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Strategies to overcome barriers in emerging economies: The case of Brazilian pharmaceutical industry

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Abstract

Running a company in emerging markets demands from managers a particular knowledge related to the country specificities. Brazil as an emerging economy presents a complex scenario with several barriers which are not easy to overcome. This exploratory study presents the Brazilian pharmaceuticals industry and the strategies applied to deal with barriers from a dynamic scenario. This research was organized in two stages, in the first stage three cases are presented, in the second stage, based on a sample of 31 pharmaceutical companies, a description of the industry is presented. Following an institutional approach, the aim of this study is oriented to provide arguments to shed lights on how firms behave in emerging scenarios in order to overcome barriers and optimize performance.

Key words: *Strategic management, emerging market, performance, Brazil.*
JEL Classification: *C 19, G13, G 14*

1. Introduction

Even today, emerging economies still represent an enigma. Despite the international crisis, some BRICS' members did not stop growing and are still on the way to development, experiencing attractive rate of economic growth. Thus, this phenomenon has concerned managers, policy makers and the academic community. Nowadays, BRICS' members present a common characteristic, they are all different and consequently, companies running in these countries face unique conditions. Therefore, arguments to shed lights on how to deal with problems and overcome barriers represent a relevant issue to explain firm's behavior in emerging markets.

Literature presents evidence to show the relevant role of governments in country and in industrial development process (Porter, 1996; Athreye & Godley, 2009b), describing successful cases with government intervention (Athreye & Godley, 2009a; Ding et al., 2011) and others, where government intervention did not achieve the desired outcomes (Krueger, 1990; Caliari, & Ruiz, 2013). Authors as Athreye and Godley (2009b) described the successful experiences in the cases of the pharmaceutical industry in United States and India, while others as Caliari and Ruiz (2013) remarked that government intervention could be an adverse event for industrial development, as in the case of the pharmaceutical industry in Brazil.

This study is about strategy, and it is intended to provide arguments for a better understanding of how companies behave to overcome barriers under an emerging scenario. Particularly, this study follows an institutional approach (Williamson, 2000; Peng et al., 2009) to explain the strategies that pharmaceutical companies applied in an emerging scenario as a Brazil one. Findings explain how these companies survived during the 90's, consolidated a domestic position at the beginning of the new century and started an internationalization process.

This work is an outcome of a research activity that was organized in two stages. In the first stage, an exploratory study was developed in the pharmaceutical industry; a script was defined to interview executives from three companies (A, B and C). Findings at this stage were a result of qualitative analysis. In the second stage, a descriptive analysis was developed using a sample of 31 pharmaceutical companies and the survey was applied by telephone. SSPSS platform was applied to perform descriptive statistical analysis, which was contrasted with previous results. Additionally, this study presents some implications for managers and policy makers.

This study is organized in five sections. The second section presents a review of the literature that supports the research approach. Third section presents the methodology applied in the research process, data collection activities and data analysis. Fourth section presents relevant findings and opens the discussions. Section five presents some relevant remarks, implications and limitations of the study.

2. Literature Review

2.1 Environment and Institutions.

The environmental conditions and its impact on industry is not a new issue (Lawrence & Lorsch, 1969). Unfortunately, during last decades, the dominant approach was focused on productions process and economic indicators to measure performance, taken for granted a static environment, neglecting the institutional role (Dess & Beard, 1984). Currently, some academics have open the possibility of a new approach, where institutional changes and interactions are considered as relevant in the decision making process of any organization (Narayanan & Fahey, 2005; Wang et al., 2014). In this way, some authors remark that a strategic analysis neglecting the institutional framework limited the possibilities of a better understanding of companies' behavior, the strategic position and performance (Ingram & Silverman, 2002; Lewin & Kim, 2004, Peng et al., 2008).

The literature remarks that in developed economies, agents behave totally aligned to formal institution, in such a way the institutional influence is almost imperceptible (McMillan, 2007; Peng et al., 2008). In emerging markets the situation is different, because agents are regulated by informal institutions, which is a consequence of weak formal institutions (Peng et al., 2008; Wang et al., 2014). Following this directions, several academics have showed interest in studying the institutional framework as an independent variable in emerging conditions, estimating its impact on company's behavior, the chosen strategy and performance (Newman, 2000; Hitt et al., 2000; Yi et al., 2013; Wang et al., 2014).

2.2 Environment, Institutions and the Strategic decision.

Following the North's approach (1990), institutions represent the rules of the game of a society, or in other words, the norms developed by men in order to regulate human's interactions. In the same direction, Scott (1995) describes institutions as being the cognitive, normative and regulatory structures that provide stability and meaning to social behavior. The institutional framework was also defined as a set of political, social and legal rules that support production, distribution and commercial activities (Davis & North, 1971).

The strategic definition is related to choices. Thus, the strategic analysis of any business is a result of the manager's decision making process (Child, 1972). Therefore, taken for granted that institutions affect companies' behavior, any manager's decisions will be bounded by formal and informal constriction (North, 1990; Oliver, 1997). Prior works have neglected the relevance of institutions for strategic management (Dess & Beard, 1984; Clougherty, 2005; Oliver & Holzinger, 2008; Scott, 2008), questioning their arguments to explain company's behavior.

Last decades, the company's behavior was explained following different approaches. In the 80's, Porter (1980) explained the strategic position of a company following an Industrial Based View, where the level of rivalry among agents in the industry present a key condition to define the company's strategy, competitive advantage possibilities and performance. Then, during the 90's, Barney (1991) presented arguments based on company's resources. The author explained that any company is a unique entity and its strategic positions and performance is defined by a set of resources, which are configured in a very particular way. Later, this approach was defined as Resource Based View (RBV).

Currently, new studies have presented arguments to think institutions are relevant for any company's strategic position and its results. This new approach could be useful to understand the particular company's behavior in emerging markets, where traditional managerial tools could lead to wrong conclusions (Peng, 2008; Mike, 2009; Mahmood, 2012; Wang et al., 2014). Several authors (Peng et al., 2008) present arguments to think the approaches developed by Porter (1980) and Barney (1991) did not take into account the role of institutions, because both models were conceived in developed economies, where formal institutions are strong and their effect are almost imperceptible. Nowadays, studies present evidence to recognize the differences between institutional frameworks from developed and emerging countries (North, 1990; Hong et al., 2014; Wang et al., 2014).

Several authors have taken into account the institutional approach contributions to strategic management, defining it as Institutional Based View-IBV (Peng et al., 2002; Peng et al., 2008; Mike et al., 2009). Academics pointed out this new approach applied to study of emerging countries and international business opens a new research field with great possibilities of significant contribution to management science and particularly to strategic management (Peng et al., 2008; Kumar et al., 2013; Yi et al., 2013). New studies, following an institutional approach, have pointed out the role of the public institutions and its effect on companies' strategic decision and results (Hong et al., 2014). Additionally, some evidence suggests that institutional changes affect companies' behavior and its choices (Wang et al., 2014).

In this study, the institutional approach is applied in order to understand companies 's behavior in the Brazilian pharmaceutical industry, focusing on the strategies applied to survive and overcome problems and barriers during the 90's, consolidate the domestic position in the new century, and open the possibilities to international business.

3. Methodology

3.1 Research Questions

The aim of the study is to provide arguments for a better understanding of companies' behavior in emerging countries. This study is intended to explain the strategy applied by pharmaceutical companies to overcome the different barriers faced under an emerging scenario as Brazil. Thus, this question is oriented to justify how pharmaceutical company survived, consolidated a domestic market positions and initiated export activities.

3.2 Data Collection

The data collection plan was executed in two steps. First, an exploratory study was organized. Therefore, three pharmaceutical companies were contacted and scheduled. The research team developed a script that later was tested and applied to interview executives and managers from specific areas, interviews were recorded. Second, previous interviews provided useful contribution, information that was useful to elaborate a survey; instrument that was tested and then applied and completed by 31 companies from the Brazilian pharmaceutical industry, this data was organized and debugged in SPSS platform.

3.3 Data Analysis

Data analysis was organized in two steps. First, all interviews were typed into a word file, which was organized per cases and group of questions. After that, transcription data was analyzed through content analysis (Bardin, 1977). In this step, the main objective was to find relevant insights about barriers, motivations and the applied strategy.

Second, the research team, using the SPSS applications, performed a data analysis of the pharmaceutical industry. Based on a sample of 31 companies, this description was useful to validate findings form the first stage, which was linked to important changes in the pharmaceutical industry conditions.

4. Results and Discussion

This section is twofold. First part presents three cases, which provide important insights about the incentives and difficulties theses companies had to face in order to survive, consolidate strategic position and go into internationalization activities. Then, in the second part, a market description is presented, where institutional changes are linked to information about the reaction of the Brazilian pharmaceutical industry.

4.1 Cases

4.1.1 Company A

Managers described that company A began activities in the textile industry, supplying oil chemical compounds. In 1984, the founder realized a great opportunity in the pharmaceutical industry, when Brazilian government stablished a public policy to substitute imported pharmaceutical ingredients (APIs) and pharmaceutical drugs by domestic production, and then Company an initiated operations. Nowadays, Company A has been a success case, growing very fast and going to the international arena in 1988. Actually, Company A supplies pharmaceutical compounds to 12% of the global market and 70% of the Brazilian consumption, ranking the company into the third place as a global player. Managers provided some reasons that motivated to take the decision to go abroad:

- Small domestic market for a large volume of production,

- Economy of scale,
- Brazilian market opening in 1992.

Company A described the strategy to go abroad was based on a high service level, using exclusive distribution channels in most of the countries and five distribution centers in the world to supply the most important customers, United States (4DCs) and Europe (1DCs). Managers also remarked that part of the success is a consequence of being innovative, which is supported by a R&D department (5% of total employees) and some partnerships (Fiocruz, UFRJ and UNESP).

Managers at Company A are very aware about how complex is to run a company in the Brazilian market, how to deal with problems in this condition is part of the DNA of the company, which has been a useful factor to face the global market. Managers also described the main barriers they have to overcome to succeed in the Brazilian market, enlisting them as follow:

- The dollar exchange rate variability,
- Limited infrastructure and high cost (energy, water, labour force and logistics),
- Geographical locations (Far from important markets as Europe, USA and Asia),
- The bureaucracy which is really expensive (time and money),
- The lack of exclusive public policy for the pharmaceutical industry.

Being a third place global player in the pharmaceutical industry, Company A can be considered as a successful Brazilian company. Thus, when managers were asked about the main critical factors in the internationalization process of company A, they presented the following arguments:

- The development of a strong global brand, based on a value added strategy,
- The development of a marketing strategy based on partnerships with distributors,
- A selection system to identify distributors with strategy aligned to the company's,
- A set of indicators to track the distributors' service level,
- The development of partnerships with global players to prospect new markets, and
- A proactive position, providing technical solutions to solve customers' problems.

4.1.2 Company B

Company B began operations in 1976, a group of medical doctors decided to open a health care clinic for retired people. In order to provide medical drugs, a laboratory was established as part of clinic's facilities. Very soon, the lab's production capacity exceeded the clinic's demand, so, in this way, it was necessary to allocate somewhere the remaining production, triggering the starting point of lab's commercial activities. The laboratory specialized on products of psychiatry and anesthesia, achieving in few years a market reputation for excellence. Foreign medical doctors making internship in Brazil, and who tried Company B's products, started to recommend them to colleges, generating an unexpected international demand. Export activities began in the 80's, with a first shipment to Mozambique.

Managers at Company B described that the decision to go ahead with an internationalization strategy was taken because a set of motivations, they enlisted them as follow:

- Reduction of imported compounds and lack of domestic products,
- Reduction of foreign markets dependency,
- The possibility to increase revenues through exports,
- The possibility of new business and ideas that could be implemented in Brazil.

Company B described there is not a specific internationalization strategy, instead, the organization defines a strategy taking into account the country's conditions, it is like an ad-hoc strategy. Additionally, managers described at the beginning, Company B imported pharmaceutical compounds and drugs, later, based on a transfers technology strategy, the company started licensing some patents to produce in Brazil to satisfy domestic demand and exporting the remaining production to several countries, this represents an average of 4% of total production. Actually, Company B exports to 30 countries, which are located in America, Asia and Africa.

Managers at Company B are nurturing a verticalization strategy to get better possibilities to increase exports, in order to achieve this objective; the R&D department has been stablished. Additionally, some partnerships have been subscribed with different Brazilian universities (UNICAMP, USP, UNESP, and UFRGS). The path till here has been not easy, and managers recognize the company´ barriers they had to face to produce and export are not easy to overcome. Managers describe a list of main barriers as follow:

- ANVISA (National Agency for Sanitary Surveillance) and the authorization process,
- Limited infrastructure and costs of services (Laboratories for testing, logistics),
- Geographical locations (Far from important markets as Europe, USA and Asia),
- The variability of dollar exchange rate.

Managers consider that Company B is growing and it is possible to forecast a great future, increasing the market share and exports, but in order to transform this future into reality it is relevant to take into account the following factors:

- Tracking system to follow the trend of emerging technologies,
- Investments on absorptive capabilities,
- Alignment among company's strategy and distributors,
- A clear business model to internationalize,
- Partnerships with global players to prospect new markets, and
- Alignment among imports, export, markets prospection and company's strategy.

4.1.3 Company C

Company C began operations in 1987; the main activity was import condoms to supply domestic demand in Brazil. At the beginning the company did not have technological infrastructure, disadvantage that was overcame establishing a partnership with a famous high-tech laboratory in South-America. After few years and investments in technology, company C began production of new lines, achieving great results with oncological products.

In 2010, company C changed its strategy, adopting a new name to facilitate communication of the brand and products to the domestic market. Currently, the company has several lines of production (Hospital equipment, active pharmaceuticals ingredients, pharmaceutical drugs, etc.) and is being recognized as a biotech company, which exports to 20 countries, the most important being located in South-America. Managers described that export activities began in 2005 and basically triggered by two strong motivations: to overcome the bureaucratic process to get product authorization at ANVISA and to reduce the possibility of bankruptcy, because without ANVISA’s authorization is forbidden the production or commercialization of any pharmaceutical product or compound in Brazil.

Managers at Company C described the strategy to go into an internationalization process is based on acquisition of subsidiary. The strategy began with the acquisition of a laboratory in Bogota-Colombia and later another acquisition in Uruguay. The plan is to acquire in the short future, two more subsidiaries, which are located in Argentina and Chile. Currently, 15% of company’s production is exported; the difference is allocated in the domestic market. Managers described that in order to succeed as a biotech company; they are investing strongly on bio-technology and synthetic compounds, as well as on the development of an R&D department. Additionally, company C has established partnership with UNICAMP and other international universities; as well it has been receiving support of scientist and consultant from global institutions.

Managers at company C consider the pharmaceutical market in Brazil as being very competitive, but at the same time very bureaucratic, because of the ANVISA’s regulation. Additionally, they complemented, if a company can fill out ANVISA’s requirements, this company could license production anywhere. Based on managers’ experience, a list of main barriers is described as follow:

- The ANVISA’s bureaucracy,
- Export procedures and documentations,
- Import procedures and documentations,
- There is not financial support for new investments in the industry,
- Lack of qualified workers and scientist,
- Regulated market and price control mechanism.

Managers described that Company C has showed determination in the execution of the internationalization strategy based on acquisition, which has been a key factor for product development, production process and research. Additionally, they considered a set of critical factors that has to be taken into account to internationalize a company. These factors are enlisted below:

- Partnerships with institutions to support research and testing,
- Global products with high-level specifications,
- Governmental programs for qualification,
- Governance tools to facilitate the relationship between company and subsidiaries.

4.1.4 Cases' important insights

During the 90's, in order to push Brazilian industry to make an technological upgrade, government decided to reduce import tariff and taxes. This new market condition affected negatively the Brazilian pharmaceutical industry (Caliari & Ruiz, 2013). That new scenario pushed many companies near to bankruptcy (Frenkel, 2002; Gadelha, 2002) and consequently weaken the existing infrastructure (High-tech laboratories and research institutes). Even today, the industry still faces consequences of prior government's interventions, but based on different strategies, many companies have overcome them to satisfy domestic demand and to reach the pharmaceutical global market.

Based on previous three cases and the arguments presented by managers, next paragraphs describe the different strategies applied to overcome the Brazilian barriers. First, the problems are presented and later the logical reasoning of arguments is explained.

- **Dollar exchange rate:** This is a key barrier for the pharmaceutical industry, because most of the chemical compounds have to be imported and paid in US dollars, while the domestic production is paid in BR Reais (Brazilian currency). Managers described this barrier was overcame by: i) Applying in the domestic market a value added strategy to differentiate the company's production from generic drugs and ii) Achieving economy of scale through large volume production, supplying government's generic program and exporting the remaining production.

- **Limited infrastructure:** This barrier is very complex because it is represented by different services, which are low quality and expensive, and some of them do not even exist (i.e. water, gas, energy, high-tech laboratories, qualified professionals, logistics, etc.). Here some insights, managers described that in the case of high-tech laboratories for testing, some partnerships where established with local and foreign universities, and in order to have qualified workers, some companies hired foreign qualified professionals, while others provided qualification programs (in house and/or abroad).

- **Geographical locations:** This is a common barrier for every country in South - America, affecting the logistic cost of importing from USA, Europe and Asia, and consequently the distribution cost. According to some managers, the best strategy was to import active pharmaceuticals ingredients (APIs) to produce in Brazil or in other cheaper country in South-America and later export to neighbors around in the continent.

- ANVISA (National Agency for Sanitary Surveillance): This organization represents the Food and Drug Administration (FDA) of Brazil and according to managers, the problem with this organization is the very long bureaucratic procedures. The strategy to overcome this barrier has been through diversification, while producing and commercializing the company's production in others less bureaucratic or less regulated markets.

- Regulated market and price control mechanism: Since the end on the 90's and after the poor outcome of the Brazilian "generic" program, the pharmaceutical industry was regulated and price control mechanisms were implemented. According to some managers, there are three domestic strategies. i) Being a government's supplier, taking advantage of economy of scale, companies could provide the generic drugs to contribute to government's generic program; ii) Value added strategy, which offers the opportunity to launch products that present a differentiation when compared against generic drugs; and iii) Very specialized products, with no generic or competitor in the domestic market. And of course, companies always will have the possibility to go abroad to find better lucrative market.

4.2 The Brazilian Pharmaceutical Industry

This section is twofold. In the first part, historical events at the Brazilian pharmaceutical industry are described, the purpose is to identify relevant changes in the institutional framework that have affected the industry in the period 1990-2014 . In the second part, a description of the industry is presented.

4.2.1 Historical Antecedence

Next paragraphs present a timeline of the most important changes in norms and regulations which are part of Brazilian formal institutions. These changes affected directly the Brazilian industry, one of this was the pharmaceutical industry. This changing environment affected managers choices and strategies applied by them.

1994- Reduction of import tariffs and taxes (Real Plan): This year, President Itamar Franco implemented Real Plan. One important decision was the reduction of import tariff and taxes. The objective was to pressure the Brazilian industry to a technological upgrade, improving quality and reducing cost.

1995- Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs): Brazilian government began an agreement to develop and applies a new patent legislation.

1996- New patent legislation (Law 9.279): The Law 9.279 was approved to regulate rights and obligations related to the industrial property.

1998- Creation of the Agency of Private Health (ANS): This is the National Regulatory Agency for Private Health Insurance and Plans. This agency was created to regulate changes in private health insurance market in order to ensure public interest.

1999- Creation of National Health Surveillance Agency (ANVISA): This agency is a regulatory unit from Brazilian government, It has same attributes that the FDA in the United States. This agency is responsible for regulation and approval of Pharmaceutical products, sanitary standards and also for the food industry's regulation.

2000- Brazilian generic drug program (Law 9787-1999): The objective of this Law is to outline rules to regulate the commercialization of medicines in Brazil.

2003- Industrial, Technological and Foreign Trade Policy (PITCE): Government declared the pharmaceutical industry as one of the major sector for intervention.

2004- Federal Innovation Law (Law 10.973): This Law was the first to deal with the relationship Companies - Universities, and was intended to stimulate innovations activities in the Brazilian Industry.

2004- BNDES (Development National Bank) - PROFARMA is a program that was implemented to offer financial support to innovation activities in the pharmaceutical industry.

2005- Provisional Law of goodness (MP do bem- 1.196): This Law is intended to stimulate Brazilian export capacity, benefiting several industrial sectors.

2007- Policy for Productive Development (PDP): The aim of this Policy is to promote the long-term competitiveness of the Brazilian economy, strengthening confidence in the ability to grow, with greater integration of existing policy instruments. This policy considers the pharmaceutical industry as part of the health–industrial complex and a strategic area for investment.

2011- Major Brazil Plan (PBM): This policy was implemented to stimulate investment on innovations and international business, and protect national industry. In this plan, pharmaceutical industry is declared as a strategic industry, thus, it should be supported.

4.2.2 Descriptive Analysis of the industry

At the beginning of this study, the main objective was to understand how companies from the pharmaceutical industry overcame barriers in an emerging market as Brazil. After the first stage, findings suggested that almost all the companies had export activities. Then, the decision was to go beyond and to find arguments to explain how these companies survived, overcame barriers and went into international business. Thus, next paragraphs show the result of survey application.

Managers were asked about the international activities, 97% answered the company has a specialized department on international business and in average this area have a team of 11 people. The study also described that they export in average to six different countries, the survey reported 65% of exports goes to all America (North, Central and South) as final destiny, 10% Africa, 6% Europe, 6% Asia and the remaining 13% is spread to other regions as Middle East, East Asia, Meddle Asia and Oceania. It is important to remark that so few managers wanted to provide details about exported volume or total income.

A clear customer definition is a key element in strategic management. Thus, next question in the survey was focused on to identify the factors that managers consider as being relevant for foreign costumers. In order to estimate this perception, a five point Likert scale was applied (from "No important: 1" to "Very important: 5"). Sample describes that most of managers agreed that quality (5), reliance (5), reputation (4.83) and logistic facilities (4.63) are very important factors. Price (3.97) is considered an important factor too. Additionally, 69% of managers' answer reported qualified professional as being the most relevant companies' success factor.

Research activities are at the core of the pharmaceutical business, one question was focused on to discover if research and development of product and processes are defined as a formal area in the company. Sample reports that 54.8% of the companies have a formal R&D department, results also described that an average of eight professional work in this area. Additionally, results also showed that 62% of the companies have intellectual property regulations, and 32% of them have registered patents.

This study was originally intended to identify Brazilian barriers in the pharmaceutical industry. One question was intended to catch up managers' perceptions about Brazilian barriers and how important they are for international business activities. Here, a five point Likert scale was applied (from "No important: 1" to "Very important: 5"). Managers agreed that labor legislation conditions represent an important barrier (4.40), as well as dishonesty (4.20), corruption (4.10), taxes (3.90) and interest rate (3.60). Factors as inflation (3.43) and lack of infrastructure (3.30) were described as being neither very good nor very bad factors, Brazilian regional customs was considered as being less important (1.87).

Companies' behavior is an important point of this study. Thus, next paragraphs describe the internalization strategy pharmaceutical companies applied. The first group of question was related to international activities. Thus, the sample reported 76.7% of the companies have export activities, while 23.3% reported they have stop exporting. Additionally, managers reported 86.7% of the samples seek actively for export possibilities, while 13.3% do not. In line with this attitude, 73.3% of the sample declared they have cooperation agreement with foreign companies, 83.3% of the sample reported they have opened commercial representative offices in other countries. Finally, sample reports that 80% of the pharmaceutical companies have international productions facilities, which are results of merges and acquisitions.

Motivations and reasons to go to international activities is another important point in this study. Therefore, second group of questions was focused on to describe how some factors were relevant to the company to go into international business. A five point Likert scale was applied (from "No important: 1" to "Very important: 5"). Managers answered that market expansion is a very important factor for internationalization (4.83). Interest to join new international networks (4.33), to get an international image (4.10), track clients/competitors markets trends (4.03), access to new technologies/resources (4.23), internationalization as part of the strategic plan (3.93), network opportunities (3.90) and dependency reduction from domestic market (3.77) are considered important factors. Government policy for internationalization (3.07) and foreign customers needs (3.03) are considered as being neither very good nor very bad factors. Pressure from international competitor in domestic market (2.67), available production capacity (2.40) and reduction in sales (2.07) are considered as being less important factor for internationalization.

International environment presents barriers that have to be overcome. The other questions are oriented to identify how important managers perceive factors that represented or still represent difficulties to internationalization process. A five point Likert scale was applied to identify how important these factors are (from "No important: 1" to "Very important: 5"). The sample reports that managers considered lack of knowledge of the international market as a very important factor (4.6). Few managers with international experience (4.43), lack of information about potential international market (4.47), competitive foreign prices (4.33) and lack of knowledge about other markets' regulation (3.80), are considered as important factors. Few governmental incentives (3.17), access to distribution channel (3.27) and technological gap in production (3.17) are considered as being neither very good nor very bad factors. Filling out other countries' legislations requirement (2.07), difficulties with other languages (2.30), high cost in logistics (2.47) and difficulties with packaging (1.97) are considered less important factors.

Internationalization activities are important for pharmaceutical companies; therefore they have to be supported. The next group of questions is intended to identify which factor inside the company were or still are relevant to nurture internationalizations activities. A five point Likert scale was applied to identify how important these factors are (from "No important: 1" to "Very important: 5"). Sample described that managers' international experience (3.95), the market potential and size (3.95), domestic and foreign partnerships (4.14), being a pioneer in the market (3.90), the existence of previous commercial contacts in new markets (4.0) and the geographical strategically location (4.14) are considered as important factors for internationalization activities. Cultural similarities with Brazil (3.14) and existence of trade agreement with Brazil (2.57) are considered as being neither very good nor very bad factors.

Companies have to change in order to go into an international arena, therefore, next issues were oriented to identify which internal factors are relevant to support internationalizations activities. A five point Likert scale was applied again to identify how important these factors are (from "No important: 1" to "Very important: 5"). Tracking the international market trend to align companies' strategy (4.58) is considered a very important factor. Organizational change to follow main competitors (4.45) is perceived as being an important factor. The relevance and benefits of after sell services (2.77), organizational quick response to fit market changes (2.77), strategic alignment to fit internationalization trends (3.23) and alignment between exports and production areas (3.06) are considered as being neither very good nor very bad factors. Changing the organizational regulation to fit market requirement (2.26) is considered as less important factor.

Managers were asked about how internationalization affected the companies' performance indicators. A five point Likert scale was applied to identify how positive or negative these factors were perceived (from “Very negative: 1” to “Very positive: 5”). Sample reports that changes in the production process (4.56) were a very positive indicator. Total revenue (3.8), companies' profit (4.16), market share (3.96), customer satisfaction (3.96), development of new distribution channel (3.84), company's background (4.16), application of new management tool (4.28), changes in the administrative process (4.24), new product development (4.12), qualification and training (4.16), total income (3.72), strategic position (3.92) were considered all positive indicators.

5. Final Remarks, implications and Recommendations

Based on the Brazilian policy, prior study (Caliari and Ruiz, 2013) presents arguments to explain why the number of large pharmaceutical companies (over 500 employees) declined in the 90’s and just started to grow after the implementation of the generic program (2000). These authors also present arguments to think the generic program was terrible for the development of the pharmaceutical industry and did not achieve the expected outcomes.

This study present argument to think the Brazilian generic program failed because a strong informal institution (North, 1990) was not considered. This informal institution is represented by the cognitive dimension (Scott, 1995), which is the Brazilian culture belief, people associate low price to low quality, and additionally, commercial representatives persuade medical doctor to induce patients to buy brand name drugs instead of generic drugs (PROGENERICOS, 2010). Thus, the belief that brand name drugs are better quality than generic drugs is reinforced in the patient’s mind.

Next paragraphs presents some links between findings from the first stage and the survey results from the second stage, Remarking how changing in the institutional framework (time line) affected the managers´ strategy. Then, some implications for managers and policy makers are presented. Finally, recommendations for future research are detailed.

5.1 Final Remarks

Findings described dollar exchange rate as being a very old problem, and still today represents a big barrier, because most of the compounds are imported and paid in dollars and domestic income is received in reais. Findings suggest that in order to pharmaceutical companies overcome the dollar volatility during the 90's, they had to go abroad looking for partnerships for several reasons (new customers and sales, new technology, cost reductions, risk diversification etc.). This could explain why most of the companies have international activities, which also helped to support a good position in domestic market. Limited infrastructure available is Brazil is a complex barrier that affects several industries. High cost of basic services as water, gas, energy, etc., are almost impossible to overcome. Findings suggest that the possibility to have access to high-tech laboratories and qualified professionals is through partnership with universities and research institution in Brazil and abroad.

Logistic cost in Brazil are really high, thus the geographical locations of the country is a strong barrier to overcome. Findings suggest that merge and acquisition, as well as agreement as joint ventures are part of the strategy lo allocate production to strategic facilities which are surrounded the most important customer in Brazil and in South, North and Central America.

The ANVISA (National Agency for Sanitary Surveillance) is a very difficult barrier to overcome. This organization is very bureaucratic and to have a medicine approved is a time consuming process. Findings suggest that the strategy to overcome this barrier was, and still is diversification. Abroad facilities allow pharmaceutical companies to produce in less bureaucratic countries and allocate the production in less bureaucratic or less regulated markets.

The new century brought a better market condition to the pharmaceutical industry in Brazil. A regulated market and price control mechanism were implemented. Changes in legislation, government incentives, a generic program and public funds for the industry were implemented. As a consequence, production capabilities in the country have been consolidated, but still R&D activities and technological capabilities have been neglected. Thus, companies have participated of the generic program which is good for better total income but have been no relevant to nurture R&D activities.

5.2 Implications

This work provides several managers' implications. Findings contribute with arguments to explain companies' behavior in the Brazilian pharmaceutical industry. The main contribution is the link between the decision managers made and the circumstances explained in the time line.

Findings also provide policy makers' implications. Because government programs and its implementation always provide experiences, as in the case of Brazil, unexpected outcomes and negative effect in the industry should be avoided. Considerations of the institutional framework could provide better results.

5.3 Recommendations

This is an exploratory study and findings represent just suggestion and arguments to shed lights about how companies behave in emerging economies. Thus, this study represents an effort to operationalize institutional analysis and provide an idea about how dynamic an emerging market can be. We strongly recommend go deep with the institutional approach making research on how informal and formal dimensions affects companies' behaviors.

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