

UNDERSTANDING THE STRATEGIES OF LATE-MOVERS IN INTERNATIONAL MANUFACTURING

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Abstract

The aim of this paper is the study of the Brazilian enterprises which are establishing manufacturing plants in foreign countries. It departs from the assumption that the context in which late-movers are emerging is different from the one in which the internationalisation of traditional multinationals took place. Thus, a critical assessment of the existing theoretical approaches was recommendable. The literature review involved International Manufacturing, International Business and International Management. It provided the basis for the development of an analytical framework that was applied to Brazilian late-movers. An extensive process for gathering secondary information provided the background for the realisation of four in-depth case studies. The preliminary conclusions indicate that success in international late-moving requires systemic innovation competences. Manufacturing, in particular, is expected to be agile and efficient in what concerns learning and evolution.

Keywords: International Manufacturing, Late-movers, Competence Management

1 INTRODUCTION

This paper is primarily concerned with entry strategies of Brazilian firms in the international market, particularly those which are establishing manufacturing plants abroad. It is an exploratory study in the area of late-movers in international markets [1] or Third-World Multinationals [2]. The key concern regards the role of Manufacturing in the implementation of those new corporate strategies.

When internationalisation is considered, the first question to be addressed is: why? (and, eventually, why not?) The literature focused on Manufacturing in general, and International Manufacturing in particular, has no answer to that question, which in reality concerns a higher level of decision making. However, possible answers to that question are found in the literature related to International Business. Here we find three distinct theoretical approaches departing from different assumptions and focussing on different dimensions of the internationalisation issue. The classic approach is eminently economic: the decision to internationalise is supported by rational economic arguments. The behavioural approach is built around the premise of bounded rationality: managers acknowledge that the complexity of the decision at hand is greater than their capacity for modelling and processing. This being the case, firms internationalise gradually, choosing their paths in such a way that every step represents no more than an incremental challenge and learning from their experience to move to further countries and markets. And thirdly, there is the approach based on competitiveness. It presupposes that the decision to internationalise (or not) is not under the realm of any single firm. Since the markets are now open, regionally bounded or global, and no firm can be considered immune: the game is played in global grounds.

This being the case we opted for an exploratory research, aiming to understand which would be the contributions of those three approaches for the explanation of the internationalisation of Brazilian enterprises. Would the decision of Brazilian managers be driven strictly by economic reasons? Or would it be better explained in terms of evolution and learning? Or would the insertion of Brazil in the global competitive game be the real determinant for their decisions? Finally, what would be the role played by manufacturing?

We first identified the most relevant drivers proposed by those three theoretical streams. The field research had two phases. As the field is still limited in Brazil, a previous analysis of the whole universe (23 late-movers) revealed the common features of their internationalisation processes. Then, from the above universe, four firms were selected for in-depth case studies. Through a process of semi-structured interviews we captured the processes that led firms to internationalise. We paid particular attention to the role that Manufacturing played in that process.

2 A BRIEF CHARACTERISATION OF LATE-MOVERS

In the literature one finds firms from advanced countries that only recently established international operations and those from Large Emerging Economies. The latter are struggling to internationalise under conditions that are radically different from the ones faced by traditional MNCs. The following environmental characteristics must be highlighted: i) there is currently an excess capacity for the production of goods and services at global level; ii) the traditional MNCs, the early-movers, are in a process of restructuring and rationalising international operations, focussing on highly value adding activities, and seeking the command of global production networks; iii) governments are assuming a new role, seeking

attract foreign firms through public policies, aiming to improve the achievement of their national, regional or local objectives; and iv) the institutional mechanisms that rule international trade are in a process of consolidation.

3 LITERATURE REVIEW

The internationalisation process refers to the undertaking by a firm of production outside its home country. The various forms of internationalisation include FDI, licensing, corporate alliances, management contracts, joint-ventures, sub-contracting, technology transfers, etc. In this study we are assuming a narrower view, in which the internationalisation of late-movers means the assumption of an effective responsibility for the management of manufacturing plants in foreign countries, through acquisition, new wholly owned plants and joint-ventures.

The classical theoretical perspective of International Business is essentially an economic approach. It considers foreign direct investment as an individualised movement where the firm will become international whenever it is able to exploit its superior resources in foreign countries, through the installation of factories, which will then be managed to make the most for the sake of its own objectives [3]. In a certain sense, it is a self-contained production system perspective. To a great extent the authors that analyse the movements of MNEs rely on the analytical framework produced by Dunning [4], in which the decision to internationalise is justified by three sets of competitive advantages: ownership (tangible and intangible assets), location (a place which generates advantages for the integration and coordination of assets distributed in distinct countries and regions) and internalisation (transfer of assets through national frontiers by using the structure of the firm instead of the market place).

Unlike the economic-based literature on internationalisation, behavioural models of internationalisation are mainly concerned with organisational processes. Rather than conceptualising internationalisation as an outcome of a rational decision-making process through which the firm draws heavily on market research and, as a result, selects an optimal entry strategy, the model stresses that the internationalisation of the firm is a process composed of a set of sequential steps strongly dependent on knowledge acquired from experience. Because a firm's absorptive capacity expands incrementally, internationalisation processes are often viewed as evolving slowly and gradually [5]. The Uppsala model assumes that firms adopt a sequential process of internationalisation moving into psychically closer countries in order to avoid uncertainty and minimise risks. The management of learning processes becomes of utmost importance. For the analysis of the Brazilian late-movers we selected the following dimensions to be observed: gradualism (the Uppsala model's

sequence), choice of country in terms of culture and geographic distance, investments in knowledge management (in the homeland and abroad).

The third approach considers that the decisions and movements are justified by competition, threats and opportunities in the global competitive game. Therefore, the worldwide configuration of operations of a given firm should be analysed having in mind the competitive strategies of global enterprises. For example, pre-emptive decisions, which are not foreseeable if one departs from a perspective of economic rationality, would be justified according to the principles of competition among specific enterprises. In this area, the literature presents three distinct yet complimentary approaches. The first focuses on the multinational as a whole and produces knowledge that is essentially directed to the head offices. The second focuses on the subsidiaries as the basic unit of analysis [6]. The third prioritises the production system, either as individual factories or as a network [7] [8]. In a certain sense this would be a bottom-up approach, since the authors consider implicitly that the strategy and the structure of the corporation are those which optimise the performance of the Manufacturing function.

Therefore, if we adopt the approach in which decisions and processes related to the internationalisation of late-movers are justified by issues of competition and competitiveness, the following questions should be observed at ground level: is the decision to manufacture abroad part of a proactive or reactive strategy, is it related to rival's movements, is it associated to the evolution of global value chains, do the decisions related to configuration and coordination reveal a long term strategic orientation towards international markets?

4 METHODOLOGICAL CHOICES

The methodological choices were, to a certain extent, limited by the nature of the research problem and the availability of research objects because Brazilian firms manufacturing abroad are simultaneously small in numbers but an extremely diversified group. Initially, a dossier about 23 the largest Brazilian late-movers was prepared. The analysis revealed common features of the internationalisation process. From the above universe, we selected four firms as case studies.

Following the guidelines proposed by Pauwels and Matthyssens [9], we first made a theoretical sampling. We distinguished commodity producers from manufacturers, assuming that the comparative advantage of the former would be greater than the latter. Among the commodity producers we chose Voto Cements representing the privately owned enterprises and CSN, a recently privatised enterprise. As both had established international operations in recent times (in 2001), we considered that they would bring to light the reasons for the resistance in establishing foreign factories and how they are managing in very crowded markets: Voto

Cement in the North-American market and CSN in the European market. Besides, both firms are relatively small in terms of size when compared to their global competitors.

Among the manufacturers we were able to choose two polar types [10]: Embraer and Sabo. Embraer is the worldly known producer of aircraft, the third largest in that industry, a company that has built and exerts the coordination of a very complex and sophisticated global supply chain. Embraer has only recently established operations abroad, embarking on a JV with a Chinese firm. On the other hand, Sabo is an auto-parts producer, highly connected to the large auto assemblers and mega-suppliers since the mid-1970s. It is a relatively small enterprise who is building an interesting international trajectory initiated in 1992.

For triangulation purposes we used as criterion for selection the existence of former studies about the firms as well as an extensive coverage from the specialised media. With this we intended to have material for a better reconstruction of the firms' histories and trajectories as well as ammunition for checking the information collected in the interviewing processes. We also had meetings with consultants who were formerly contracted by those firms.

The semi-structured questionnaire was applied to the Director of International Operations Manager and in two cases we also interviewed the Industrial Director and the Human Resources Manager. The analysis of individual firm's reports brought additional subsidies

5 THE CASE STUDIES

5.1 The CSN case

The Companhia Siderurgica Nacional (CSN) was established as a state-owned enterprise in 1941. It was privatized in the early 1990s. As a group, CSN holds business in mining, distribution, port terminals, rail roads and hydroelectric power stations. Exports share of steel products grew considerably after 2000, reaching the 60% level in 2003. The steel industry is going through a strong process of concentration where Mittal, an Indian producer whose head-quarters is in Luxembourg, is leading the way. Technically, that concentration process is based on the premise that the ideal logistic configuration requires proximity between mines, mills and ports.

CSN has become a member of the NYSE in the late 1990s. Its first international acquisition was Heartland Steel, in 2001. This was one of most advanced independent steel processing facilities in the USA, but went bankrupt and was cited as Chapter 11. For CSN, its acquisition provided an excellent opportunity to entry into the American market. It is a focused plant that receives inputs from the Brazilian mills for the finishing parts of the

production process, also known as "postponement".

The acquisition of a steel plant in Portugal, in partnership with Corus Steel (the merge of the Dutch Hoogovens with British Steel), in 2003, was the entry step into the European market. In the its basic arrangement, CSN assumes the operational responsibilities while Corus deals with the commercial activities, mainly. Although cultural distance from Portugal seems small (Brazil was colonized by Portuguese on the XVI century and the language is Portuguese) the expatriate country managers faced several cultural issues. All the implementation process of new operational procedures were carefully negotiated and gradually implemented. In less than five years the productivity of Lusinor, the Portuguese plant has increased considerably; currently, it operates in a very autonomous way, supplying the Spanish construction market, essentially.

The main reasons declared for the internationalization of production were of a financial nature (hedging and revenues in strong currencies) and of a regulatory nature (technical and sanitary barriers). The main benefits declared by the interviewees were related to experiential knowledge gained in terms of "real time understanding of the dynamics of global markets for being operating in advanced countries" and "the management of human resources and industrial relations in different cultures".

5.2 The Voto Cement case

Due to technical features and logistic costs, cement is an industry where long distance transportation is unfeasible; the geographic range of a given plant is highly limited. Therefore, the internationalisation process in the cement industry involves international acquisitions and partnerships.

Votorantim is one of the largest industrial groups in Brazil and cement is their main business. After the aggressive movement of the global leaders (the French Lafarge, the British Blue Circle, and others) into the Latin American and even into the Brazilian markets, Voto's reacted through the acquisition of two plants in Canada, in 2001 and the implementation of an experimental plant, in partnership with one of the world's leading firm in engineering applied to the cement industry.

From the beginning, the idea of expatriating managers to the Canadian plants was discarded. Knowing that their strength relied on Process Engineering and Operations Management, Voto decided that would transfer know-how to Canada through best practices. With the support of an international consultancy firm, a task force was established and, in a short period of time, the first version of the VCBP-Voto Cement Best Practices was consolidated. Simultaneously, exchange programmes involving Canadian managers were implemented. Visits to the local plants to learn about the local way of managing made the

implementation of the VCBP easier at the Canadian plants. For the Brazilian managers the most demanding aspect of their learning processes was associated to cultural differences and especially to the intricacies of interpersonal and labour relations in Canada (similarly to the experience of CSN). In organisational terms, Voto decided that the Canadian subsidiaries would operate with great autonomy following the operational procedures established by the VCBP.

After the consolidation of that organisational model, Voto Cement decided to internationalise their activities of distribution and delivery, up to a certain point seeking to emulate the successful strategy adopted by Cemex. So, they are replicating the process: formalising their best practices from their Brazilian distribution company while, negotiating to acquire a distributor in the Great Lakes region.

5.3 The Sabo case

Sabo is a family owned enterprise, founded in 1939, that develops and produces application-oriented sealing elements and sealing systems for automotive industry, mainly. Sabo has a strong orientation towards international markets since 1977, when it became one of GM's world-class supplier. Due to its high quality standards, Sabo exports for the European market and maintains an agreement with a German firm as its technology supplier since the early 1980s. In the beginning, the financial results were rather poor but the firm stuck to the strategy because experiential learning was considered valuable. In the late 1980s, cost became the prime factor in the auto industry. Sabo managed to achieve cost targets without compromising quality, thus keeping a competitive standing as a global supplier.

The first factory abroad was in Argentina, in 1992, and, in 1994, after a long period (around seven years) dating Kaco, a renowned German producer, Sabo was authorised by the local government, to acquire the whole operation, which included three plants in Germany and one in Austria. Sabo kept Kaco's profile of operations and started to use it as its European base and main source for Research and Development activities. In 1997, Sabo implemented a new factory in Hungary and, in 2006, its first factory in the USA. It also has commercial offices in the USA, UK, Italy and Australia to supply almost all automotive producers in the world.

The main point to be highlighted in the Sabo's case is its role as a "follow source" in the automotive industry. Sabo is a case that exemplifies the Uppsala model in the sense that the first movement was towards a neighbour country (Argentina) in times when there were fairly open market conditions due to the installation of the Mercosur. The gradual and long involvement with the German producer gives an idea of the learning process that Sabo managed to create the necessary competences and knowledge to successfully move into higher performance standards in international

manufacturing and in technological development, as well. Additionally, it has to be pinpointed that by acquiring a German firm, Sabo gained access to new sources of financial support.

From the organisational standpoint, Sabo created a distinct architecture. As a subsidiary, Kaco operates in relative autonomy, as a Centre of Competences exerting a World Mandate. The main difference is that in the case of the traditional MNCs, the R&D centres are located close to the headquarters. In the case of Sabo, the R&D Centre is located in the subsidiary and the main flows of technological knowledge go from the subsidiary to the headquarters.

5.4 The Embraer case

In a certain sense, Embraer was born international because airplanes are a global product. However, for a long period of time Embraer sold, in markets which can be characterised as peripheral, products which were certified by the FAA-Federal Aviation Agency, but which did not carry the brand name Embraer: they were only regional transporters or regional jets. Embraer captured a golden opportunity when the regional transportation markets boomed, creating a new business model in the aeronautics industry, through risk partnerships. Currently, Embraer leads a complex international supply chain network. Its involvement in international manufacturing, embarking on a joint-venture in China was essentially due to political constraints.

Embraer was founded in 1969, as a state-owned enterprise, linked to the Brazilian Aeronautics Ministry, manufacturing civil and military aircrafts. Its first civil product, a regional turbo was made for the internal market only, but the second family of products was designed and manufactured having the international market as main target. In the early years, a joint development programme with the Italian firm Airmacchi provided important inputs for the formation of its technological competences. An alliance with Piper (USA), in the late 1970s, was crucial for the creation of the competences needed for sales, services and maintenance in global markets.

In 1997, Embraer was privatised, after a long period of crisis caused by poor product design. Due to the financial and infrastructural conditions, when the new administration took office, a new business model was put in place: for the launching of a new product, a 45 seat regional jet, risk partnerships with four foreign suppliers, from Chile, Spain, Belgium and the USA, were established. That model was innovative not for being based on a global supply network, but for the cooperative character associated to partnering and risk sharing. In that project Embraer had four international risk partners. In its subsequent product family, a 70 to 110 seat jet, Embraer increased the number of risk partners to 11, including large traditional MNEs. Embraer's international operations are essentially related to inbound logistics and customer's

services. Therefore, Embraer can be considered a successful multinational enterprise without having invested significantly in resources for its foreign operations.

Embraer had to establish an assembly plant in China, recently, as a pre-condition to deliver jet planes to Chinese airlines, as part of an industrial offset agreement. Offset agreements within the aircraft industry have become increasingly complex, such that, by now, major producers like Boeing and Airbus operate with globally decentralised supply networks that are not shaped by cost, quality, or logistical factors. These subcontracting relationships have been configured in response to industrial development priorities of foreign governments that control the purchasing decisions of their domestic airlines. The Chinese operation is a joint-venture with a local manufacturer, and relies on a CKD-type of assembling.

6 ANALYSIS AND DISCUSSION

6.1 Contributions deriving from the Economic/Classic Approach

Analysing the internationalisation processes of Brazilian enterprises from the perspective of the Classical Approach, the first point to be addressed is that the movement of Brazilian firms is essentially asset seeking instead of asset allocation. This is especially true in the case of Ownership-Specific advantages, where a particular set of distinctive competences is the only intangible asset that could be classified as such. They do not hold comparative advantages in terms of size, or technology, or any other resource. And because they are in the early stages of the internationalisation process, advantages of common governance are not so distinguishable, too. Location specific variables were extremely relevant for the CSN and Voto cases because they profited from windows of opportunity opened by local regulatory systems (Chapter 11) and structural advantages were important for Embraer in its negotiation with the Chinese government. Finally, in what concerns Internalisation Specific Advantages, both capital and knowledge flows were mentioned as relevant. The need to stabilise financial flows through revenues in strong currencies is important for three from the four. Access to capital in parity with the conditions prevailing in the advanced countries was considered as an important by-product too.

6.2 Contributions from the Organisational Approach

The Brazilian late-movers are mature and integrated firms as predicted by the general literature. They were initially exporters, as predicted by the Uppsala Model, but it took a long time for them to internationalise their production activities: the average time between first export and first plant abroad is 22 years. The time lag is greater for the

manufacturers and smaller for the commodities' producers.

It is interesting to observe the location pattern of their subsidiaries. During the 1990s, 15 Brazilian enterprises started operations abroad. Ten started their operations in Latin American countries; five of them still remain exclusively in LA; the other five established new operations in other parts of the world as did the remaining five from the beginning of their international activities. In the 2000s, eight firms started international operations: only one in LA, soon followed by an acquisition in the USA, while the other seven started in various parts of the world. Therefore, the notion of closeness in geographical and cultural terms, another point raised by the Nordic School, was observed during the 1990s, mainly.

Conservative thinking about control seems to be behind the declared preference towards acquisitions. However, it is important to observe that the three Brazilian MNEs which are prone to joint-ventures are firms where "the assembling (of airplanes or buses)" is more important than "producing". In other words, the proneness of Brazilian enterprises towards acquisitions, perhaps, might be better explained by the characteristics of products/markets (scale) than by limitations related to the entrepreneurial mindset.

The organisational learning and knowledge management approach is also relevant for the analysis of the Brazilian late-movers. Even though the internationalisation process seems to have preceded the structuring of the management of learning at firm level, the agility of the Brazilian companies permitted a very efficient process of learning that in the first moment was directed to the management of operations in totally different environments in terms of market characteristics, national cultures and industrial relations.

As to the access to and transfer of knowledge, the internalisation of knowledge flows might be analysed in two aspects. The first concerns the (tacit) knowledge about the real functioning of international/regional markets when the firm is operating its own subsidiary: this flow was considered of utmost importance for international competitiveness by the four firms. The second concerns the internalisation of technological knowledge flows. This was really a prime factor in the case of Sabo and Voto Cement: both rely on technological knowledge produced in their subsidiaries for strengthening their competitive position, at home and in the foreign markets.

6.3 Contributions deriving from the Competitiveness Approach

The competition and competitiveness approach provides additional insights. There were two cases of companies that were proactive and one that was reactive. In this latter case, the company is struggling to build scale at global level for the production of a certain type of commodity. The

case of Embraer keeps a peculiar feature that was the acceptance of the Chinese conditions to manufacture locally the products to be delivered in the Chinese market.

Finally, the need to overcome trade barriers was relevant for CSN and Embraer. In the case of CSN the barriers were defined by global standards and in the case of Embraer by national (Chinese) policies ruling the access to certain products/markets.

6.4 The role of Manufacturing

In their internationalisation movement the Brazilian enterprises are using the differentiated competences that they have built for operating in an extremely turbulent national environment. Their strategies are short termed and supported by a considerable competence in terms of learning and reacting very efficiently and objectively to the events that mean threats and opportunities.

The key factor in the explanation of the internationalisation of Brazilian enterprises seem to be the intangible assets associated to differentiated competences in Process Engineering and Operations Management for all cases except Embraer, where a strong competence in complex products design and project management provided the basis for negotiation with potential partners. CSN and Voto Cement, as commodity producers, are worldly recognised by their competences in Production and Operations Management; those are firms that achieve productivity levels similar or superior to their international competitors. As for Sabo it has been for a long time a distinguished follow source in the automotive industry.

Therefore success in international late-moving requires systemic innovation competences. Manufacturing, in particular, is expected to be agile and efficient in what concerns learning and evolution.

7 CONCLUSIONS AND SUGGESTIONS

There are two main outcomes from this study. First, the process of internationalisation of Brazilian late-movers seems to be guided and supported by the differentiated competences owned by those firms in relation to the traditional multinationals. Second, the study of the late-movers should be carried out under the lens of a new conceptual framework. Currently, the main concern of early-movers is the rationalisation of the "legacy manufacturing networks" and formation of global value chains. Late-movers face different challenges.

Finally, the question of sustainability must be brought into the picture. How the late-movers will escalate the value adding curve? This is a point that deserves further research.

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