteristics. A Minnesotan manufacturer of disposable chopsticks might attempt to enter East Asian markets prior to attempting entry into Western Europe. The size of market is also important. As Eastern European markets open up, American firms appear to have greater interest in Russia than in Estonia which is smaller but probably psychically closer. Because psychic distance is constantly changing between any two countries, it is a very
inconvenient variable in longitudinal studies. Assorted firm case studies are not as convincing as more aggregate studies which might show if the trend exists or not.

Hornell, Vahlne, and Wiedersheim-Paul (1973) ranked countries by order of their psychic distance from Sweden. Johanson and Weidersheim (1975) then compared the ranking (with slight modifications) to the internationalization histories of four Swedish firms that had significant sales and production overseas. Choosing 20 countries that each of the four firms (Sandvik, Atlas Copco, Facit and Volvo) had entered, the authors performed rank correlation tests between distance and the order of establishment. The resulting coefficients were all in the correct direction, and some were significant at .05, but the differences among the four firms were so great as to cause the authors to look for explanations other than psychic distance. Cultural distance is also identified by others such as Kogut & Singh (1986) and Anderson & Coughlan (1987) who argue that forays into other countries are first made into countries that are less culturally distant.

Benito and Gripsrud (1990) examined 201 cases of foreign direct investment by 93 Norwegian firms. They classified countries into three groups of increasing distance from Norway: (1) Near - other Nordic countries; (2) Medium distance - other countries in Europe and North America; (3) Far - all remaining countries. They found that first investment in medium distance countries was the most common practice, and fully 30% of the firms made their first investment in far countries. They also found no evidence that subsequent investments were in countries of increasing distance. The authors misread the model as one
competing with rather than complementing economic theory, and to test its generalizability they designed their study to be cross-industrial. The model can be criticized for its absence of economic controls. For example, one would expect firms that move abroad in search of cheap labor not to move to other Nordic countries, where labor costs are similar, but to move to Southern Europe or Asia. Similarly, investments that are undertaken to obtain natural resources must be distinguished from those whose purpose is to exploit intangibles. The choice of countries for firms seeking natural resources is limited by their uneven geographic distribution. Since the establishment of a foreign manufacturing subsidiary entails fixed costs, the choice of target market for firms that expand abroad to exploit intangibles is likely to be biased towards larger countries.

As evidence of how broadly psychic distance can be measured, Johanson and Vahlne (1990) explained one case of a firm beginning its internationalization with distant countries (in a case reported by Lindqvist, 1988) as a result of the firm having network connections in that country. That is not a surprising circumstance, but considerations like these are likely to reduce the predictive ability of the psychic distance construct in small samples.

(2) Establishment Chains: The existence of establishment chains has been investigated by numerous studies, with results both supporting and refuting the model. The original presentation of the model explained findings of case studies of Swedish firms which

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1 By way of example, the resulting list put the Scandinavian countries closest, but the U.S. (8th out of 20) was ahead of Switzerland, France, and Southern Europe. Japan, ranked 16th, was ahead of Brazil, Argentina, and South Africa. Australia was ranked 20th.
had moved along the establishment chain in their marketing efforts. The first question in operationalizing this model is how to specify the degree of internationalization.

Johanson and Weidersheim-Paul (1975) acknowledged that, while degree of internationalization is most accurately an expression of attitude, the only way it could reasonably be measured was by behavior. Accordingly they devised a ranking of internationalization behavior. The first level was to export with use of a sales agent in the foreign country. Second was establishment of a sales subsidiary in the foreign country, and third was establishment of a manufacturing subsidiary. In their same four-firm study referred to in the preceding section, two of the firms, Facit, and Volvo, had very minimal overseas manufacturing activity, but generally, all of the firms engaged in each level of international activity in the sequence expected: agency relationships were initially established (in all 20 countries), then sales affiliates, and finally manufacturing subsidiaries. That each firm proceeded along the chain at varying speeds leaves open the question of what (other than passage of time) instigated the moves from one stage to another. All those firms expanded abroad to sell products (as opposed to buy raw materials or components).

Case studies and surveys dominate the establishment chain empirical literatures. Authors employing surveys include Bilkey and Tesar (1977), Cavusgil (1980, 1984), and Czinkota (1982). Anderson (1993) has critically reviewed these and other articles which share a focus on the export phase of internationalization. In fact none of those three studies consider foreign direct investment at all. Other supportive export-based studies include Dichtl et al, 1984), Davidson (1980, 1983), Hook and Czinkota (1988), Johanson and
Nonaka (1983) and Karafakioglu (1986). The home countries of the firms studied include Scandinavia, the U.S., Hawaii, Japan, and Turkey.

Similar to the case study approach is the Industrial Marketing and Purchasing (IMP) project in which a British team gathered data over five years via interviews of a convenience sample of United Kingdom based firms that had export markets in Europe (Turnbull, 1987). A more in-depth analysis of three industries within the study (marine-diesel engines, motor vehicle components, and telecommunication equipment) refuted an evolutionary path. Sometimes an opposite effect was found as when a sales office was closed and direct exporting from the U.K. initiated. The study identified organization structures (e.g., agents only, sales subsidiary, manufacturing subsidiary) for each firm. Using the ratio of export sales to total sales for each firm as a measure of internationalization, the study found no relationship between degree of internationalization and organization structure.

Here again the test suffers from a failure to control for economic factors that should affect the relationship between share of foreign sales and mode of entry. For example, it does not pay to establish foreign sales subsidiaries to service foreign markets if the number of customers in those markets is limited and the firm's products mobile (for example, Boeing does not have foreign sales offices, but instead dispatches salespeople from Seattle). Similarly, the decision to manufacture depends on many well-known economic factors, such as tariffs and non-tariff barriers, transportation costs, scale economies, and relative costs of production. Because of these misspecifications and lack of controls, the test does not convincingly refute the internationalization model.
Sullivan and Bauerschmidt (1990-91) studied internationalization in the forest products industry of four European countries. They devised a questionnaire asking managers' opinions of the importance of 30 potential barriers and 30 potential incentives to export. They argued that managers in firms with more international operations would rate barriers to export to be lower than those working in firms that have a greater domestic focus. They measured a firm's internationalization by the geographic dispersion of both its sales and production operations. Their expectation that "managers of firms of different international scope will have different perceptions of the inhibitive and catalytic influence of barriers and incentives to internationalization" was not borne out (p. 21).

There are three major problems with this study. First, the authors posit the equivalence between the firm's and the respondent's international experience. Second, they assume that the relationship between the respondent's subjective assessment of barriers to exports and his/her international experience is linear. Yet there are good reasons to believe that this relationship is U-shaped: a manager with little international experience will understate the level and importance of barriers to exports; as most of the subsequent actual experiences based on these presumptions are likely to be unpleasant ones, a manager with a limited amount of experience is likely to overstate barriers to exports; lastly, additional experience is likely to restore our manager's confidence in his ability to overcome barriers to exports. In other words, there are good reasons to assume that the relationship between experience and the subjective evaluation of barriers to exports should parallel the U-shaped cultural adjustment curves of expatriates observed by Black and Mendenhall (1991). The lack of support for the Sullivan and Bauerschmidt hypothesis is therefore not surprising.
Sullivan and Bauerschmidt's measure of internationalization is also questionable. Their sample consists of sixty forest product firms in Austria, Germany, Sweden, and Finland. Each firm is given one of six internationalization ratings, based on whether the firm has international sales or production units in (1) the "adjacent market only", (2) the "adjacent market and Continental Europe," and on up to "principally overseas markets." Thirteen of the firms were not rated at all on account of their membership in a consortium. A concern with this measurement scheme is that firm size and the specific demand for each firm's products would seem to overwhelm internationalization characteristics of a firm as determinants of the markets in which a firm is active. As an example of misspecification, if a firm sold all of its products to one buyer in one overseas country, it would be rated as more internationalized than a firm selling and producing in ten countries of which only one is overseas (i.e., outside Europe).

While far from an exhaustive list, the above studies indicate the variety of means employed to operationalize the internationalization model, and also the strong focus of internationalization process studies on exports. They also highlight their general failure to control for the various economic factors that constrain the choice of countries entered and the strategies used to enter them. The next section proposes that future research should focus more on foreign direct investment.
The Neglected Role of Foreign Direct Investment:

We have seen that the bulk of the operational tests of internationalization theory have focused on exporting. Yet, the internationalization process also includes importing, licensing, and foreign direct investment. This focus on exporting is paradoxical for several reasons. First, foreign production plays a much greater role than exports in international business, with sales by foreign manufacturing affiliates of US firms three times US exports. Foreign production is also growing much more rapidly: from 1984 to 1989, foreign direct investment flows grew at an annual average annual rate of 29%, three times as fast as exports (The Economist, 1991).

A second concern with the export emphasis is that export/import commitments are arguably the most reversible of all modes of internationalization. Foreign direct investment, for example, often entails a major commitment of resources (time, money and attention), which is precisely why it is often the last stage of the establishment chain. Consequently, FDI decisions are much more telling about a firm's commitment to international expansion. Export decisions can be made more casually and may have a greater degree of randomness in them. The earliest stages of export expansion have particularly low consequences for the firm. If the internationalization model has any predictive ability, we would expect the evidence to be clearer in the case of FDI than in that of exporting.

A third important point to keep in mind is that foreign direct investment is not always a successor nor a substitute to exports. Yoshihara (1978) noted that many Japanese investments in South-East Asian countries were not alternatives to export. In some cases the
decision is between production at home for export and production abroad for export. Other investments may be made to develop resources or to acquire technology.

Hennart and Park (1993) made a preliminary investigation of whether Japanese investors in the US had followed the establishment chain. Twenty-four percent of the 670 products that were manufactured in the United States at the end of 1986 had not been previously sold in the US through a sales subsidiary. While those cases may seem to contradict the internationalization model, an examination of the products involved may suggest that they could not have been exported from Japan. Hence the need to control for economic factors (such as tariffs and transportation costs) that affect the mode of entry.

In some service industries (for example, banking) export is not an option. A British bank cannot reasonably provide letters of credit to customers in the U.S. without establishing a U.S. office.

Baer and Garlow (1977) identified four stages of internationalization by regional banks. As paraphrased by Tschoegl (1982: 205) they are:

1. trade financing for local exporters and importers;
2. loans to foreign banks and participation in loan syndications;
3. direct loans to foreign non-financial firms;
4. creation of foreign subsidiaries by the bank and the syndication of loans.

Ball and Tschoegl (1982) examined the decisions by foreign banks to establish a branch in Japan or a subsidiary in California. Such establishment is a measure of
commitment, and the authors found it to be a function of experience both with the subject country specifically and with foreign operations generally. Geographic distance between the host country and the parent's headquarters was also significant except in the case where the parent already had a presence in the target market.

Entry in another country's banking industry may be incremental. In Japan the entry choices are (1) representative office or (2) branch. In California, the options are (in order of ascending commitment) representative office, agency, and subsidiary. For both Japan and California, there were very few cases of first entry being in the form representing the greatest commitment. Furthermore, the banks' foreign operations generally proceeded from one step to the next with some time elapsing between them.

Rose (1991) identified a progression of border-crossing bank operations. Banks first facilitate the trading activities of their home customers. Then they seek to identify foreign customers for the home bank, and they monitor operations of customers to whom they have lent money. Eventually they solicit commercial and finally retail business in the foreign country. It is clear that banking is an industry in which the internationalization process can be tested.

What the case of banking shows is that there are no valid reasons why the concept of establishment chain and its empirical testing should stop with the firm's initial foreign direct investment. Instead, operationalization of the model could fruitfully investigate the transformation of early subsidiaries from joint ventures with locals to wholly-owned subsidiaries, from setting up a single subsidiary to establishing several, and from selling one of the firm's products to selling the firm's full product range.
An example is Hennart, Roehl and Zietlow's (1995) investigation of the evolution of the Japanese ownership stake in the 62 Japanese-US manufacturing joint ventures that were active in the United States in 1980. In very few cases did the Japanese move from minority to majority or from partial to full ownership between 1980 and 1989. While the lack of clear increase in the stakes held by Japanese investors could be seen as lack of support for the internationalization model, this study is far from conclusive, in that other behavior could also demonstrate support. Increased internationalization by Japanese firms may have taken the form of subsequent investment in additional joint ventures or in wholly-owned subsidiaries or in an increase in the number of products manufactured in the United States. Clearly this is an area ripe for further study.

Operationalizing the internationalization model with more attention paid to foreign production could add considerably to the richness of the model. Not only is FDI an increasingly important part of international business activity, it also involves commitment decisions more consequential than those involved in exporting. Rather than the successor to previous export commitments, FDI often occurs with no preceding export activity.


**Conclusion:**

This paper has reviewed the major empirical tests of the two closely related implications of the internationalization model: the implication (1) that a firm will enter countries of increasing psychic distance and (2) that it will proceed in any given market from modes of entry characterized by low commitment to those that require greater commitment.

While the subjective nature of psychic distance and of experience makes it difficult to capture these concepts in empirical tests, we suggest two ways in which future tests could be improved. Our first recommendation is to better control for economic variables that affect the choice of target market and the choice of mode of entry. If an industry's minimum efficient scale is very high relative to the size of the domestic market, increasing internationalization will not take the form of a shift from exporting to local manufacture, as the diseconomies of scale involved would be too large. Similarly, the size of the target country is likely to swamp the effects of psychic distance in a firm's choice of target market if the minimum size of the investment is large. It also stands to reason that one must control for differences in motivations for foreign expansion: firms that move abroad to source products can be expected to choose markets based on a totally different set of criteria than those that go abroad to exploit advantages.

Our second recommendation is to move away from export-centered internationalization. Testing of the model to date has emphasized developments of export markets, but that is often only the first part of the internationalization process. Empirically, the largest part of a firm's foreign sales involve foreign production. Theoretically, because
decisions on foreign production entail much higher risk, and because they tend to be less reversible, they require a higher level of commitment. Since the internationalization model purports to explain internationalization as caused by greater commitment, itself caused by greater experience, looking at the initial entry and the subsequent expansion of foreign production units would seem to make more sense than focusing on exports.
### TABLE 1

Examples of Specifications of Internationalization Commitment Stages Used in Tests of the Internationalization Process Model

<table>
<thead>
<tr>
<th>Author/Year</th>
<th>Specification of Stages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rothschild, 1983</td>
<td>(1) domestic, (2) quasi-domestic, (3) multinational.</td>
</tr>
<tr>
<td>Johanson &amp; Wiedersheim-Paul, 1975</td>
<td>(1) direct exporting, (2) indirect exporting, (3) local sales, (4) local manufacturing.</td>
</tr>
<tr>
<td>Bilkey and Tesar, 1977.</td>
<td>(1) unwilling to export, (2) fulfil unsolicited orders, (3) explore feasibility of exporting, (4) export experimentally to one or two markets, (5) experienced exporter in a few markets, (6) explore further markets.</td>
</tr>
<tr>
<td>Turnbull &amp; Ellwood, 1986.</td>
<td>Marketing Structures: (1) simple domestic, (2) extended domestic, (3) primary international, (4) extended international, (5) multi-national/global matrix.</td>
</tr>
<tr>
<td>Cavusgil, 1980.</td>
<td>(1) Domestic marketing, (2) pre-export, (3) experimental involvement, (4) active involvement, (5) committed involvement.</td>
</tr>
<tr>
<td>Czinkota, 1982.</td>
<td>(1) Completely uninterested, (2) partially interested, (3) exploring, (4) experimental, (5) experienced small exporter, (6) experienced large exporter.</td>
</tr>
<tr>
<td>Reid, 1981</td>
<td>(1) Export awareness, (2) export intention, (3) export trial, (4) export evaluation, (5) export acceptance.</td>
</tr>
<tr>
<td>Cavusgil, 1982</td>
<td>(1) nonexporting firms, and not interested in gathering export-related information, (2) nonexporting firms, but interested in gathering export-related information, (3) exporting firms that export less than 10% of output, (4) firms that export more than 10% of output.</td>
</tr>
</tbody>
</table>
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