GAINING SUSTAINABLE COMPETITIVE IT ADVANTAGES: MULTIPLE CASE STUDIES IN INTERNATIONALIZED BUSINESSES

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ABSTRACT

This research studies how the studied firms gain sustainable competitive advantages (SCAs). The issue has been studied in the literature on business strategy: the challenge for managers is to identify, develop, protect and use resources and skills that provide the firm with SCAs. Eight cases were studied. All concerned Information Technology firms that sell to other companies. The variables used were qualitative. Data was collected from primary and secondary sources of information. The primary sources consisted of the studied firms, where interviews with management were held. The main results are: (1) One firm develops products abroad and this aspect is a competitive advantage. (2) There are cases that resort to a model that provides them with great operating flexibility. (3) One firm obtained SCAs by developing a strategy whereby it implemented a franchise model for development and distribution. The franchise system encourages entrepreneurial behavior among the franchisees. (4) One case gained a competitive advantage through the complexity and sophistication of its products. (5) Some of the cases searched for market niches that were less exposed to competition.

Key-words: Strategic management. Strategic planning. Advanced technology firms. Management of multinationals.

OBTENÇÃO DE VANTAGENS COMPETITIVAS EM TECNOLOGIA DA INFORMAÇÃO: ESTUDO DE MÚLTIPLOS CASOS EM EMPRESAS INTERNACIONALIZADAS

RESUMO

Neste trabalho, objetiva-se examinar como oito empresas da área de tecnologia da informação (TI) obtêm vantagens competitivas sustentáveis (VCSs). Ao longo dos anos, este tema vem sendo tratado na literatura sobre estratégia empresarial: o desafio dos gestores está na identificação, desenvolvimento, proteção e utilização dos recursos e capacitações que possibilitam VCSs à empresa. A coleta de dados foi realizada em fontes primárias e secundárias. Como fonte primária utilizou-se as próprias empresas, nas quais se coletou informação em entrevistas com executivos. Com relação à obtenção e sustentabilidade de VCSs pelas empresas estudadas, seguem os principais resultados encontrados: (1) uma empresa desenvolve produtos no exterior e faz deste aspecto uma vantagem competitiva; (2) há casos que lançam mão de modelo de atuação que lhes confere flexibilidade alta; (3) uma empresa obteve vantagem competitiva ao desenvolver uma estratégia de atuação na qual implementou um sistema de franquias para desenvolvimento e distribuição, sistema este que estimula o comportamento empreendedor dos franqueados; (4) uma empresa fez da sofisticação e complexidade de seus produtos uma vantagem competitiva; e (5) a busca de segmentos menos expostos à competição foi o caminho escolhido por algumas das empresas estudadas para obtenção de VCSs.

Palavras-chave: Administração estratégica. Planejamento estratégico. Empresas de tecnologia avançada. Administração de multinacionais.

1 INTRODUCTION

According to Mytelka (2000), competition has become global and innovation driven. Thus, companies in developing countries should increasingly adopt a continuous innovation process, regardless of their field of business. Dependence on past habits and practices (path dependence) does not stimulate this innovative behavior.

There is an urgent need for approaches to turn lethargic companies into energy-filled competitors. Vellinga (2000) notes the importance of Gereffi's (2000) approach, which goes beyond the market versus government debate and presents the organization of production as a crucial factor behind the economic transformation process which follows from globalization. Dunning (1995), while searching for causes of extraordinary performance, notes that the success of the modern company is increasingly determined by the ability to organize resources, not only inside the company, but also with other organizations.

This paper seeks to examine how the studied companies obtain sustainable competitive advantages (SCAs). Along the years, this subject has been dealt with in the literature on business strategy: Amit and Schoemaker (1993) state that, for managers, the key challenge is to identify, develop, protect and use resources and skills that provide the company with a sustainable competitive advantage. Here we seek to answer the following question: How do the companies we study obtain and sustain competitive advantages? Teece, Pisano and Shuen (1997) also state that this is the fundamental question in strategic management.

According to the Resource Based View (RBV), competitive advantages are obtained from product markets and are based on those company resources that are unique and hard to imitate (Teece et al.). This is debatable. Schmitz (1999) argues that, although there is some convergence regarding the critical issue of who loses and who wins with globalization, there is controversy as to what allows companies to develop SCAs.

1.1 CASE STUDIES

We studied eight companies. These are profiled in table 1 below. Because of confidentiality agreements, the companies and executives are not named in the text. All are in the IT industry, in the organizational segment. Companies A1,

A2 and A3 produce and sell management software. A3 sells management software for retail but also derives a substantial part of its revenue from the sale of commercial automation equipment.

There is software bundled into this equipment, whose sale is included in the numbers reported by the company. In the figures reported by the Brazilian Association of Software Companies (Associação Brasileira das Empresas de Software - ABES, 2007) software bundled with hardware is not considered. Companies labeled B1, B2 and B3 are IT service providers. B2 and B3 are among the Brazilian market leaders and are preparing for their IPO. So is C1, which, despite its small size as compared to the others, has an investment fund and a state-owned development bank among its equity-holders. B1 is tied to a service provider regarded as a benchmark reference when it comes to innovative management and control. C1 and C2 specialize in management software for the financial sector.

COMPANY	ANNUAL REVENUE	CORE BUSINESS	STATE OF ORIGIN	CAPITAL STRUCTURE
A1	R$ 150 to R$ 500 million	Management software for medium-sized and large companies	SC	Publicly traded
A2	R$ 150 to R$ 500 million	Management software for small and medium-sized companies	SP	Publicly traded
A3	R$ 150 to R$ 500 million	Commercial automation (hardware and software) for retail	PR	Publicly traded
B1	R$ 150 to R$ 500 million	IT Services	SP	Privately held corporation
B2	R$ 150 to R$ 500 million	IT Services	RS	Privately held corporation
B3	Over R$ 500 million	IT Services	SP	Privately held corporation
C1	Less than R$ 60 million	Management software for the financial sector	SP	Privately held corporation
C2	Less than R$ 60 million	Management software for the financial sector	SP	Privately held corporation

Table1: Profile of case studies

It is unclear how to classify the companies. According to the Brazilian Institute for Geography and Statistics (Instituto Brasileiro de Geografia e Estatística - IBGE, 2001), there is no consensus on how to separate the business segments. In practice, legislation, official financial institutions and industry groups use various different criteria to classify the companies. These are based

on revenues, number of employees or a combination of the two. The variation in concepts is due to the differences in objectives and aims of the institutions that do the classification, such as regulating, providing credit, carrying out research and so on. Classification by headcount is criticized for not considering variations in the production process and the qualification of the work force. One rule of thumb is that small companies are those with 6 to 19 workers and medium-sized and large companies are those with over 20 workers. Using this definition, all the companies we studied are medium-sized or large. We also validate the criterion of the National Economic and Social Development Bank (Banco Nacional de Desenvolvimento Econômico e Social - BNDES) to classify companies by revenue.

Thus, based on the BNDES (2008) criterion, two of the companies we looked at are medium-sized (C1 and C2, whose yearly gross operating revenue is between R$ 10.5 and R$ 60 million) and six are large (above R$ 60 million). This criterion should, however, be used carefully. First, there are clear differences between organizations with revenues of, say, R$ 65 million and R$ 700 million. Second, C1 and C2, are, in spite of their small size as compared to the rest of the sample, representative of the segment in which they operate. Interviewees in these companies point out that, in this segment, a company with revenues of US$ 30 million is fairly large by international standards.

2 LITERATURE REVIEW

Barney (1991) proposes that a company has a competitive advantage when it develops a value creating strategy that is not simultaneously implemented by any of its current or potential competitors. The concept of sustainable competitive advantage is not connected to time, but to the possibility that the advantage will be copied by the competition. Foss (2007) also discusses the process whereby competitive advantages are developed. He argues that competitive advantages and consequent outperformance are driven by skills that cannot be copied by the competition.

Maskell and Malmberg (1999) conclude that long-term competitiveness is related to companies' ability to continuously perfect their knowledge base and performance, rather than merely focusing on obtaining static efficiency via the

exploitation of low cost resources and economies of scale. It follows that knowledge is a fundamental asset for competitive companies and that learning is a process of the utmost importance.

Learning processes are inherently interactive and often uncertain. Most new knowledge comes from problem solving, in an incremental trial and error process. Problem solving processes have codified and tacit elements. One can argue that as codified knowledge now spreads very fast, tacit knowledge has gained importance as a basis for competitive advantage.

If all companies had the same fundamental skills, there would be no income to appropriate. Thus, companies must develop unique competencies to avoid these competitive pressures. There is emphasis on the need to simultaneously strengthen some skills, build others and abandon fundamental constraints, which are defined as historical competencies that obstruct the development of dynamic competitive advantages (Kaplinsky, 2005).

Porter and Wayland (1995) observe that in a world in which information is rapidly broadcasted and basic resources are largely available, the only way for a company to maintain its competitive advantage is to constantly innovate and become more sophisticated. Innovation does not refer only to physical technology, but also to marketing, communication, product positioning and other competitive tools. Dynamic and innovative companies outperform their competitors, even those in consolidated positions whose competitiveness is solely based on lower factor costs or economies of scale. The conclusion is that competitive advantages follow from the dynamic rate of improvement and not from static efficiencies. Williamson (1991) argues that a central problem of economic organization is adaptability. Teece et al (1997) note that the capacity to review and transform is, in itself, an organizational competency that can be learned. The more often it is practiced, the better it is executed.

Sturgeon (2002) explains that American companies were excessively fragmented and focused on cost cutting and short-term profits. These factors got in the way of American companies' efforts to stop competitive erosion in the global economy. Instead of responding to increased external competition by improving the entire production process, American companies sought low-level competitive advantages. Among the practices that confirm this impression are cutting the number of hierarchical layers (*downsizing),* offshoring, squeezing suppliers, cutting wages and using more temporary workers.

3 RESEARCH METHODS AND TECHNIQUES

The method used was the study of multiple cases. The variables used were qualitative ones; it was assumed that strategic variables are difficult to measure, as compared to other variables. Dunning (1995) argues that most strategic variables can only be measured by their effects. In other words, it is impossible to measure them directly. In line with this argument, in this work we study strategic variables by means of indicators. Yin (1994) also points out that the case study may be the most appropriate method for understanding complex organizational phenomena. This was the main reason for selecting this method.

Case studies do not allow one to extrapolate the results to the entire universe of companies, as Yin (1994) points out. Stake (1995) also covers the subject of generalizing the findings of case studies. As he sees it, the case study seems to be a poor base from which to generalize. On the other hand, the study of a single case or a small number of cases allows one to go into greater depth. Given Yin's (1994) arguments in favor of case studies and considering that we want to take into account the context of the case (globalization, the competitive environment, corporate internationalization and so on) and that it is hard to separate these phenomena from the actions of the companies, the choice of a case study seemed appropriate. In this study, transcription of the interviews was accompanied by the interpretation of information that was gathered based on theoretical considerations. Note that we have included only the analysis of the results in this article, but not the transcripts themselves.

According to Patton (1990), the key characteristics of qualitative research strategy, such as we used in this work, are:

- ✓ Qualitative data: we carried out in-depth research, covering personal experiences and impressions.

- ✓ Contact and personal impressions: we had direct contact with the people, the situation and the phenomena being studied. The experience and the perceptions of the researchers are an important part of the research and can be considered critical to the understanding of the phenomenon.

✓ Dynamic systems: we tried to pay attention to the process, which we assumed took place within a context of constant change and progress;

✓ Focus on special cases: we assumed that every case is special. The first level of analysis captured the details of the individual cases that we studied. This was followed by a cross analysis that relied on the analysis of the individual cases.

Research design. Yin (1994) discusses research design: the rationale that connects the information that was gathered and the solutions to the initial questions that were reached. The five important components for a case study are enumerated: (1) The issues to be studied; (2) Hypotheses; (3) The unit to be analyzed; (4) The rationale that relates the data to the hypotheses; (5) The criteria for interpreting the data.

The issues studied here are outlined in the objectives. The units of analysis are the firms. Based on the objectives we set, we defined the themes for a literature review, and based on this review we designed interview scripts, which we then applied. The analysis of the results compares the information collected in the field with the concepts in the literature, in such a way as to fulfill the objectives we set. This reasoning is diagrammed in Picture 1, below.
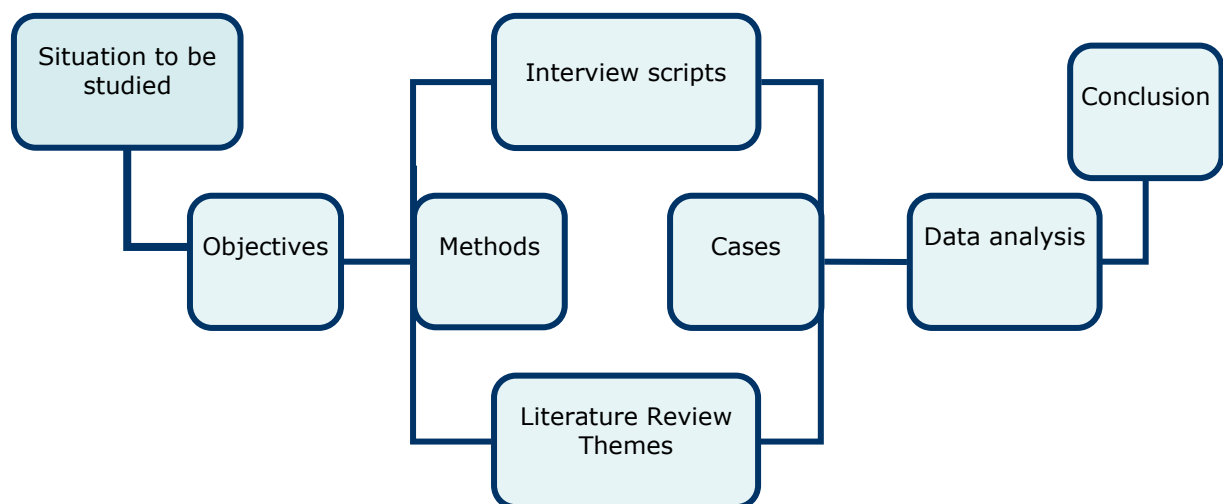

Illustration1: Components and rationale of the research model.

SOURCE: authors based on Yin (1994)

Patton (1990) adds that the researchers should state the objective of the research, which in this case is applied research, as well as the following items (followed by the classification of the present study):

1st Focus. Breadth versus depth. We chose depth, although less so than if we had examined a single case.

2nd Sampling strategies. We chose IT companies with international exposure, regardless of whether they were specialized in software or in services. In order to understand the internationalization of companies, Morgan (2001) states that global companies are organizations with complex processes that may be contradictory and conflicting, and that are distinct from those in non-internationalized companies.

3rd Type of data to be collected. Qualitative.

4th Analytical approach. We use an inductive method. Thus, following Marconi and Lakatos (2005), the conclusions we reach are likely, but not certain, as the inductive method infers the truth based on particular data. On the other hand, conclusions of studies that use inductive methods can provide information that was not present, even implicitly, in the assumptions.

5th Validation of results. Regarding triangulation, we collected information on the studied companies from the press, institutions such as the São Paulo Stock Exchange (Bolsa De Valores de São Paulo - BOVESPA) and the Brazilian Securities Exchange Commission (Comissão de Valores Mobiliários - CVM), from 2005 to 2008. This information was used, first, to profile the companies, and later to select them. The information collected from these data sources was used to guide the discussion with the companies. We, the two authors of this paper, carried out the interviews. The only primary data sources were the studied companies themselves. In the analysis of the results, the information from primary and secondary sources was used in a complementary manner in light of the concepts in the literature.

6th Time frame. The fieldwork was carried out during the first quarter of 2008. We corresponded with the companies in December of 2007. Starting from the first week of 2008, we contacted the companies by telephone and email to set interview dates.

7th Access to people, data and resistance faced. As the interviews were carried out, they were transcribed and the collected data went through an initial stage of interpretation. During this phase of interpretation, there were new contacts with the companies by telephone and email for clarification and confirmation. All interview transcripts were validated by the executives involved. We initially contacted the top managers of the studied companies. They usually indicated a member of the executive board to be interviewed. Broadly speaking, those who agreed to take part in the study did so without any resistance.

8th Ethics and confidentiality. Contact with the companies was initially done by printed mail, sent to the corporate headquarters by registered mail and confirmation of receipt. This letter already stated that information would be treated in an impersonal manner and that the organizations and their executives would not be named. We did not inform the interviewees what other companies were being studied. These commitments mean that all references that might identify the executives or their companies were removed, even if they involved secondary data sources.

We chose 19 companies that fit into the defined category: IT enterprises that provided services or sold software and that had international exposure. We excluded companies that **only** produced and/or sold hardware. While studying the sector we found that, although it is possible to fit the companies into categories, this definition is not completely clear, especially with regard to the activities of software and services. The software companies, in general, provide services. The service companies are sometimes involved in the development of certain kinds of software. The difference, therefore, lies less in the technology and more in the use of brands and the relationship with buyers, among other organizational characteristics. These similarities and differences were confirmed by the interviewees.

The number of cases we studied is in line with Yin's (1994) observation that, in the last few years, it has been frequent for studies to have more than one case. The same methodological structure is adopted for single case studies and multiple case studies. However, the justification for a single case study cannot be used for multiple case studies. It is also pointed out that carrying out

multiple case studies can be beyond the means available to independent researchers. Therefore, the decision to study multiple cases must be made carefully. Each case must have a specific purpose within the context of the investigation.

Eisenhardt (1989) presents several examples of Management studies that used the case method. Most resorted to multiple cases. The number of cases varied from six to ten organizations. In all instances, the source of data was interviews, combined with at least one other source. Eisenhardt (1989) also discusses the selection of cases. The concept of a population (of cases) is essential because it defines the set from which the research sample will be drawn. Furthermore, selecting a suitable population controls for irrelevant variation and helps one to set the limits for the generalization of results. These procedures clarify the circumstances under which the results are valid. A case is cited in which different sectors were selected, which allowed researchers to control for variation in the environment. In this same study, the focus on large companies constrained the variation due to differences in company size.

Field procedures. The places in which research was conducted were the offices of the companies where the interviewed executives work. There was no bias towards companies that have offices in São Paulo or whose executives could meet in São Paulo. Initial conversations invariably tried to verify what kind of international activities the company had. When the company was not in fact internationally exposed, the case was terminated. Conversations followed the interview script that had been developed ahead of time.

Data gathering. Patton (1990) notes the different reasoning in qualitative and quantitative methods for sample selection. Qualitative research typically focuses on achieving depth in small samples, which are selected intentionally. Quantitative methods, on the other hand, depend on larger samples that are selected randomly, given that this type of study seeks to extrapolate results. The logic and the power of intentional sampling rest on the selection of cases that have a wealth of information for in-depth study. Cases dealing with abundant information are defined as those in which one can learn a lot about fundamental research questions. There are different strategies for intentionally selecting cases with abundant information. We used a combination of the strategies found in the literature. We gathered data from primary and secondary sources. The primary

sources were the companies themselves, where we collected data in interviews with executives. In these interviews, we steered firmly towards gathering the information that was outlined in the interview script, which was developed based on the theoretical review.

Schofield (2000) also relates the objectives of the study to its modeling. When one studies what *might be* (as opposed to the case in which one studies what *is)*, the techniques of sample selection include searching for cases, or situations that probably will become more common with the passage of time. The idea is that the cases with exposure to the international market will become more common with time.

Yin (1994) judges that the interview is one of the most important, or even essential, information sources for the researcher. The interviews may take several forms. In this study, we used the focused interview. In this kind of interview, the interviewee is questioned for a short period of time – an hour, for instance (we used roughly two hours in each interview, plus the email communication). In this case, the interviews are also open in terms of scope and take on a conversational tone. We followed a number of topics derived from the case study protocol. We used what is most common in case studies – interviews with an open form. In these, the researcher not only inquires after facts, but also after the opinion of the respondents. In some situations, it is possible to ask the respondent to share his or her impression about certain occurrences and these impressions can be used to deepen the research. The importance of interviews as a source of evidence in case studies is tied to the fact that most case studies have to do with human issues. However, as interviews are verbal reports, it is recommended that the data obtained in interviews be crosschecked with information from other sources (Yin).

Procedures for analysis of results**.** According to Yin (1994) the data analysis consists of examining, categorizing or otherwise recombining the evidence in such a way as to answer the research questions. In the analysis, there are no formulas or recipes to guide the researcher. The quality of the results depends largely on the rigor of the researcher, as well as the sufficient presentation of evidence and careful consideration of alternative interpretations. Eisenhardt (1989) ratifies the practice by emphasizing that the researcher should

constantly compare theory and data and does so in an iterative manner, moving towards a theory that adjusts to what has been collected. With regard to the operating measures, we used, mainly, information on the gross revenue of the companies, in terms of an absolute level and of recent growth. In the analysis of the results, we used a six-position Liekert scale (very low, low, moderately low, moderately high, high, and very high).

Methodological limitations. Schmitz and Knorringa (1999) recognize the subjectivity of the Liekert scale. However, it is justified by the need to carry out comparative judgments.

Regarding the interviews, Yin (1994) notes that if the organizations are the unit of analysis, the conclusions cannot only be based on interviews, given that these provide information on the perceptions that individuals have of the organization, but not on the organization per se. Although the conclusions in the present study have been based on more than a single information source, interviews played a key role in the data gathering. Furthermore, the interviews in this study are biased. This is because the role of the companies in the chains was examined based only on their own perspective. In other words, we did not consult other players.

4 PRESENTATION AND ANALYSIS OF THE RESULTS

In terms of the ideas of Barney (1991) about competitive advantage, we observed the following in the fieldwork:

- ✓ A1 developed a value creation strategy based on entrepreneurial stimulus to developers and to participants in the distribution channel.
- ✓ A2 managed to obtain a competitive advantage in the small and medium-sized enterprise (SME) sector, which the competition has difficulty reaching.
- ✓ A3 developed a value creation strategy based on the completeness of its solution. The company acts simultaneously in several global chains.
- ✓ B1 creates value by paying constant attention to the evolution of technology and modifying its behavior accordingly.
- ✓ B2 believes its competitive advantage is flexibility as well as the scale of its operations.

✓ B3 believes its competitive advantage is efficient operation (the term *lean* was used) which is the result of intensive planning.

✓ C1 believes its competitive advantage is the completeness of the solution it offers to financial companies.

✓ C2 believes its competitive advantage is also in the completeness of its solution, together with the innovative characteristics of its product.

Considering Kaplinsky's (2005) model for obtaining competitive advantage at the company level, B1 seems to clearly understand the need for change. This shapes the business strategy. B3 understands the need for change, but does this more by means of the organizational structure. A1 changed successfully. This influenced the business strategy, but perhaps it lacks a state of continuous improvement, such as the one found in B1.

Company A3 is striking because it does not seek to compete on price. It was stated that they practiced *premium* pricing. If one considers that this company is the commercial automation leader in the Brazilian market, with market shares that exceed 60%, one can state that this enterprise captured the buyer's preference. Given that we did not research buyer preference, we can only speculate that this premium is sustained by the completeness of the solution, the reliability of the products and the intensity of the distribution.

Regarding segment-oriented action, findings were in line with theory. We did not analyze the quality of the segments and where the products fit in with each of these. With the conclusions of Maskell and Malmberg (1999) companies B2 and B3 seem quite focused on achieving efficiency, as opposed to A3 and B1, where there seems to be constant learning. Case A1 should also be noted, because it went through a reorganization in 1999, which can be classified as a form of learning. The continuous reorganizations of B3, if duly linked to a strategy that takes into account more than just scale and efficient operation, could also be considered evidence of learning.

The most notable case of tacit learning and the capacity to disconnect from its own history is that of company B1. C1 has a network of individuals in several countries in the world who exchange experiences and information. This is evidence that there is a network in which non-coded knowledge circulates.

Table 2, below, classifies the case studies based on information obtained in the fieldwork. This classification is carried out with regard to response time,

flexibility to accept small orders, innovation (organization, marketing and other competitive tools) and adaptability in the sense of rearranging and transforming the organization. These aspects are proposed by Schmitz and Knorringa (1999), Porter and Wayland (1995), Williamson (1991) and Teece et al (1997).

CASE	FLEXIBILITY FOR SMALL ORDERS	INNOVATION: ORGANIZATION, MARKETING AND OTHER FORMS	ADAPTABILITY
A1	Moderately low	High	High
A2	High	Moderately high	Moderately low
A3	High	High	High
B1	Moderately low	High	High
B2	Moderately low	Moderately high	Moderately high
B3	Low	Moderately high	Moderately high
C1	Moderately high	Moderately high	Moderately high
C2	Moderately high	Low	Moderately high

Table 2: Classification of cases with regard to aspects of competitive advantage

Source: authors based on information collected in fieldwork; Schmitz and Knorringa (1999); Porter and Wayland (1995); Williamson (1991) and Teece et al. *(*1997).

The cases were classified subjectively by the authors, based on information gathered in the field. We did not inquire directly about these characteristics because, as Schmitz and Knorringa (1999) point out, one should avoid letting interviewees answer with *clichés*. The position of A3 is striking, and we can also highlight the position of companies A1 and B1.

However, all these companies base their production on predictions of what the buyer wants, differently from what Kaplinsky (2005) describes as the new paradigm.

We now consider those competitive advantages that are globally transferrable, as discussed in Kogut (1985):

✓ In A1, advantages that seem to be transferred globally are those that follow from the franchise model for development and distribution implemented by the company from 1999. In this case, we can speak of learning. At least locally, one cannot say that there is a disadvantage with regard to location: in Brazil, the South is an IT cluster. Interviewees in all companies that were started or that operate in this region unanimously mention the abundance of qualified labor. There is also no disadvantage in regional terms, as there is

geographic and cultural proximity to the largest markets in South America. There are also competitive advantages based on economies of scope, because this organization has also developed other products (both software and services) such as HCM (Human Capital Management), BI (Business Intelligence), ECM (Enterprise Content Management), B2B (Business to Business), CRM (Customer Relationship Management)*. However, one cannot speak of competitive advantages based on economies of scale because this organization is much smaller than its closest competitors are.

✓ A2's competitive advantage is derived from the learning it obtained by operating in the SME segment. There are also economies of scope, as it developed or bought companies that developed vertical solutions that worked together with its original product – so-called ERP systems. In its chosen segment, it is large. Furthermore, in regional terms the company declares itself as the largest company in emerging markets in its activity. Thus, in its segment and in geographic terms, there are economies of scale.

✓ In the case of A3, the competitive advantage obtained via learning in commercial automation is very clear. There are also economies of scale, because in the domestic market, the company states that it has over 60% market share in a certain product. The company also developed competitive advantage through economies of scope with its software product.

✓ B1 obtained competitive advantage by learning. This learning is not only technical and technological, connected with the integration of telecom systems, but also related to its activity in foreign markets, especially in developing countries.

✓ B2 acquired competitive advantages by learning from its foreign markets, both developed and developing. There are also competitive advantages from economies of scope, because in addition to having continuously complemented its supply with new products, its operation is based on partnerships with organizations that complement its activities. Less emphatically, we can also mention competitive advantage from economies of scale. There is a single argument in favor of this last point: in competitive markets, with

products tending towards standardization, such as the company specializes in, it would be impossible to compete without a reasonable level of competitive advantage based on economies of scale.

✓ B3 obtains competitive advantages mainly through economies of scale. Its size, for the Brazilian market, is remarkable. To a lesser extent, there are economies of scope, because the company has frequently incorporated new products, as the interviewees have stated and as has been confirmed by the press. There is also some degree of learning, in this case related to the frequent incorporation of new companies, new products and the resulting adaptations in structure.

✓ C1 obtains competitive advantages mainly through learning, by operating in a specific segment of the market (finance) with several products. There are economies of scope, although along a different dimension from that of the other companies, as the organization focuses on the financial segment, to which it targets all its products. There are economies of scale as compared to smaller IT companies focusing on the financial market.

✓ C2 obtains its competitive advantage from learning in both a technical and technological sense. This follows from operating globally in a chain led by a large multinational.

Table 3, below, summarizes the sources of competitive advantages of the case studies.

COMPANY	ECONOMIES OF SCALE	ECONOMIES OF SCOPE	ECONOMIES OF LEARNING
A1		X	X
A2	X	X	
A3	X	X	X
B1	X		
B2	X	X	X (less emphatically)
B3	X	X	X
C1	X (with specialization in the financial market)	X (with specialization in the financial market)	X
C2			X

Table 3: Origin of competitive advantage of the cases studied.

Source: authors based on information collected in fieldwork; Kogut (1985).

According to the information we have obtained, these companies have strengthened their competitive advantages and have also sought to obtain additional advantages. In the sample, B2 and B3 have the least differentiated supply. B2 has invested in facilities abroad. In some way, these companies, via the association they have created, have sought to influence the government, not for protection, as outlined by Kogut (1985), but to reduce the unequal conditions of competition with companies from other developing countries, especially India. The other companies in the sample, thanks to their greater capacity to use knowledge, as pointed out by Cassiolato and Lastres (2000), are better positioned for sustainable competition and growth. However, according to the information obtained in the field research, the interviewees themselves declared that their companies are yet to reach the level of knowledge generation, another important skill for sustainable competitiveness and growth.

Regarding the observations of Sturgeon (2002), there is the risk that the studied companies, as they are in some cases publicly traded or, in others, preparing their IPOs, will become too focused on short term profit. Such a situation seems to have occurred in case A3, in which foreign investors sold their shares after a few quarters of underperformance that was due to difficulties in integrating acquired companies, whose products complete the company's product line. One can see that the strategy can make sense (to make the product line complete and for other reasons), so the investors' reaction seems to encourage the company to take a short-term approach. Below, a list of some practices adopted by the companies to gain competitive advantages:

- ✓ **A1**. The creation of development and distribution franchises has reduced the number of hierarchical layers, although this was not the primary objective. Production is sourced from low-wage regions. One example was Argentina, although certainly wages were not the only justification and possibly not even the main one.

- ✓ **A2.** Production is sourced from low wage regions (Argentina), although this is not the primary driver behind the decision. The company does not use temporary workers.

- ✓ **A3.** It was stated that the organization has sent the production to low-wage locations and that it puts pressure on suppliers.

✓ **B1.** No practices were identified to confirm the impression that the company obtains so-called low-level competitive advantages.

✓ **B2.** Although the company uses practices such as producing in low cost regions, such as inner-state São Paulo, the impression is that the competitive advantages are obtained principally through discipline and training. Broadly, there also appeared to be a very strong focus on productivity.

✓ **B3.** Activities are sent to low-wage locations. However, in this case, the impression is that competitive advantages are sought primarily through planning rather than through low-level procedures.

✓ **C1.** The company sends activities to low-wage locations, such as India.

✓ **C2.** As in case B1, no practices were identified that confirm the perception that the company obtains low-level competitive advantages.

Thus, in six out of eight cases, practices that aim to obtain low-level competitive advantages are used.

5 FINAL THOUGHTS

Looking at how these companies seek to achieve and sustain competitive advantages, we find that: (1) Some of Company A3's products are developed by third parties and abroad. This is used as a competitive advantage. (2) Some cases adopt a business model that gives them high flexibility. (3) Case A1 is interesting because of its strategy of franchising development and distribution. This promotes entrepreneurial behavior among the franchisees. (4) B3 seeks to develop more sophisticated and complex products. Sophisticated products are also in the interest of companies C1 and C2. C2, however, lacks scale and scope. The indications are that the challenge of complex and sophisticated products must be sought without setting considerations of scale aside. (5) The search for segments that are less exposed to competition, as in the case of companies A2 and A3, seems to be an attractive route. A3 also chose to offer a complete solution. In addition to blocking the entrance of competitors, this yields scope

and scale gains. (6) Four out of eight cases develop competitive advantages simultaneously through learning, scale and scope. Most cases develop competitive advantages through at least one of these economies. (7) Cases A2 and A3 both focus on SMEs. This market is more fragmented than that of large enterprises. Another advantage is greater protection from competition.

As for the limitations of this study, we highlight the following points: (1) The examination of the companies' actions depended largely on the statements of company executives and the authors' judgment. Potentially, this could cause problems such as evasive responses, a bias towards political correctness or disguising strategies and future plans. This last case certainly occurred. (2) Although the studied enterprises have common features, the quality for the comparison of cases depends on sample homogeneity. Complete homogeneity is unlikely and there are differences that should be noted, such as different company sizes and corporate structures. Three of the companies are publicly traded. Another three are preparing for their IPOs. (3) The technical issues of the cases were not examined; instead, there was a focus on management, specifically on corporate strategy. Although we acknowledge the relevance of the technical dimensions, which can change the path of companies such as the ones studied here, they lie outside the scope of this work.

One suggestion for future studies is to select similar companies in other countries and compare their strategies for gaining competitive advantages and the sustainability of these strategies.

REFERENCES

ABES - Associação Brasileira das Empresas de Software. (2007). *Mercado brasileiro de software: panorama e tendências*. Recuperado em outubro de 2007, de http://abes.org.br.

Amit, R. & Schoemaker, P. J. H. (1993). Strategic assets and organizational rent *Strategic Management Journal*, *14* (1), 33-46*.*

Barney, J.B. (1991). Firm resources and sustained competitive advantage. *Journal of Management, 17* (1), 99-120*.*

BNDS - Banco Nacional de Desenvolvimento Econômico e Social. (2008). *Classificação de porte de empresa*. Recuperado em abril de 2008, de <http://www.bndes.gov.br/clientes/porte/porte.asp>.

BOVESPA - Bolsa de Valores de São Paulo. Recuperado em 2005, 2006, 2007 e 2008, de http://bmfbovespa.com.br.

Cassiolato, J. E. & Lastres, H. M. M. (2000). Local Systems of Innovation in Mercosur Countries. *Industry and Innovation, 7* (1), 33-53.

CVM-Comissão de Valores Mobiliários do Brasil. Recuperado de outubro 2007 a março de 2008, de http://www.cvm.gov.br.

Dunning, J.H. (1995). *The globalization of business*. London: Routledge.

Eisenhardt, K. (1989). Building theories from case study research. *Academy of Management Review*, *14* (4), 532-550.

Foss, N. J. (2007). The emerging knowledge governance approach: challenges and characteristics. *Organization, 14* (29).

Gereffi, G. (2000). The regional dynamics of global trade: Asian, American, and European models of apparel sourcing*.* In M. Vellinga (org.). *Latin America in global perspective*. Boulder: Westview Press.

IBGE - Instituto Brasileiro de Geografia e Estatística. (2003). As micro e pequenas empresas comerciais do Brasil - 2001. Recuperado em abril de 2008, de http://www.ibge.gov.br.

Kaplinsky, R.l (2005). *Globalization, poverty and inequality*. Cambridge: Polity Press.

Kogut, B. & Zander U. (2003). Knowledge of the firm and the evolutionary theory of the corporation. *Journal of International Business Studies, 34.*

Maskell, P. & Malmberg, A. (1999). *Localized learning and industrial competitiveness. Cambridge Journal of Economics*, *23*.

Morgan, G. (*2001). *The multinational firm: organizing across institutional and national divides*. In G. Morgan; P. H. Kristensen; R. Whitley (Org.). *The multinational firm: Organizing Across Institutional and National Divides.* Oxford: Oxford University Press.

Mytelka, L. K. (2000). *Local systems of innovation in a globalized world economy Industry and Innovation, 7* (1).

Patton, M. Q. (1990). *Qualitative evaluation and research methods*. Newbury Park, California: Sage Publications.

Porter, M. E. & Wayland, R. E. (1995). *Global competition and the localization of competitive advantage* (vol. 11, Part. A). In H. B. Thorelli (org.). *Advances in Strategic Management. Integral Strategy: Concepts and Dynamics*. Greenwich, Connecticut: Jai Press Inc.

Schmitz, H. (1999). Global competition and local cooperation: success and failure in the Sinos Valley, Brazil. *World Development, 27* (9).

Schmitz, H. & Knorringa, P.r (1999). *Learning from global buyers*. IDS Working Paper 100. Recuperado em outubro de 2006, de http://www.ntd.co.uk/ids book shop/details.asp?id=513.

Schofield, J.W. (2000). Increasing the generalizability of qualitative research*.* In R. Gomm; M. Hammersley, P. Foster. *Case study method*. London: Sage Publications,.

Stake, R.E. (1995). *The art of case study research*. Thousand Oaks, California: Sage Publications.

Sturgeon, T.J. (2002). Modular production networks: a new American model of industrial organization. *Industrial and Corporate Change, 11* (3), 451-496*.*

Teece, D.J.; Pisano, G. & Shuen, A. (1997). Dynamic capabilities and strategic management*. Strategic Management Journal 18,* (7), 509-533.

Vellinga, M. (2000). The dialectics of globalization: internationalization, regionalization and subregional response. In M. Vellinga (org.). *Latin America in global perspective*, Boulder: Westview Press.

Williamson, O.E. (1991). Comparative economic organization: the analysis of discrete structural alternatives. *Administrative Science Quarterly*, *36* (2), 269.

Yin, R.K. (1994). *Case study research*: *design and methods* (2ª ed.). Thousand Oaks, Califórnia: Sage Publications.