

**Testing the Incremental Hypotheses of the Uppsala Internationalization Model:  
Brazilian Exporters after 28 Years**

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# **Testing the Incremental Hypothesis of the Uppsala Internationalization Model: Brazilian Exporters after 28 Years**

## **ABSTRACT**

This paper aimed at testing whether the incremental path of international expansion predicted by the Uppsala Internationalization Process Model could be verified among a sample of Brazilian exporters. Secondary data from three surveys conducted with the same sample of Brazilian firms in 1978, 1999, and 2005 were used to test the research hypotheses. Results provided very limited support to the hypotheses of incremental patterns in foreign market selection and sequential choice of higher-commitment entry modes.

## **1. INTRODUCTION**

The Uppsala Internationalization Process Model is one of the most influential theories in the search for understanding the international expansion of firms. Proposed in the mid-1970s, the theory received a lot of attention from scholars all over the world and was subject to a large number of tests. However, despite all this attention, many results are inconclusive, or ambiguous. This paper provides an additional test of the Uppsala IP Model in a different set, Brazil. Leonidou and Katsikeas (1996) emphasized the need for studies in developing countries, claiming that “export behavior of firms in developing countries differs markedly from that of firms in developed countries and is, therefore, worthy of investigation in light of the increasing role and involvement of developing country exporters in world trade (p.530). Since then, many studies covered the international expansion of Asiatic firms, but, to our knowledge, there are no tests of the IP model in a Latin American context.

In addition, the paper uses a longitudinal research design, taking advantage of secondary data from three surveys with the same sample of firms. These firms were exporters in 1978, the year of the first survey. Surviving firms were revisited in 1999 and 2005, in order to study their evolution. The use of a longitudinal research design is considered especially appropriate to test the IP model, because of its supposition of slow, incremental steps in the internationalization process.

It should be noted that the sample in this study is composed by exporting firms, not multinational corporations. Buckley (1993, p.94) suggested that one reason why studies starting with multinational firms and looking back at various stages of their internationalization process found a series of incremental steps in the internationalization process might be associated to the fact that “‘failures’ are weeded out” in time. Hedlund and Kverneland (1993) also mentioned the bias associated to not studying those firms that did not move to the foreign production stage. This study avoids such bias by starting from the opposite side of the internationalization process, at the moment when firms were still in the earlier steps of their export activities.

## **2. THE UPPSALA INTERNATIONALIZATION PROCESS MODEL, ITS SUPPORTERS AND ITS CRITICS**

The Uppsala Internationalization Process Model, or IP Model, was developed in the 1970s by a group of Nordic scholars, inspired by theoretical developments by Penrose and Cyert and March, and empirical work by Aharoni and Carlson. The firm is seen “as an organization characterized by bounded rationality, action-based learning processes, and a dispersed and complex structure in terms of resources, competencies, and influence” (Björkman and

Forsgren, 2000, p.9). The original empirical basis on which the model was built came from in-depth case studies of Swedish MNEs (Johanson and Wiedersheim-Paul, 1975).

The IP model assumes that firms initially develop in the domestic market and that international expansion only occurs in a later phase. Internationalization is seen as a series of incremental decisions. The model distinguishes between state aspects (market commitment and market knowledge), and change aspects (resource commitment decisions and current business activities) (Johanson and Vahlne, 1977). As companies acquire experience in foreign markets, perceived risk is reduced, permitting them to increase their commitment to international operations. As a consequence of this process, the model predicts that the international expansion of the firm will follow two basic patterns: choose new markets with increased psychic distance, and adopt successively higher-commitment operation modes.

According to Björkman and Forsgren (2000, p.11), the empirical evidence in support of the Uppsala IP model is “considerable, although not undisputed”. The supportive evidence relevant to this study is presented in the specific issues covered in our review of the IP model<sup>1</sup>. Main criticisms to the model include<sup>2</sup>:

- The model is deterministic (Andersen, 1993; Melin, 1992; Reid, 1983).
- The model takes a reactive perspective of learning (Forsgren, 2002).
- The model has low explanatory power/lacks predictive validity (Andersen, 1993; Millington and Bayliss, 1990).
- The model does not take into consideration location, industry, competition, economic and strategic factors (Andersen, 1993; Engwall and Wallenstal, 1988; Hagen and Hennart, 2004; Melin, 1992; Reid, 1983; Turnbull, 1993; Whitelock, 2002).
- The model is more applicable to firms in the early stages of their internationalization process (Johanson and Vahlne, 1990).
- The model sees internationalization as an export-led phenomenon (Fletcher, 2001; Hagen and Hennart, 2004).
- The model does not explain how the internationalization process starts (Anderson, 1993; Melin, 1992).
- The model is uni-directional, but it should be bi-directional, with feedback between market commitment, market knowledge, and market involvement (Lamb and Liesch, 2002).
- The incremental behavior of firms in their internationalization process predicted by the model is not confirmed by empirical evidence, or occurs on a limited portion of firms (Bell, 1995; Benito and Gripsrud, 1992; Hedlund and Kverneland, 1993; Jarillo and Martinez, 1991; Millington and Bayliss, 1990).

Various scholars responded to these criticisms, arguing that the model never intended to be complete (Johanson and Vahlne, 1990); that some criticisms “may be restatements of the model acknowledged limitations” (Hagen and Hennart, 2004, p.6); that certain empirical tests of the model lacked validity (Anderson 1993; Hadjikhani, 1997; Sullivan, 1994); that in some cases the rejection of one aspect of the model led to the rejection of the full model, or that there

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<sup>1</sup> For a review of the empirical research supporting the Uppsala IP model, see Johansen and Vahlne (1990); Pedersen and Petersen (1997); and Björkman and Forsgren (2000).

<sup>2</sup> For more detailed reviews of the criticisms to the IP model, see Anderson (1993), Hadjikhani (1997); Hagen and Hennart (2004); Leonidou and Katsikeas (1996).

were misspecifications, incorrect operationalization, or lack of controls (Hadjikhani, 1997; Hagen and Hennart, 2004; Petersen and Pedersen, 1997; Sullivan, 1994).

## **2.1 Market Commitment**

Market commitment is conceptualized in the IP model as composed of two factors: amount of resources committed and degree of commitment, which is defined as the extent to which resources are specialized to serve the specific market. Hadjikhani (1997) addressed the issue of criticisms to the market commitment construct in the Uppsala IP model. He recognizes the existence of two dimensions, tangible and intangible commitment, while the original work by the model proponents concentrates in the tangible dimension of commitment. Tangible commitment refers to the amount of resources and the extent of their specialization. Intangible commitment is defined as “a desire to develop a long-term relationship, a willingness to make short-term sacrifices to maintain this relationship” (p.47). Lamb and Liesch (2002), following other scholars, considered commitment a multi-dimensional construct, including not only the amount of resources dedicated to the foreign venture and their level of specialization, but also the investment in relationships.

## **2.2 Market Knowledge, Experience, and Learning**

The Uppsala Internationalization model has been characterized as a learning model (Forsgren, 2002), because of the direct connection between market commitment and market knowledge. Market knowledge acquisition can be of two different kinds: objective and experiential. Experiential knowledge is considered critical to the international expansion of the firm. Because of its complex and tacit nature, it cannot be transferred from one market to another and from one individual to another. Objective knowledge permits theoretical thinking, but experiential knowledge is associated to feeling and intuition. Another relevant distinction in the model is between general and specific knowledge. As the firm acquires more market knowledge, uncertainty is reduced, permitting to progress in the sequential steps of internationalization. The crucial importance attributed to experiential learning comes from the fact that it is used to explain why firms move gradually in their international expansion (Steen and Liesch, 2007). In fact, it is considered to be “a driving force in the internationalization process” (Johanson and Vahlne, 1990, p.12). In a recent work (Johanson and Vahlne, 2006), the authors explained that experiential knowledge is crucial for two reasons: one is because it reduces market uncertainty, and another because of its role in the perception and pursuit of opportunities.

Forsgren (2002) observed that the IP model emphasizes one type of organizational learning (experiential), but there is growing evidence that other types impact internationalization: “...learning through imitation, learning through incorporating people or organizations, or searching or scanning for new information” (p.261). Various scholars (e.g. Bonaccorsi, 1992; Chang, 1995; Lamb and Liesch, 2002) have claimed that knowledge is often not the result of a stand-alone firm’s actions, but of collective action. For example, belonging to a network permits firms to acquire knowledge from other firms. Experiential knowledge in similar markets also seem to accelerate the pace of internationalization (Liesch and Knight, 1999). In later writings, Johanson and Vahlne (1990, 2003, 2006) incorporated to their model the issue of knowledge development as a consequence of relationships with other companies.

Björkman and Forsgren (2000, p. 12) argued that “it is not at all clear how experiential knowledge affects organizational behavior”, mainly because of interpretation biases from different leaders and loss of experience due to personnel turnover. If organizational leadership is not stable over time, it is probable that the impact of experiential knowledge is reduced or even totally lost. In fact, there is some limited evidence that changes in management leadership may disrupt the establishment chain (Björkman and Eklund, 2001). Millington and Bayliss (1990) observed that the international development of the firm is accompanied by changes in the ways knowledge is acquired. For them, experiential knowledge would characterize more

firms in earlier stages of internationalization, while formal planning would be more relevant to experienced MNCs.

### **2.3 Incremental Patterns of International Expansion**

The IP model considers two aspects of international expansion: organizational form and foreign market coverage (Johanson and Wiedersheim-Paul, 1975; Johanson and Vahlne, 1977, 1990). Type of organizational form refers to the type of entry and operation mode, while extent of market coverage considers the array of foreign markets and the perceived psychic distance to them. The basic assumption is that patterns of international expansion tend to be incremental. As firms acquire experience, they move to markets of greater psychic distance, and adopt higher commitment entry and operation modes. The evidence available on the incremental patterns of foreign expansion is mixed. We examine here the evidence concerning psychic distance and the establishment chain, which are the focus of this study.

*Psychic Distance* – One assumption of the IP model concerns the ordering of foreign countries entry, from closer to more psychically distant. Johanson and Vahlne (1990) claimed, however, that psychic distance was one manifestation of the firm's international expansion, but not a critical assumption of the model. A number of studies, using surveys or case studies, found evidence that firms tended to start their international activities in more similar or closer markets (Davidson, 1980, 1983; Dow, 2000; Erramili, Srivastava and Kim, 1999; Juul and Walters, 1987; Lau, 2003; Rhee and Cheng, 2002), but others did not (Benito and Gripsrud, 1992; Engwall and Wallenstal, 1988; Jarillo and Martinez, 1991). Clark and Pugh (2001) found market potential and geographic distance to be more important than cultural factors in explaining entry sequence in a sample of British firms. Chang and Rosenzweig (2001), examining sequential FDI entry modes, observed that as experience with entry modes and with the foreign market increased, the importance of cultural distance in influencing the choice of entry mode was reduced. Dow (2000) found evidence that psychic distance had a greater impact on market selection for the first market entry decision. However, this influence was substantially weaker in later entries. Mitra and Golder (2002) did not find an association between foreign market entry timing and cultural similarity with the domestic market, but their findings shed some light on how psychic distance might operate. They determined that firms would be more likely to enter markets they had better knowledge, gained in similar markets. On the other hand, Pedersen and Petersen (2004) found that managers of firms entering adjacent markets experienced "shock effects" consistent with the psychic distance paradox hypothesis (O'Grady and Lane, 1996), but not managers of firms entering distant markets. Similar results were obtained by Fenwick, Edwards, and Buckley (2003).

*Establishment Chain* – Despite the importance attributed in the literature to the establishment chain, and the large number of studies that tried to determine its existence, Johanson and Vahlne (2006, p.166) claimed that "the model is not 'the establishment chain', going from ad hoc exports to the establishment of manufacturing facilities", but rather "the interplay between knowledge development and increasing foreign market commitments". The establishment chain was the empirical evidence of such interplay. Empirical support to the establishment chain is mixed (Coviello and McAuley, 1999; Rhee and Cheng, 2002). Studying the expansion of UK companies in the EC, Millington and Bayliss (1990, p.159) noticed that the patterns predicted by the IP model were "the exception rather than the rule", and Björkman and Eklund (2001) determined that only a small number of Finnish firms followed the whole establishment chain, but Camino and Cazorla (1998) found that most Spanish SMEs entering developing markets followed the patterns predicted by the IP model. Other supporting evidence comes from Chang (1995), who determined that Japanese firms in the US moved from exporting to FDI, and gradually increased their commitment to local markets. Learning from earlier experiences helped them to build capabilities to operate in foreign markets, and trial-and-error permitted to revise expectations and to move into new avenues. Also, Kogut and Chang (1996)

observed a higher probability of FDI in a country where the firm already had distribution facilities.

An interesting contribution to the understanding of how firms move from one stage to another in the establishment chain was given by Pedersen, Petersen and Benito (2002), who investigated the factors that led exporting firms to change their foreign market servicing mode from independent agents or distributors to a sales subsidiary. They found limited support (at the 10% level) to the IP model's contention that accumulation of market knowledge and experience would lead to a change to a higher-commitment entry mode (in this case to the opening of a sales subsidiary). In addition, they determined that switching costs (such as contractual restrictions and recruitment and training costs), were the major impediment to such change. No significant relationship between cultural distance and the decision to shift to a new operation mode was determined to exist. Also, a number of scholars (e.g. Buckley et al, 1987; Turnbull, 1993) have shown that firms may use simultaneously various entry and operation modes.

The following research hypotheses are directly extracted from the Uppsala Internationalization Process Model:

*As firms acquire international experience, they enter markets of increasing psychic distance.*

*As firms acquire international experience, they choose higher-commitment entry modes.*

## **2.4 Differences among Firms**

Evidence from various studies (e.g. Björkman and Eklund, 2001; Jarillo and Martínez, 1991; Millington and Bayliss, 1990) suggest that not all firms follow the incremental path of internationalization, even if some of them do. The following variables have been indicated as affecting the pattern and pace of firm internationalization:

*Firm size* – Firm resources are considered an important element in internationalization (Johanson and Vahlne, 1977, 1990). Size is often used as a proxy for company resources available in the internationalization process (Hedlund and Kverneland, 1993). Size permits the firm to risk a certain amount of resources in new international ventures, and establishing subsidiaries abroad is a riskier operation mode than exporting. Empirical evidence on the impact of firm size on incremental internationalization is ambiguous. Cavusgil (1984) found a moderate positive relationship between degree of internationalization and firm size (sales and number of employees), while Turnbull (1993) found no relationship. Björkman and Eklund (2001) found some weak evidence that larger Finnish firms tended to leapfrog stages in the establishment chain, but Petersen and Pedersen (1997) argued that research findings did not show a greater propensity of leapfrogging among larger firms. It is hypothesized here that firm size, as a proxy for amount of resources, is positively associated to the incremental path of internationalization. In other words, firms that follow the incremental path in their international expansion tend to be larger than those that do not.

*Product type* – Most studies on the international expansion of firms tend to look at industrial rather than consumer goods firms. Leonidou and Katsikeas (1996), in their literature review, identified only four studies covering manufacturers of both consumer and industrial products. Björkman and Eklund (2001) found some weak evidence that consumer goods producers were somewhat less likely to leapfrog the stages in the establishment chain than producers of industrial goods, following more often the incremental pattern. They speculated that manufacturers of consumer goods “would be more likely to internalize the sales function” (p.44), thus moving from exporting to a sales subsidiary, and not leapfrogging the intermediate stage. Accordingly, it is hypothesized here that manufacturing industrial products and components is negatively associated to the incremental path of internationalization.. In other

words, firms that follow the incremental path in their international expansion tend to manufacture consumer products, rather than industrial products.

*Product standardization* – Small-scale manufacturing and the ability to provide special products seemed to be competitive advantages of young multinationals from emerging markets (Wells, 1983; Buckley, 1993). Pedersen and Petersen (2004) found that managers of firms producing customized goods were impacted by the psychic distance paradox (O’Grady and Lane, 1996), but not manufacturers of standardized products. It is hypothesized that manufacturing standardized products is negatively associated to the incremental path in internationalization. In other words, firms from emerging markets that adopt the incremental path in their international expansion tend to manufacture customized products rather than off-the-shelf standardized products.

*Domestic market scope* – Nordic scholars (Johanson and Vahlne, 1977, 1990; Johanson and Wiedersheim-Paul, 1975; Welch and Wiedersheim-Paul, 1980) proposed that national expansion preceded foreign expansion. Cavusgil (1984) considered this variable important to understand a firm’s degree of internationalization, but was unable to test whether the scope of the domestic market was associated to the degree of internationalization, since almost all firms studied marketed their products nationally. It is hypothesized here that domestic market scope is positively associated to the degree of internationalization. Firms that follow the incremental path in their international expansion tend to have earlier achieved national presence in the domestic market.

*Objective knowledge acquisition* –Objective knowledge can be obtained by the use of formal mechanisms of gathering market information. Buckley (1993) emphasized the crucial role of information gathering in risk reduction, but suggested that it could consume an excessive amount of management time in smaller firms. It is hypothesized here that the level of objective knowledge acquisition on export markets by a firm is positively associated to its compliance to the incremental suppositions of the Uppsala Internationalization Process Model. Firms that follow the incremental path in their international expansion tend to have more structured information gathering mechanisms, or to have actually invested more resources in accessing market information.

*Experiential knowledge acquisition* – It has been argued that experiential knowledge is a key element of the model, and its measurement has been repeatedly questioned by supporters of the IP model (Johanson and Vahlne, 2006; Petersen and Pedersen, 1997). Experiential knowledge is often measured by number of years in international activities (Cavusgil, 1984; Rhee and Cheng, 2002; Pedersen and Petersen, 2004) and number of countries (Erramilli, 1991). This measure was used for the total number of years in international activities (e.g. Cavusgil, 1984), or years of operation in a specific country (Rhee and Cheng, 2002), depending on the research design. Cavusgil (1984) found a weak association between degree of internationalization and international experience and Fletcher and Bohn (1998) found a positive association. It is hypothesized here that the level of experiential knowledge acquisition of the firm is positively associated to its compliance to the incremental suppositions of the Uppsala Internationalization Process Model. Firms that follow the incremental path in their international expansion tend to have more international experience.

*Export intensity* – Export intensity seems to be associated to advancing in the internationalization path. Higher export intensity may require a firm to have distribution facilities in other markets. Cavusgil (1984) found a “weak-to-moderate relationship” with export intensity (% of export sales on total sales), while Turnbull (1993) found no relationship. It is hypothesized here that the importance of exporting to the firm is positively associated to the degree of internationalization. Firms that follow the incremental path in their international expansion tend to have higher export intensity.

The following research hypothesis expresses the expected differences between firms that comply and do not comply with the suppositions of the Uppsala Internationalization Model concerning greater psychic distance and the adoption of investment modes:

*Firms that comply with the incremental patterns of the Uppsala Internationalization Process Model differ from those that do not comply, in terms of firm size, product type, product standardization, domestic market scope, level of objective knowledge acquisition, level of experiential knowledge acquisition, and export intensity.*

### 3. METHODOLOGY

The study uses longitudinal data from three surveys with Brazilian exporters of manufactured goods. The data was collected in the years 1978, 1999, and 2005, from the same sample of Brazilian exporters of manufactured goods. The distribution of firms in each year is presented in the following table:

| Year | Survivors-Exporters |        | Survivors-Domestic |       | Failed Firms |       |
|------|---------------------|--------|--------------------|-------|--------------|-------|
| 1978 | 152                 | 100.0% | -                  |       | -            |       |
| 1999 | 62                  | 40.8%  | 28                 | 18.4% | 62           | 40.8% |
| 2005 | 60                  | 39.5%) | 25                 | 16.4% | 67           | 44.1% |

The samples used in this study consist only of Survivors-Exporters, although the database also included interviews with Survivors-Domestic. The final sample was smaller than the available set of firms because not all firms agreed to be interviewed again each year. Final sample sizes in this study were the following: 1978: 152 firms; 1999: 60 firms; 2005: 52 firms. Missing data also reduced the number of observations in some tests.

The use of secondary data – data not originally collected for the purposes of the research in which they were used – poses a number of limitations to researchers. These limitations have to do mainly with the fact that the desired data may not be available, or they were not collected in the desired format. On the other side, the main advantage in a longitudinal study is that the access to historical data is rarely obtained from a single survey. Important historical information is often not recorded by a firm, since it may not be seen as relevant for the firm's continuity and growth. For example, although every firm interviewed in the 2005 survey came from the original sample of 1978 exporters, a number of respondents informed a later date for export initiation, or were unable to indicate the precise year. In addition, because of personnel turnover, respondents in one study may not be the same as in another study, especially if the second study is carried two or more decades later. For example, only five respondents were the same in the 1978 survey and the 2005 survey. Another limitation of secondary data is the lack of information on data collection procedures. This was not the case in the present study, since detailed records of all aspects of fieldwork were kept with the database. In addition, one of the authors of this paper participated in the three surveys.

The 1978 survey used a probabilistic sample extracted from a list of approximately 6,900 firms, available at CACEX, the Brazilian agency for export development at the time. Exporters of commodities, export intermediaries, state companies, and subsidiaries of multinational firms (more than 10% of foreign capital) were excluded from the list, reducing the population to 3,611 firms. A random sample of 210 firms was selected from the list. Four firms were eliminated from the sample, since they were the only ones located in the Northern states of Brazil (Amazonas, Pará, and Mato Grosso) and the cost of interviewing was considered prohibitive. Firms were then contacted by telephone and personal interviews were conducted with the executives responsible for international activities, or, when the firm was small, with the CEO or other top executives. A final sample of 152 firms was interviewed. The questionnaires were originally kept in paper and later passed to digital form.



The 1999 survey was initiated in 1999 but finished in 2000. A period of six months was necessary to find those companies that were still in operation (90 companies), and to determine which of the others had survived but ceased to export (28 companies), or did not survive (62 companies). The task of finding firms that were contacted after more than two decades proved to be challenging. Telephone numbers had in most cases been changed. New telephone directories had limited use, because many firms had changed names or location. Consultation with local telephone companies helped to locate a certain number of firms. A variety of other sources were used to find the remaining firms: business guides for Latin America and Brazil; lists of exporters from SECEX, the Secretary of Foreign Trade of the Ministry of Industry, Trade, and Tourism, and from AECD (the Association of Brazilian Foreign Trade); State and City offices for Finance, Industry, Trade and Services; *juntas comerciais*<sup>3</sup>; and the Federal Tax Commission. In addition, the services of a collection firm were used in the state of São Paulo, and a personal investigator hired in the state of Rio de Janeiro. Finally, for the companies that still could not be located, telephone contacts were made with the person interviewed in 1978, or family members in the original location. These attempts were more successful in smaller towns and when companies had not bankrupted. Of the 62 companies that survived and continued to export, 60 agreed in participating in the second survey. Although the definition of qualified respondents remained the same, most respondents changed. A large amount of the questionnaire administered in 1978 was used again, but new questions were added to better understand firm decisions and actions in the period between the first and the second surveys. Data from the questionnaires was codified and stored.

The 2005 survey was conducted between January and April. Of the 62 Survivors-Exporters found in 1999, 60 remained in the export activity. Of these, 52 companies agreed in participating in the survey. The questionnaire used in 2005 included some questions similar to the 1978 and 1999 versions, but also explored other aspects of the firm's international activities. All the information collected was organized in a database.

### 3.1 Operationalization

- *Psychic Distance* was measured as follows:

| Variable   | Operationalization  |
|--|---|
| PD to export markets in the first 3 years of exporting | PD to the first market  |
|  | Increase in PD from low PD to high PD countries from the first to the second year of export operations: 0 = no increase; 1 = increase |
|  | Increase in PD in the first 3 ys of exporting: 0 = no increase; 1 = increase  |
| PD to all export markets until 1978                    | Mean of PD to all markets to which the firm exported until 1978   |
|  | Median of PD to all markets to which the firm exported until 1978   |
| PD to all export markets in 2000                       | Mean of PD to all markets to which the firm exported in 1999  |
|  | Median of PD to all markets to which the firm exported in 1999  |
| PD to all export markets in 2005                       | Mean of PD to all markets to which the firm exported in 2005  |
|  | Median of PD to all markets to which the firm exported in 2005  |
|  | PD to the most distant market to which the firm exported in 2005  |

The PD measure used the results of Leite's (1981) study, collected from the original 1978 sample. It consists of an overall measure of PD to 35 foreign countries, using a 7-point scale measuring the perceived similarity between Brazil and the foreign country. Da Silva and Da Rocha (2005) replicated Leite's (1981) study in a sample of university students in 2004, finding a .871 correlation coefficient (Spearman) significant at 1%, suggesting that

<sup>3</sup> Local administrative offices in which, by legal requirement, firms are registered when they start and end their operations, as well as when major changes in corporate structure, ownership etc. occur.

cultural stereotyping behind PD seemed extremely resistant to time. Since Leite (1981) used a broader range of foreign countries, her results were preferred to Da Silva and Da Rocha's (2005), although the later were collected more recently. Countries to which the firm exported were thus assigned a number from 1 to 7 according to Leite's (1981) results. When a foreign country was not included in Leite's study the assignment was based on the researchers' judgment of similarity between the specific country and the others considered by Leite (1981). It is believed that such procedure did not produce serious errors since the researchers are also Brazilians, and thus subject to the same cultural stereotyping. Furthermore, Leite's study produced a clear set of country clusters, which made quite obvious where to place each other country.

*Establishment Chain* – Entry and operation modes are categorized in the IP model in four levels: no regular exports; export agents; sales subsidiary; production/manufacturing subsidiary (Johanson and Wiedersheim-Paul, 1975). Erramili and Rao (1990) proposed a scale with nine levels of foreign market involvement for the internationalization of services, but their scale does not apply to manufactured goods. Researchers have adopted two approaches to operationalize the construct. One was to determine the sequence of operational modes, classifying companies according to this sequence (e.g. Johanson and Wiedersheim-Paul, 1975; Björkman and Eklund, 2001). Another measure, adopted by Rhee and Cheng (2002, p.425), was “the number of operational modes a firm had undertaken in a country before establishing its first manufacturing facility in that country”. In this study, the establishment chain was operationalized in two ways. First, we used the traditional four entry and operation modes of the original IP model. Then, we determined the sequence followed by each firm and classified the firm accordingly in two categories (incremental pattern; non-incremental pattern). It should be noted that all firms in our sample were initially exporting. Second, we used a more detailed list of entry modes, separating indirect, cooperative, and direct exporting modes, and repeated the classification procedure previously explained. This last operationalization follows the suggestion by Petersen and Pedersen (1997), who claimed that the inclusion of other forms of exporting might actually provide greater empirical support to the IP model.

- Variables related to *Firm Characteristics* were selected considering their availability in the database and theoretical and empirical clues from the export literature. The following variables were used:

| Variable                                    | Operationalization   |
|---|--|
| Firm Size                                   | Number of employees in the current year  |
| Product Type                                | Product type 1: industrial(1) or consumer (0)  |
|   | Product type 2: complete (1) or intermediate (0) (only 2000, 2005)   |
| Product Standardization                     | % of the output coming from off-the-shelf products   |
| Domestic market scope                       | 1 = regional; 2 = extra-regional; 3 = national (only for 2000)   |
| Level of objective knowledge acquisition    | No.of types of data gathered from 19 possibilities (only 1978)   |
|   | Extent to which the lack of information on foreign markets was perceived as an obstacle by the firm: 0 = no influence; 1 = makes it more difficult; 2 = hinders export growth. |
| Level of experiential knowledge acquisition | No of years since the firm started exporting   |
|   | No. of export methods used from a list of 9 alternatives   |
|   | Whether the firm moved to specific market because other competitors already operated in those markets (bandwagon effect) (only for 1978)                                       |
| Export intensity                            | Export intensity (% of export on total sales)  |
| Reactive export behavior                    | % of markets in which the initiative came from a foreign buyer   |

## 4. RESULTS

In order to make it more comprehensible, we present our results following the sequence of time of the data available. We start by presenting and discussing the patterns of internationalization in the early years, based on the 1978 data. Then we proceed to analyse those patterns in 1999-2000, comparing with the 1978 data. Finally, we combine the three datasets (1978, 1999, 2005) to have a full picture of the evolution of the firms.

### 4.1 Young Exporters and the Early Patterns of Internationalization

The original sample was collected at the end of a high-growth period in the history of Brazil, during the early 70s, known as the “Brazilian Economic Miracle”, which ended with the first oil crisis. This was, from the standpoint of the present study, an extraordinary convenient time to do the first survey. Therefore, the data collected in 1978 provides a picture of the preliminary steps of firms in their internationalization process, and of the micro results of the initial efforts of an emerging country to develop its exports.

In 1978, when the original data was collected by personal interviews, firms had enjoyed years of continuous growth. Most Brazilian firms were small and medium-sized: the average for the sample of 152 exporters collected at the time was approximately 550 employees; 19% had less than 100 employees; 53% had up to 250 employees; and only 15% had more than 1,000. As the country engaged in a substantial effort to increase exports, fuelled by generous export incentives offered by the Brazilian government, a substantial number of firms had recently entered the export activity. As a result, a large percentage of the original 1978 sample were newcomers to the international markets: in the average, firms had less than 7 years in exporting; 83% had less than 10 years in this activity; and only five firms had exported for more than 15 years. The fact that most firms were starting their exports also appears in their low export intensity: the average was around 7%, but 41% exported less than 1% of their output, and approximately 15% exported more than 10%. The 1978 sample had a mix of exporters of industrial goods (41%) and consumer goods (59%).

#### *The Role of Psychic Distance in the Early Years*

The role of psychic distance is reasonably supported by a preliminary examination of the data: 76.3% of the firms started their export activities by entering a psychically close market, while only 23.7% entered a more distant market in their first step in internationalization. It should be pointed out, however, that many firms entered more than one market in the same year, and they often did not remember the exact order. In some cases firms entered simultaneously psychically close and psychically distant markets in the first year, suggesting that not much learning could have occurred between the two experiences. Examples of combinations of psychically close and psychically distant countries in the first year of exporting are: Bolivia and Zaire, Portugal and South Africa; Paraguay and Germany; Chile and Australia, etc. The following table shows the distribution of number of markets entered by firms in the sample during their first year in exporting. Among those with 6 or more markets, three companies entered in the first year more than ten markets.

| No. of Markets during Year 1 | Frequency | Percent | Cumulative Percent |
|------------------------------|-----------|---------|--------------------|
| 1                            | 73        | 59.3%   | 59.3%              |
| 2                            | 24        | 19.5%   | 78.9%              |
| 3                            | 14        | 11.4%   | 90.2%              |
| 4                            | 4         | 3.3%    | 93.5%              |
| 5                            | 3         | 2.4%    | 95.9%              |
| 6 or more                    | 5         | 4.1%    | 100.0%             |

N=123 (missing = 29)

We speculated the reasons behind this unexpected speed in entering new markets. In order to investigate the issue we used correlations and cross-tabs to test possible associations between this variable and other variables available in the database that could logically be related to this phenomenon, such as type of export intermediaries used, level of reactive exporting (percentage of foreign markets where the initiative came from foreign buyers), bandwagon effect (whether first exports to specific foreign markets were inspired by the success of other firms), firm size, product type, export intensity, and international market scope (total number of countries to which the firm exported in 1978). We found support for the bandwagon effect; firms that were inspired by the success of other exporters in specific markets seemed to enter more than one market in their first year of exporting (a chi-square of 4.793, significant at the 0.05 level). Mimicking other Brazilian firms that were taking advantage of international opportunities, firms reduced their perceived market uncertainty, and entered simultaneously a larger number of markets. This reveals that experiential learning may have occurred by imitation, as suggested by Forsgren (2002). We also found a positive correlation between the number of markets entered by the firm in its first year of exporting and the number of markets to which the company exported in 1978 (a correlation coefficient of 0.455 significant at the 0.01 level). This suggests that the decision to enter simultaneously or almost simultaneously a number of markets in the first year of export operations had a positive impact on the number of markets the firm would be exporting to a few years later.

Many firms that started by entering psychically close markets in the first year of international operations moved in the second year to psychically distant markets (17.1% of the sample). In order to investigate the issue we used the same variables (type of export intermediaries used, reactive exporting, bandwagon effect, firm size, product type, export intensity, and total number of countries to which the firm exported in 1978) to test possible associations. Again, we found an association between the quick move to psychically distant markets in the second year of exporting and the number of countries to which the firm exported in 1978, a few years after (a chi-square of 0.11,003 significant at the 0.01 level). We also found an association between export intensity and the quick move to psychically distant markets (a chi-square of 11,319 significant at the 0.01 level). Finally, it seemed that exporters that used non exclusive foreign agents or distributors tended to have more a tendency to jump to distant markets (in terms of psychic distance) in the second year of exporting (a chi-square of 5.079, significant at the 0.05 level) than their counterparts that used other foreign market servicing modes (indirect exporting, consortia, exclusive agents, or exports directly to the final customer).

Finally, we looked at firms that showed the incremental pattern of foreign market entry predicted by the Uppsala IP Model: they started by exporting to psychically close markets and moved to psychically distant markets during the first years of export operations that preceded the 1978 survey. Only 27.4% of the firms in the sample showed the expected pattern. A number of reasons may explain this result. One is that many firms did not move to more distant markets, but continued to serve export markets that were psychically close during these early years. In fact, the situation of these firms does not necessarily contradict the model; it was probably too early to evaluate their foreign market selection.

We used binary logistic regression to test for the differences between those firms that followed the expected incremental pattern of foreign market selection until 1978 and those that did not. The following independent variables were used: firm size, product type, product standardization, level of objective knowledge acquisition, level of experiential knowledge acquisition, export intensity, and reactive export behavior. A total of 134 cases were included in the analysis. The model had a chi-square of 20,098, with 10 degrees of freedom, significant at the 0.05 level. However, the model did not have a good fit ( $-2LL = 137,821$ ; Cox and Snell = 0.139; Nagelkerke's  $R^2 = 0,201$ ; Hosmer & Lemeshow = 4.637,  $p = 0.796$ ) and had almost no predictive ability (the classification matrix was only able to classify correctly 74.6% of the cases, slightly above the maximum chance criterion of 72.4%). Curiously, the model classified

correctly 94.8% of the cases that did not follow the incremental path; but only 21.6% of the cases that followed the predicted pattern of international expansion. The only significant variable in the model was years of export experience, with a positive sign. This offers some support to the Uppsala incremental foreign market selection hypothesis: firms that did not follow the incremental path tended to be less experienced than those that did. In summary, the results obtained from the 1978 data offer only partial support for the Uppsala IP Model hypothesis of increased psychic distance in foreign market selection.

### *The Choice of Entry Modes*

Only 18.4% of the sample were irregular exporters; 10.5% used indirect exporting methods; and 71.1% used direct exporting methods. None of the firms interviewed had moved to the stage of establishing sales subsidiaries abroad, and none had made investments in foreign countries until 1978.

We used binary logistic regression to establish whether there were significant differences between the two groups of regular exporters: those using direct exporting and those using indirect exporting or that were characterized as eventual exporters. The following independent variables were used: firm size, product type, product standardization, level of objective knowledge acquisition, level of experiential knowledge acquisition, export intensity, and management reactive behavior behavior. A total of 151 cases were included in the analysis. The model had a chi-square of 47.812, with 11 degrees of freedom, significant at the 0.01 level. Again, the model did not have a good fit (-2LL= 134.412; Cox and Snell= 0.271; Nagelkerke's  $R^2$ = 0.387; Hosmer & Lemeshow= 12.369,  $p$ = 0.135) and had low predictive ability (the classification matrix was only able to classify correctly 78.8% of the cases, slightly above the maximum chance criterion of 70.9%).

| <b>Variables</b>   | <b>Beta</b> | <b>Wald</b> | <b>sig</b> |
|--|-------------|-------------|------------|
| Firm size (no of employees)  | .001        | 2.954       | .086       |
| Product type (industrial = 1; consumer=0)                                  | -.701       | 2.139       | .144       |
| Product standardization (% of off-the-shelf products)                      | .001        | .061        | .805       |
| Level of objective knowledge acquisition 1 (amount of information used)    | .175        | 5.647       | .017       |
| Level of objective knowledge acquisition 2 (perceptual)                    | .366        | .225        | .635       |
| Level of experiential knowledge acquisition 1 (years in exporting)         | .015        | .094        | .760       |
| Level of experiential knowledge acquisition 2 (bandwagon effect)           | 1.408       | 3.999       | .046       |
| Level of experiential knowledge acquisition 3 (no. of export methods used) | .536        | 6.340       | .012       |
| Export intensity   | .020        | .881        | .348       |
| Reactive export behavior (% of markets with foreign buyers' initiative)    | -.009       | 3.031       | .082       |

Five variables showed to be significantly related to the use of indirect or direct exporting: firm size (significant only at 10%); level of objective knowledge acquisition, measured by the amount of information used (significant at 5%); level of experiential knowledge acquisition, measured by the bandwagon effect (positive sign significant at 5%); level of experiential knowledge acquisition, measured by the number of export methods used until 1978 (positive sign, significant at 5%); and management reactive behavior (negative sign, significant only at 10%). These results are consistent with the literature: firms that were in a more advanced stage of internationalization in 1978 – in this case, direct exporting – tended to be larger, to use more objective market information, to have used more export methods until 1978, and to be less reactive in their export behavior. Also, firms that had moved into a more advanced exporting stage were influenced by the export experience of other firms in their respective industries. In summary, we obtained partial empirical support for the Uppsala IP Model's proposition of incremental behavior in the choice of foreign market servicing modes in the early stages of internationalization of our sample.

## 4.2 Experienced Exporters and Later Patterns of Internationalization

### *Psychic Distance*

Psychic Distance in each of the three moments of time was operationalized by the mean value of PD to all markets to which the firm exported in the year of the survey. In order to test the first hypothesis – *As firms acquire international experience, they enter markets of increasing psychic distance* – we first tested if the variables had a normal distribution. (Shapiro-Wilk). Since two of the three psychic distance variables failed the normality test, it was decided to use a non parametric test – Kruskal-Wallis – to verify whether the three distributions of psychic distance were identical ( $H_0$ ). The following table presents the results of the test.

| Psychic Distance in 1978 (mean)<br>Psychic Distance in 1999 (mean)<br>Psychic Distance in 2005 (mean) | Rank - Average |       |
|---|----------------|-------|
|   | 94.24          |       |
|   | 75.97          |       |
|   | 99.20          |       |
| Chi-square  | df             | Sig.  |
| 6.531   | 2              | 0.038 |

These results are significant at the 0.05 level, suggesting that at least one of the distributions is significantly different from the others. The average rank suggests that psychic distance in 1999 was significantly different from the other two years, but, contrarily to hypothesized, it was actually smaller than in the other two points in time (1978 and 2005).

The next step consisted of testing whether those companies whose average psychic distance to foreign markets increased between 1978 and 2005 differed from those that did not increase in one of the variables used in the literature to explain the differences in behavior. Accordingly, we used binary logistic regression. The following independent variables were used: firm size, product type, product standardization, level of objective knowledge acquisition (perceptual only), level of experiential knowledge acquisition (years in exporting, number of export methods used), export intensity, and domestic market scope. Only 43 cases could be used, because of missing values for the dependent variable. Because of the small sample size, we had to limit the number of variables included in the analysis. The model failed to reach significance. None of the variables examined could explain the differences between the two groups. We also used stepwise logistic regression, but again we failed to obtain significant results.

### *The Choice of Entry Modes*

By 2000, only 62 firms of the original sample were still exporters, and 60 of them were interviewed. Of the 28 firms that survived, but did not export, 23 were also interviewed. Survivors Non Exporters had no other international activity, except importing. Of the 60 Survivor Exporters, one had established an international franchising business, and only 7 firms had established foreign subsidiaries. By 2005, there was an increase in foreign direct investment: 10 firms had subsidiaries abroad, of which 8 were only commercial facilities (sales offices and warehousing) and 2 were production facilities. Those that had foreign production also had commercial facilities. Because of the limited number of cases, we did not perform any statistical tests. These descriptive results provide limited support for the IP Model, since approximately only 20% of the sample moved in the expected direction.

The next step was to examine possible differences between those that moved forward in internationalization and those that remained as exporters, using binary logistic regression. The following independent variables were used: firm size, product type, product standardization, level of objective knowledge acquisition (perceptual only), level of experiential knowledge

acquisition (years in exporting, number of export methods used), export intensity, and domestic market scope. A total of 52 cases were included in the analysis. The model failed to reach significance. None of the variables examined could explain the differences between the two groups. We also performed a stepwise logistic regression using the same variables. This time the results were significant. The model had a chi-square of 7.383, with 1 degree of freedom, significant at the 0.01 level. Again, the model did not have a good fit (-2LL= 43.531; Cox and Snell= 0.132; Nagelkerke's  $R^2$ = 0.212; Hosmer & Lemeshow= 6.463,  $p$ = 0.595) and had low predictive ability (the classification matrix classified correctly 82.7% of the cases, slightly above the maximum chance criterion of 80.8%). One variable entered the equation: firm size (significant at 5%), indicating, as hypothesized, that larger firms had a higher probability of moving to a subsidiary in their internationalization process.

## 5. DISCUSSION AND CONCLUSIONS

In general, the study found very limited support to the Uppsala Internationalization Process Model as a predictive theory of the internationalization patterns of Brazilian exporters. A number of aspects should be considered, however, that could have changed these patterns. One was the aggressive use of export promotion instruments by the Brazilian government in the 1970s and early 1980s, which increased the rewards and reduced the risk involved in entering the export activity. This could partially explain why some firms jumped from low to high psychic distance markets during the first and second years of exporting in the 1970s.

Another explanation for the excessively slow movement towards higher-commitment forms of internationalization is probably associated to the same factor, but with a reversed consequence. With the economic crisis of the 1980s in Latin America and Brazil, the government was forced to substantially reduce financial incentives to exporting, and a large number of firms exited the export activity, or reduced their export involvement. This could explain why, in the year 1999, the firms studied were actually reaching, in the average, markets of smaller psychic distance than they were in 1978.

During the late 1990s, the international financial crisis that had started in Asia reached Latin America, with speculative attacks against the Brazilian currency, forcing its devaluation in the beginning of 1999. During the previous years, the overvalued Brazilian currency had permitted exporters – and manufacturers in general – to import machinery and equipment, leading to the modernization of Brazilian manufacturers. Thus, from 1999 on there was a new export boom, with experienced exporters increasing their export intensity, and new firms entering the activity. The late 1990s and the early 2000s also saw an increased number of Brazilian firms investing outside the country. This phenomenon started in the last ten years. Therefore, it is interesting that around 20% of the firms had some sort of foreign direct investment in 2005. It is possible that the 2005 survey only caught the beginning of the move to higher-commitment entry modes among Brazilian exporters.

Whatever the impact of the economic environment might be, this study's results suggest limited support to the Uppsala model, with a small portion of firms following the expected patterns of internationalization. More research is needed to expand our understanding of how emerging firms from Latin America evolve in their international expansion.

## REFERENCES

- Andersen, O. (1993). On the internationalization process of firms: a critical analysis. *Journal of International Business Studies*, 24 (2), 209-231.
- Bell, J. (1995). The internationalization of small computer software firms. *European Journal of Marketing*, 29 (8), 60-75.

- Benito, G. R.G., & Gripsrud, G. (1992). The expansion of foreign direct investments: discrete rational location choices or a cultural learning process? *Journal of International Business Studies*, 23 (3), 461-476.
- Björkman, I., & Forsgren, M. (2000). Nordic international business research: a review of its development. *International Studies of Management & Organization*, 30 (1), 6-25.
- Björkman, I., & Eklund, M. (1996). The sequence of operational modes used by Finnish investors in Germany. *Journal of International Marketing*, 4 (1), 33-56.
- Bonaccorsi, A. (1992). On the relationship between firm size and export intensity. *Journal of International Business Studies*, 23 (4), 605-635.
- Buckley, P. J. (1993). Foreign direct investment by small- and medium-sized enterprises: the theoretical background. In: Buckley, P. J.; Ghauri, P. (eds.) *The internationalization of the firm: a reader* (pp.91-105). London: Academic Press.
- Buckley, P.J., Mirza, H., & Sparkes, J.R. (1987). Direct foreign investment in Japan as a means of market entry: the case of European firms. *Journal of Marketing Management*, 2 (3), 241-258.
- Camino, D., & Cazorla, L. (1998). Foreign market entry decisions by small and medium-sized enterprises: an evolutionary approach. *International Journal of Management*, 15 (1), 123-130.
- Cavusgil, S. T. (1984). Differences among exporting firms based on their degree of internationalization. *Journal of Business Research*, 12, 195-208.
- Chang, S. J. (1995). International expansion strategy of Japanese firms: capability building through sequential entry. *Academy of Management Journal*, 38 (2), 383-407.
- Chang, S. J., & Rosenzweig, P. (2001). The choice of entry mode in sequential foreign direct investment. *Strategic Management Journal*, 22 (8), 747-776.
- Clark, T., & Pugh, D. S. (2001). Foreign country priorities in the internationalization process: a measure and an exploratory test on British firms. *International Business Review*, 10, 285-303.
- Coviello, N. E., & McAuley, A. (1999). Internationalisation and the smaller firm: a review of contemporary empirical research. *Management International Review*, 39 (3), 223-256.
- Da Silva, M.G.F., & Da Rocha, A. (2005). Measuring the psychic distance construct. *Proceedings of the 4th International Conference of the Iberoamerican Academy of Management*. Lisbon: Iberoamerican Academy of Management.
- Davidson, W. H. (1980). The location of foreign direct investment activity: country characteristics and experience effects. *Journal of International Business Studies*, 11 (2), 9-22.
- Davidson, W. H. (1983). Market similarity and market selection: implications for international marketing strategy. *Journal of Business Research*, 11, 439-456.
- Dow, D. (2000). A note on psychological distance and export market selection. *Journal of International Marketing*, 8 (1), 51-64.
- Engwall, L., & Wallenstal, M. (1988). Tit for tat in small steps: the internationalization of Swedish banks. *Scandinavian Journal of Management*, 4 (3/4), 147-155.
- Erramili, M.K. (1991). The experience factor in foreign market entry behaviour of service firms. *Journal of International Business Studies*, 22 (3), 479-502.
- Erramili, M.K., & Rao, C.P. (1990). Choice of foreign market entry modes by service firms: role of market knowledge. *Management International Review*, 30 (2) :135-150.
- Erramili, M.K., Srivastava, R., & Kim, S.-S. (1999). Internationalization theory and Korean multinationals. *Asia Pacific Journal of Management*, 16 (1), 29-45.
- Fenwick, M., Edwards, R., & Buckley, P.J. (2003). Is cultural similarity misleading? The experience of Australian manufacturers in Britain. *International Business Review*, 12, 297-309.
- Fletcher, R. (2001). A holistic approach to internationalization. *International Business Review*, 10, 25-49.



- Fletcher, R., & Bohn, J. (1998). The impact of psychic distance on the internationalization of the Australian firm. *Journal of Global Marketing*, 12 (2), 47-68.
- Forsgren, M. (2002). The concept of learning in the Uppsala internationalization process model: a critical review. *International Business Review*, 11, 257-277.
- Hadjikhani, A. (1997). A note on the criticisms against the Internationalization Process Model. *Management International Review*, 37 (2, Special Issue), 43-66.
- Hagen, J. M., & Hennart, J.-F. *Foreign production: the weak link in tests of the internationalization process model*. Working Paper 2003-41. Department of Applied Economics and Management. Cornell University, June 2004.
- Hedlund, G., & Kverneland, A. (1993). Are entry strategies for foreign markets changing? The case of Swedish investment in Japan. In: Buckley, P.J.; Ghauri, P. (Eds.) *The internationalization of the firm: a reader*. (pp.106-123). London: Academic Press.
- Jarillo, J.C., & Martínez, J.I. (1991). The international expansion of Spanish firms: towards an integrative framework for international strategy. In: Mattson, L.G.; Stime, B. (Eds.) *Corporate and industry strategies for Europe*. New York: Elsevier.
- Johanson, J., & Vahlne, J.-E. (1977). The internationalization process of the firm: a model of knowledge development and increasing foreign market commitments. *Journal of International Business Studies*, 8 (1), 23-32.
- Johanson, J., & Vahlne, J.-E. (1990). The mechanism of internationalization. *International Marketing Review*, 7 (4), 11-24.
- Johanson, J., & Vahlne, J.-E. (2003). Business relationships commitment and learning in the internationalization process. *Journal of International Entrepreneurship*, 1 (1), 83-101.
- Johanson, J., & Vahlne, J.-E. (2006). Commitment and opportunity development in the internationalization process: a note on the Uppsala Internationalization Process Model. *Management International Review*, 46 (2), 165-178.
- Johanson, J., & Wiedersheim-Paul, F. (1975). The internationalization of the firm: four Swedish cases. *Journal of Management Studies*, 12 (3) :305-322.
- Juul, M., & Walters, P.G. (1996). The internationalization of Norwegian firms – a study of the UK experience. *Management International Review*, 13 (2), 4-19.
- Kogut, B., & Chang, S.J. (1996). Platform investment and volatile exchange rate. *Review of Economics and Statistics*, 78 :221-231.
- Lamb, P.W., & Liesch, P.W. (2002). The internationalization process of the smaller firm: re-framing the relationships between market commitment, knowledge and involvement. *Management International Review*, 42 (1), 7-26.
- Lau, H.-F. (2003). Industry evolution and internationalization processes of firms from a newly industrialized economy. *Journal of Business Research*, 56 (10), 847-60.
- Leite, H.M.C.B. (1981). *Afinidades culturais do executivo e a seleção de mercados externos nas empresas brasileiras produtoras de manufaturados*. Rio de Janeiro, COPPEAD/UFRJ. MBA Dissertation.
- Leonidou, L.C., & Katsikeas, C.S. (1996). The export development process: na integrative review of empirical models. *Journal of International Business Studies*, 27 (3), 517-551.
- Liesch, P.W., & Knight, G. (1999). Information internalization and hurdle rates in small and medium enterprise internationalization. *Journal of International Business Studies*, 30 (2), 383-394.
- Melin, L. (1992). Internationalization as a strategy process. *Strategic Management Journal*, 13, 99-118.
- Millington, A.I., & Bayliss, B.T. (1990). The process of internationalization: UK companies in the EC. *Management International Review*, 30 (2), 151-161.
- Mitra, D., & Golder, P.N. (2002). Whose culture matters? Near-market knowledge and its impact on foreign market entry timing. *Journal of Marketing Research*, 34 :350-365.
- O'Grady, S., & Lane, H.W. (1996). The psychic distance paradox. *Journal of International Business Studies*, 27 (2) :309-333.

- Pedersen, T., & Petersen, B. (2004). Learning about foreign markets: are entrant firms exposed to a “shock effect”? *Journal of International Marketing*, 12 (1), 103-123.
- Pedersen, T., Petersen, B., & Benito, G.R.G. (2002). Change of foreign operation method: impetus and switching costs. *International Business Review*, 11, 325-345.
- Petersen, B., & Pedersen, T. (1997). Twenty years after – support and critique of the Uppsala Internationalisation Model. In: Björkman, I., & Forsgren, M. (Eds.). *The nature of the international firm: Nordic contributions to international business research* (pp.117-133). Copenhagen: Handelshöjskolens Forlag.
- Reid, S. (1983). Managerial and firm influences on export behaviour. *Journal of the Academy of Marketing Science*, 11, 323-332.
- Rhee, J.H., & Cheng, J.L.C. (2002). Foreign market uncertainty and incremental international expansion: the moderating effect of firm, industry, and host country factors. *Management International Review*, 42 (4), 419-439.
- Steen, J.T., & Liesch, P.W. (2007). A note on Penrosean growth, resource bundles and the Uppsala Model of Internationalisation. *Management International Review*, 47 (2), 193-206.
- Sullivan, D. (1994). Measuring the degree of internationalization of a firm. *Journal of International Business Studies*, 25 (2), 325-342.
- Turnbull, P.W. (1993). A challenge to the stages theory of the internationalization process. In: Buckley, P.J., & Ghauri, P. (Eds.) *The internationalization of the firm: a reader* (pp.172-185). London: Academic Press.
- Welch, L. S., & Wiedersheim-Paul, F. (1980). Domestic expansion: internationalization at home. *Essays in International Business*, 2, 340-341.
- Wells, L.T. (1983). *Third World multinationals: the rise of foreign investment from developing countries*. Cambridge, Mass., MIT Press.
- Whitelock, J. (2002). Theories of internationalization and their impact on market entry. *International Marketing Review*, 19 (4), 342-347.