

**THE USE OF INFORMATION FROM THE ENVIRONMENT IN THE PROCESS
OF STRATEGIC DECISION OF SMEs**

PATRICIA VIVEIROS DE CASTRO KRAKAUER

USP - Universidade de São Paulo

patriciakrakauer@usp.br

MARTINHO ISNARD RIBEIRO DE ALMEIDA

USP - Universidade de São Paulo

martinho@usp.br

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O USO DA INFORMAÇÃO DO AMBIENTE NO PROCESSO DE DECISÃO ESTRATÉGICA DE PMES

ABSTRACT

This study aims to understand the practices of Brazilian and American small and medium enterprises with regard to the use of environmental information in strategic decision process. Some aspects were studied in depth: description of the activities performed by these business owners regarding the environmental information and analysis of the differences and similarities between the practices of business owners of the two countries. The research is exploratory, with a qualitative approach that used the mapping of experience as a method. The results suggest that both Brazilians and Americans sought to use information from the environment as an aid in the process of strategic decision making. Some differences were noted between the Brazilian and American practices: the use of intuition, the sharing with family members and the dissemination of environmental information among team members. This study may contribute to the competitiveness of smaller companies in Brazil, still susceptible to high mortality.

Key Words: Environmental information – Strategic decision – Small and Medium Enterprises

RESUMO

Este estudo busca entender as práticas de pequenas e médias empresas Brasileiras e americanas no que diz respeito ao uso de informações do ambiente durante o processo de tomada de decisão estratégica. Alguns aspectos foram estudados em maior profundidade: descrição das atividades realizadas pelos proprietários com foco nas informações do ambiente e na análise das diferenças e similaridades entre as práticas dos empresários dos dois países investigados. A pesquisa possui natureza exploratória, com abordagem qualitativa, utilizando como método o levantamento de experiências. Os achados sugerem que tanto Brasileiros quanto Americanos buscam utilizar as informações do ambiente como essenciais no processo de tomada de decisão estratégica. Algumas diferenças foram notadas ao se comparar a prática de Brasileiros e Americanos: o uso da intuição, o compartilhamento com os membros da família e a disseminação das informações com a equipe de trabalho. Esse estudo poderá contribuir com a competitividade de pequenas empresas no Brasil, ainda sujeitas a altos índices de mortalidade.

Palavras-Chave: Informação do ambiente – Decisão estratégica – Pequenas e médias empresas

1. INTRODUCTION

Several changes are observed in contemporary organizations, and information management has significant prominence in search of competitive advantages. The uncertainties of the business environment, considered as a set of variables that affect the company and that it cannot interfere, makes the management of information essential for companies of all sizes.

Organizations manage information in order to interpret the environment, create innovative knowledge and make pivotal decisions, such as defining their path and strategies. Despite the complexity of the organizational decision process, it is part of the life of the organization, and the combination of culture, information and consensus can make it more efficient (Choo, 2006).

From this point of view, information from the environment is essential for the organizational decision-making process, assisting the executive in the evaluation of possible alternatives. In the case of strategic decisions, the environmental information and analysis are essential, because these decisions affect the course of the company as a whole and relate to long-term decisions, complex and hard to change quickly, as defined by Ansoff (1977).

Due to the importance that decision-making has on corporate governance, there are several methodologies and technologies to support managers in these processes, but their use is still limited in smaller firms (Huang, 2009), either due to lack of accessibility to the method or to the nature and characteristics of small business. To this, Cronquist (2008) adds that yet little is academically known about how owners and managers of SMEs acquire, select, interpret and analyze information to devise strategies and develop their operations.

It is a fact that small and medium enterprises (SMEs) also use very few environmental monitoring practices, although they are subject to its uncertainties, even more severely when compared to larger companies, due to limited resources they can apply to research and technology to support their analysis. Although the studies related to the monitoring of environmental information are still more targeted at large companies, such activities have a lot to contribute to small and medium enterprises. Understanding the competitive environment better can generate several strategic advantages for smaller companies (Cancellier *et al.*, 2005).

Observing these issues from another perspective, comparing the best practices developed by SMEs from different countries, can provide greater knowledge on the subject, exploring the difficulties, suggesting new possibilities. It is believed that American business owners, inserted into another context and having a daily reality different from Brazil can share information from the environment in a more dynamic and structured way as was perceived by Walters *et al.* (2003). Also, data from the Small Business Administration (SBA, 2002) classified American SMEs similar to the Brazilian ones.

In this context, the current study aim to study small and medium sized companies in the information technology sector (IT), comparing the practices of Brazilian and American business owners. Inserted in a dynamic environment with many uncertainties, IT companies are very susceptible to changes in their business environment. This study seeks to answer the following question: how Brazilian and American small and medium-sized information technology enterprises use information from the environment to make strategic decisions?

The main study objective consists to describing practices of Brazilian and American small and medium IT companies regarding the use of information from the environment to make strategic decisions. Other aspects were also investigated: (1) Understanding the activities of search, analysis and use of information from the environment during the process of strategic decision and; (2) Finding out the main differences and similarities between the activities of business owners from both countries.

Empirically, business owners who work in the information technology (IT) sector have chosen for that study. IT is an important sector for the Brazilian market: data from the Yearbook of the Associação Brasileira de Software (Brazilian Association of Software, ABES, 2010) show that Brazilian software and service companies represent 1.99% of the world market and 48% of the Latin American market, the percentages regarding financial transactions.

All three themes that compose the dimensions of the current study are issues already established in the literature, but it remains poorly studied jointly. It is important to notice that search was carried out in the database Web of Science, using the following key expressions: environmental scanning, small and medium enterprises (SME) and strategic decision. The study considered the period between 1990 and 2010, and no studies were found that possessed all key expressions related to the theme proposed for this study, showing its originality and justifying its development.

2. THEORETICAL REVIEW

In this chapter will be present the theoretical concepts that guided the empirical research.

2.1 Small and Medium Enterprises and their business owners

When analyzing the latest research from ABES (2010), from Serviço Brasileiro de Apoio às Micro e Pequenas Empresas (Brazilian Service to Support Micro and Small Enterprises, SEBRAE, 2005), and the one performed by Machado *et al.* (2009), it appears that today's small and medium enterprises have considerable importance both economically and socially for several countries, going beyond the economic and social factors: they stimulate competitiveness, develop new technologies and provide support to large enterprises through outsourcing and supply chain.

Despite this importance and the annual growth of 51.3% of smaller companies in Brazil, there is a high mortality rate of these companies in the country, encouraged by several economic or legal reasons and even owners' personal reasons (SEBRAE, 2005). In the United States, the mortality of small and medium enterprises is also high. Data from the SBA (2011) point out that 31% of companies cease their activities up to two years after opening the business. Several factors are listed in the literature for this high rate and may be noteworthy: financial issues (Martelanc *et al.*, 2001), issues related to business management (Huang, 2009; Sandberg *et al.*, 2001) as well as economic policies and government support and personal problems of the owner (SEBRAE, 2008).

It is also worth noting that many are the characteristics of smaller companies regarding management models, the performance of their leaders and how they seek and use information, and that such features may affect the process of environmental analysis and strategic decision.

Centralized decisions and the existence of a few additional hierarchical levels are details observed in several other studies such as Hambrick (1981), Huang (2009), Leone (1999) and Najmaei and Sadeghinejad (2009). Few hierarchical levels, especially at the strategic level, make the management of the business centered on the figure of the owner or a small group of people.

However, despite the centralization often having a negative connotation, the absence of many hierarchical levels favors the small and medium enterprises with regard to better communication of their employees. Savioz and Blum (2002) suggest that smaller companies, with a familiar and simple structure have greater internal cooperation among individuals and better communication when compared to large companies.

Some other positive aspects can be seen in smaller companies regarding the existence of few hierarchical levels and centralization. Berte *et al.* (2007) cite the speed of decision making and Cancellier *et al.* (2005), Hambrick (1981) and Savioz and Blum (2002) perceive greater flexibility and adaptability as advantages of small and medium enterprises that have a less static structure.

Small and medium-sized enterprises of information technology, the object of investigation in this study, besides having inherent characteristics of smaller companies, have particularities of the industry to which they belong, and should be concerned with a more rigorous analysis of the business environment, as suggested he in research of Benczúr (2005). To this, Hatonen (2010) comments on the rapid changes in their environment, the innovation of products and greater investment in technology development due to the short cycles of its products; issues that must be considered, when analyzing the decision-making processes of companies in this sector.

With respect to owners, the social subjects in this study, Leone (1999) characterizes them as paternalistic concerning relations with their employees, due to the closer relationship with them, to knowing their problems and their life projects. Lybaert (1998) investigated various characteristics of owners and managers of small and medium enterprises and their interference in the way smaller companies use the information from their environment. She lists different and individual psychological characteristics such as the locus of control, internality, greater need for personal fulfillment, craving for knowledge, sense of responsibility, greater desire for performance and confidence. She also emphasizes that there is large influence in the management of the family owners of small and medium enterprises, leading to the assumption that, often by using their own financial resources, the owner also has a concern about the projects of his family to make decisions on the company. Leone (1999) complements this aspect adding that the entrepreneur's personal life directly affects the company's existence.

Almeida and Moreira (2004) and Machado (2006) add to these findings that, in general, the small business owner has limited time to undertake work related to a strategy based on his involvement with daily tasks, more operational, and does not have many employees for such activities.

Despite being the primary decision maker and their personal characteristics directly affecting the decision making process, the manager of an SME is not aware of the wide variety of information necessary and useful for their business as well as what sources could be used to

access the data needed. The entrepreneur knows little about competition and lacks awareness or motivation to carry out such activities (Leone, 1999; Lybaert, 1998).

2.2 Information from the environment

Nonaka and Takeuchi (1997) conceptualize information as a stream of messages posted in a particular context, and McGee and Prusak (1994) consider that the information is the set of data collected, organized and meaningful, managed in such a way to encourage competitive advantage, being an important strategic resource of organizations.

To this, Choo (2006) adds that the information is used by the organization in three ways: to make sense of changes in the external environment, in search of competitive advantage; to generate knowledge and learning and to make important decisions, such as strategic ones.

According to Almeida (2009) information from the environment are those essential to the organization's business and that the company can do little or nothing to change. Choo (2006) adds that the information from the environment is essential for the control of uncertainty for the company and therefore, essential to strategic decision making.

Managing the information environment, monitoring them, is still a challenge for companies of all sizes. According to Choo (2002), despite the importance of the topic, knowledge about it is still limited, mainly because of the peculiarities of the environments in which firms are embedded. Despite all the processes involving steps such as search and use of information, companies have differences among themselves and the particularities of the environments in which they operate may have significant differences.

Choo (2006) rescues his 2002 model and adds that the organization that manages the information is able to adapt to the changing environment, and become more innovative and creative, focusing on learning and decisive action. This model considers three stages: information needs, information seeking and information use. Although not highlighted in the model the analysis and interpretation of information, the author (Choo, 2002) considers that information can be provided in different ways for the organization, and it must know how to interpret them, giving meaning to environmental signals.

From a somewhat different manner, but keeping the same line of thought, Daft and Weick (1984) consider that the organization uses the information in a process with three stages: monitoring, interpretation and learning. Monitoring, or scanning, is considered to be the stage of data collection using formal and informal sources. In the second stage, interpretation, when information has meaning, the participation of people is fundamental. The last stage, learning, involves a new response or action.

To Cronquist (2008) interpretation is also fundamental to the process. He believes that organizations that manage information from their environment intend to anticipate the future and adapt to changes that occur in it, thus, just gathering various data from the environment and not turning them into knowledge adds no value to the process of environmental analysis.

Interpreting the environment is essential for technology companies. These companies have less power to develop new markets, since they focus their efforts on developing technologies.

Monitoring the environment can make technology companies develop new competences in new markets, representing a significant difference (Danneels, 2008).

2.3 Strategic decisions and decision-makers

Strategic decisions can be defined as those that are important in terms of actions that determine, resources that commit and the need for adjustments that they demand, as defined by Eisenhardt and Zbaracki (1992). For these authors, strategic decisions are crucial because they involve fundamental issues that define the course of the company. Mintzberg *et al.* (1976) add that the strategic decision making is quite specific, characterized by being complex, single and without pre-defined limits.

In reviewing the literature Elbanna (2006) emphasizes that the same decision may be strategic for a particular industry and not to another. Additionally, according to Eisenhardt and Zbaracki (1992), strategic decisions are political: whoever has power decides what they want, using such decisions to strengthen their power in the organization.

Saffu *et al.* (2007) in conducting a survey of 200 business owners from small and medium enterprises have concluded that strategic decisions are especially important for the survival of companies, agreeing with the results of Huang (2009) that also points out specific features of the process of strategic decision in SMEs : Decisions are made by the owner with little input from the group, little information is taken internally, there are few business owners who develop alternatives to make strategic decisions and imitation of competition seems to be a constantly used.

Regarding strategic decision making, it is noteworthy that several authors have proposed that sense, may be mentioned the model of Mintzberg *et al.* (1976) which represented a break in the previously existing linear models, Eisenhardt's (1989) for being a model proposed to IT companies and Huang's (2009) for being specific to small and medium enterprises.

By studying 25 cases of strategic decision, Mintzberg *et al.* (1976) propose a model composed of three main stages to the strategic decision process: the identification phase, routine recognition and diagnosis. Despite the apparent simplicity and similarity with the model of Simon from the 60s, presented by Ansoff (1977), the authors innovate by proposing that there is a relationship of sequential steps. Eisenhardt and Zbaracki (1992) commented that this model was innovative with regard to the classical theories of decision in which prevailed the sequence of ordered steps.

The model of Eisenhardt (1989) is aimed at IT companies, the focus of this study. It presents a complex proposal for strategic decision-making, considering the volatility of the market where such companies are located. Based on this argument that the environment in which enterprises of information technology are challenging, the author proposes a model that seeks to meet the need for dynamism of this type of company executive.

The third model studied was that of Huang (2009), specifically for small and medium enterprises. The author conducted a multiple case study with 20 Chinese SMEs. After analyzing the data, he suggests a model of five stages, not necessarily sequential, as follows: identifying opportunities, finding information, analyzing information, considerations of internal factors and decision making. For the author, the identification of opportunities is related to variables that are observed in the organization's environment, being more related to

economic factors that impact the growth in demand for products and services, government policies, such as new financing and information obtained through the owner's network of personal relationships.

About the decision maker, for Keeney (2004) a good decision maker always considers, in any decision level, all information available on the subject. It is very difficult to use intuition for complex decisions, such as the strategic, although it is necessary to use a certain degree of subjectivity. Choo (2006) also comments on the rationality of the decision maker, and the only rational decision is limited by lack of full knowledge of future consequences.

There has been growth, however, in interest regarding both academic and empirical perspectives that examine the intuition of the manager as one of the factors that affect the strategic decision making, as pointed out by Elbanna (2006). Authors such as Eisenhardt K.M. have studies in this direction.

For Eisenhardt and Zbaracki (1992) intuition and insights makers should also be considered in the decision process, even strategic complement for rationality. They consider that the cognitive ability of managers should be considered in making the decision. Intuition is also present in the decision-maker of small and medium enterprise. In this case, decisions, especially strategic, are centered on the figure of the owner when the main business manager, as mentioned by different authors (Almeida and Moreira, 2004; Berte *et al.*, 2007; Hambrick, 1981).

With respect to information technology companies, Eisenhardt (1989) cites that the manager's ability to make decisions is directly related to organizational performance, which makes the decision maker suffer higher pressures. The author surveyed executives from eight companies in the sector, suggesting that emotional factors such as frustration, distrust and anxiety interfere with the process of decision making. For the author "... emotion is critical to understanding the strategic decision making." (Eisenhardt, 1989, p. 573).

As can be observed in the theoretical review, there are a relation with the three dimensions of the present study, as can be seen in Figure 1.

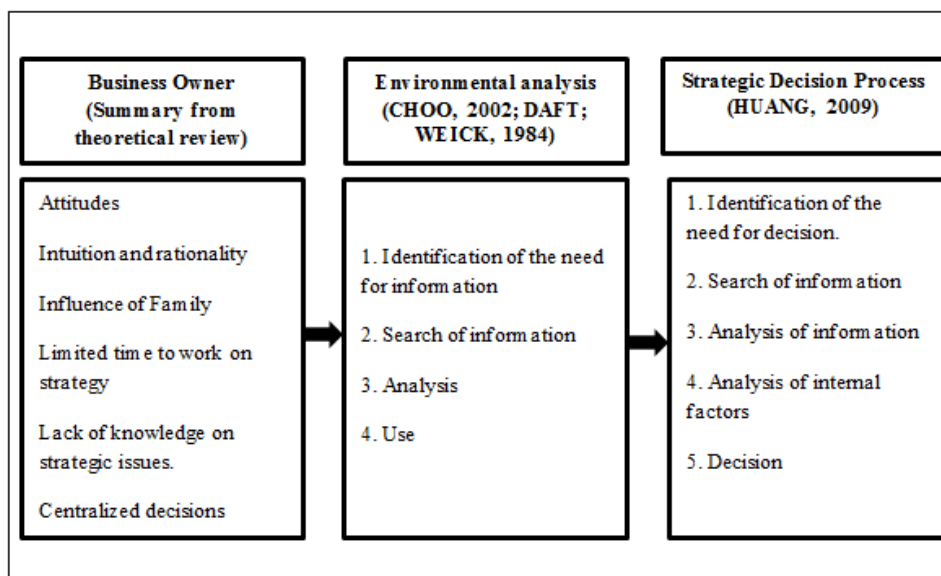


Figure 1: Theoretical model based on the theoretical review

3. METHODOLOGY

This study is exploratory and the choice for a qualitative approach is justified since it focuses on understanding and describing human behavior through a frame of reference, having a more subjective perspective of the data (Martins and Theóphilo, 2007). To this, Flick (2009) adds that one of the characteristics of qualitative research is to study situations and people in their daily practices.

The method used was a mapping of experience cited by Mattar (2007) that aims to understand the relevant experiences, deepening knowledge of the topic under study. With this method, was tried to obtain the experiences of business owners of small and medium enterprises, social subjects of this research. According to Flick (2009) for qualitative research semi-structured interviews are widely used to collect data, consistent with what Mattar (2007) says for the method of mapping of experience, being a discourse analysis one of the possibilities to analyze the findings.

Efforts were concentrated on the selection of social subjects, considering the access to respondents and ease of collaboration. In addition, a few requirements were considered: nationality, be owner of an SME of information technology, be active in the company and be the primary decision maker. Table 1 presents the profile of respondents. Moreover it is considered the characterization by size of company, following the definition of SEBRAE (2005) and ABES (2010), which considers an SME companies that have between 10 and 99 employees.

In this study were interviewed in depth ten business owners between Brazilians and Americans with fourteen strategic decisions, number sufficient to elucidate the search problem, as recommended by Mattar (2007) for the method used.

Table 1 - Classification of respondents

Nationality	Business Owner Interviewed	Sector of the company	Lifetime	Number of employees
Brazilian	B1	Solutions provider for business management software	29 years	70
	B2	Development and implementation of digital solutions	15 years	92
	B3	Solutions for human resources	24 years	60
	B4	IT Services	13 years	60
	B5	Providing software and services	08 years	70
American	A1	Distribution BI	8 years	90
	A2	Telecommunication	12 years	62
	A3	ERP Development	15 years	60
	A4	Software Development	05 years	29
	A5	Software Development	07 years	14

To collect data, semi-structured, individual interviews were conducted. It was decided the use of the interview focused on the problem by following the steps proposed by Flick (2009) for

their achievement: (1) Sending a questionnaire prior to the interview to collect preliminary data and qualifiers, (2) Development of an instrument, with exmanent questions, (3) Conducting the interview and (4) Developing an interview protocol.

About the instrument, it was development a semi-structured guide, considering the issues showed in the theoretical model (Figure 1). The instruments were tested in June/2011 with two business owners, one Brazilian and one American, with a profile similar to that proposed for the study, for the identification of possible difficulties and failures in their understanding.

Interviews lasted for about one hour. Regarding units of analysis in this study, namely, strategic decisions, 14 were considered units of analysis described by the interviewees (Table 2). The interviews were not recorded, but were transcribed immediately after their completion. Highlighted phrases, presented in this study, are credible to the respondents' statements, since they were copied in full during the interview. This methodology takes into account the content of speech and interpretations are based on transcripts of interviews (Flick, 2009).

Table 2 – Units of Analysis

Business owner interviewed	Strategic Decision	Strategic decision description
B1	Decision 1	To regionalize the company
	Decision 2	Discontinue a branch,
B2	Decision 3	Partial outsourcing of product development.
	Decision 4	Closing an office in Rio de Janeiro.
B3	Decision 5	Establishment of a new company of distance learning platform.
B4	Decision 6	Vertical integration for the education segment.
B5	Decision 7	Prioritization of one specific supplier.
A1	Decision 8	Integration of BI tool with ERP.
A2	Decision 9	Operations in a new region.
	Decision 10	Use of new technologies.
A3	Decision 11	Cloud Computing Solutions for mobile devices.
A4	Decision 12	Large investment in software to meet vertical markets.
	Decision 13	Operations in other countries.
A5	Decision 14	Discontinuance of the sale and implementation of ERP systems.

4. ANALYSIS OF RESULTS

The findings of the interviews were analyzed according to the theoretical framework used as support for this study. The next items will be discussed in the findings.

4.1 General Considerations about business owners

Analyzing the drivers of decision processes, we can suggest that the majority is started according to business needs, and few cases were cited where the will or the benefit of the entrepreneur would be the initial motivator, meeting the comment by Elbanna (2006).

All Brazilian business owners interviewed felt more intuitive to make strategic decisions for their companies. Some split the process of decision making at the time of the decision itself, commenting that the process is more rational, while the decision is more intuitive, meeting the comments by Eisenhardt and Zbaracki (1992) who believe that intuition is present in decision-making and acts as a complement to rationality.

Yet, American business owners interviewed, considered themselves more rational in the process of decision making and in the execution of the decision, using for such various data collected earlier. This result coincides with the study of Keeney (2004) considers that a decision maker should use the information available in a rational way.

It should be remarked that, according to Elbanna (2006), it is difficult to describe what is intuition, and various definitions of different authors are presented in their study. It should be noted that in this study, the entrepreneur was asked directly if he is more intuitive or rational, so the responses represent only the perception of the interviewee on the topic.

Also concerning the decision making process, it is worth mentioning that none of the business owners surveyed used the assistance of experts or consultants for the decision making, as also discussed in the study of Lybaert (1998). Only the interviewee B3 contacted his network of relationships in the process of seeking information from the environment.

About the family's influence in strategic decision making of SMEs cited by Leone (1999) and Lybaert (1998), it was noted in the interviews that there are differences between the two business groups: the majority of Brazilian business owners interviewed considered the opinion of family in the process, while the Americans have not shared strategic decisions with the family. It is noteworthy that American business owners commented that divide with the family if the decision had an impact on it as a possible change in the city or personal investments. Among the Brazilians, decisions were discussed with their spouses and in some cases with the children. In two companies, the wives are even actively working in the company. These issues are probably related to differences in culture and values between Americans and Brazilians.

There was no unanimity with regards to centralization, mentioned in several previous studies, such as of Berte *et al.* (2007), Cronquist (2008) and Najmaei and Sadeghinejad (2009), suggesting that the centralized management may be more related to personal characteristics of the entrepreneur or the decision to be taken than that of the company size. It was observed that the same manager is sometimes more and sometimes less centralized, depending on the type of decision.

It should be noted that the focus of this study is strategic decisions, which makes the issue of non-centralization exciting at times, in the light of the theoretical framework presented. Considering the definition of Ansoff (1977) that strategic decisions are centralized, non-regenerative, the results of interviews may suggest that there is currently a major concern with the participation and opinion of the team during the process.

With regard to the involvement of the entrepreneur in strategic activities, it can be said that all business owners, except for one Brazilian, have been operationally involved with their business. Only entrepreneur B4 commented he was solely responsible for strategic activities, adding: "Those who deal with the team in my company are the directors. I do not get involved with operational issues."

It is seen in the study of Machado (2006) that the owner of smaller companies has little knowledge of strategic tools and market information. However, it was noted in this study that the business owners surveyed have knowledge of such practices, lacking the time and resources to implement them. This question may suggest that the business owner has sought to gain greater administrative knowledge in MBAs, since most respondents did so. In accordance with what Machado (2006) comments on the marketing knowledge, it was found that SMEs are still lacking information on the market, especially among the Brazilian business owners.

Another important difference observed between the two groups of respondents concerning the allocation of people in business. All respondents mentioned that Brazilian people share the same physical space, while all Americans commented that people work in different locations, and in several cases, they work in a home office system. It was observed that there is a decentralization of the main office of American companies, sprayed in several states or even different countries. Often use labor allocated in another country such as India (Interviewee A3), Argentina (Interviewee A4) and Philippines (Interviewee A5). The allocation of human resources in other countries, according to respondents, is related to the high cost of American labor, which in the sector of information technology is both expensive and specialized. In Brazil, this issue was commented on only by interviewee B2.

4.2 Information from the environment

Analyzing the data obtained, and the interviews, it was found that the procedures for monitoring the environment for strategic decision making, although unstructured, follow the steps proposed in models of Choo (2002) and Daft and Weick (1984). They represent cycles of monitoring, and not always all steps are performed, as also discussed by Raymond *et al.* (2001).

The first phase of the model of Choo (2002) is the identification of the need for information, in which the entrepreneur is concerned with the focus and scope of monitoring, especially that which is most actively researched. The process of identifying the need for information seemed to be very informal and intuitive in all the decisions described. When asked about this phase, the business owners interviewed were limited to positioning themselves whether they had sufficient information to help break in the process of decision making.

Regarding the search for information, it was showed that it was informal, unsystematic, in almost every strategic decision processes described by the business owners interviewed, with personal sources being more prominent. For this step we investigated two indicators: (1) the frequency and sources and (2) methods used to perform the activities in this phase of monitoring the environment. As the unit of analysis in this study is a strategic decision, the frequency did not have a role in the issue being investigated in more generalist terms. It was found that all respondents often monitor the environment, even if informally. Respondents B4, B5, A1, A2, A4 and A5 cited that they have frequent and formal studies.

It was noted that there were few informal sources cited. It is the use of both impersonal sources, especially the Internet, as the personal information for the search process during the making of each analyzed. Networks of relationships, an important source described in the literature by Berte *et al.* (2007) and Huang (2009), was discussed only in two cases examined, B3 and B4.

The use of specific methodologies for information seeking was not mentioned, even some of the respondents, such as A2, found the question interesting and considered assessing possible methodologies that might aid in completing the systematic search for information. It was observed that American business owners were more accustomed to the use of technological resources to search for information from the environment, mainly due to having to share that mission with people placed in different physical whitespace, many of them working in the home office system.

Among the Brazilian business owners, only interviewee B1 mentioned the use of spreadsheets to organize data before presenting them to the team. Others, such as B2, used the same search features to discuss the information in the analysis phase. Among Americans this phase seems to be a little more structured, and analysis of the environment takes place in virtual scheduled meetings, and various aspects are analyzed, such as return on investment results, effort, risk, cash flow, among other financial issues involved.

It was found that the majority of business respondents considered that the information from environment was essential to strategic decision making. Only two respondents, interviewee B2 and B4, mentioned that the use of the information from the environment was little. On this point, the interviewee B1 added "the information I had was the environmental aid to decision making." Instead, the two business owners found they used the information from the environment, commented that the experience and intuition have great weight in the decision.

The American business owners who consider themselves rational in the process of strategic decision-making mentioned that they had used the information actively; even the A4 respondent commented: "the information was relevant to the process and always considered when making the decision." In Table 3 is presented a summary of steps taken by the business owners interviewed during the process strategic decision-making.

Observing Table 3 we found that Brazilians have a more informal, less structured process, while the Americans seek to systematize the monitoring of the environment with the increased use of technological resources for sharing and analysis of information.

With regard to internal communication cited by Savioz and Blum (2002) who suggest that smaller companies have better communication when compared to large companies, it may be worth mentioning that this was a point emphasized by business owners interviewed.

It was found that the business owners interviewed seek to use environmental information as an aid in the process of strategic decision making, seeking to enforce the decisions, knowing they will be important for the company and difficult to reverse.

Table 3 - Summary of steps for environmental monitoring

Nationality of the respondent	Decision	Need for new information	Search	Analysis	Use
Brazilian	1	Yes	Yes	Informal	Yes
	2	Yes	Yes	Informal	Yes
	3	No	No	Informal	Limited
	4	Yes	Yes	Informal	Yes
	5	Yes	Yes	Informal	Yes
	6	No	No	Informal	Limited
	7	Yes	Yes	Informal	Yes
American	8	Yes	Yes	Informal	Yes
	9	Yes	Yes	Formal	Yes
	10	Yes	Yes	Formal	Yes
	11	Yes	Yes	Formal	Yes
	12	Yes	Yes	Formal	Yes
	13	Yes	Yes	Formal	Yes
	14	Yes	Yes	Formal	Yes

5. FINAL CONSIDERATIONS

The main objective of this research was to understand how the Brazilian and American small and medium enterprises use information from the environment during the process of strategic decision of their companies. In order to answer the problematic proposal and achieve the goals outlined, we obtained secondary and primary data that led the authors of this essay to some considerations on the subject.

There are clear differences between Brazilian and American respondents that concern strategic decision making and how to analyze the environment. The main differences relate to the use of intuition or rationality in the process, sharing with family and informality versus formality of monitoring information to be used in strategic decision process. The survey showed that business owners interviewees from both countries use the information from the environment to make strategic decisions, but differ in how they seek and analyze such information during the process. Such differences suggest that cultural values can influence the process of environmental analysis.

The Americans respondents consider themselves to be more rational, using more information from the environment in the process, sharing with the team through technological resources and analyzing the data obtained with a view toward analyzing the risks involved and financial matters. The Brazilian ones have cited that they make more use of experience and intuition, sharing decisions with their families. They worry about the aspirations of the partners and the quality of life. They seek the information they need to assist in the decision-making process but in an informal manner and with little help of technological resources. Another difference observed concerns the existence of the type of home office work in the United States, which is not mentioned by any respondent in Brazil. This difference suggests that American companies are more structured in sharing information with the team, using electronic channels such as intranets and videoconferencing for this purpose.

Concluding the analysis, the data presented in this study suggest that although it is still a somewhat unstructured process, there is a tendency towards change in this picture, mainly due to better management features aimed at sharing with the team, sharing with people working in

different places and countries, and greater use of best management practices and better qualification of the business owner.

Some methodological limitations are observed in this study. In the foreground, it is important to mention that one of the characteristics of both qualitative research and the convenience sample is not to generalize the data. Therefore, the suggestions presented here are limited to the context studied. On the one hand, the selection of survey respondents by convenience facilitates access to social subjects and increased cooperation during the interview, such selection criteria may be biased by having been selected by the investigator. The interviews, being personal, may have caused some embarrassment among respondents, especially those dealing with issues related to business strategy, which may decrease the reliability of responses. In addition, some values present in the American but not in the Brazilian culture, may have hindered the development of the protocol of the interview, one of the steps proposed for the method of data collection.

Moreover Brazilian companies surveyed were based only on the state of Sao Paulo, while the Americans were dispersed across the United States, which somehow may have caused bias.

Another important issue that should be commented with regard to company size, since the majority of respondents had a substantial number of employees considering they were smaller companies. Despite being within the proposed classification for this study, firm size could have influenced the results. It should also be noted that all companies were already consolidated in the market, with several years of existence, and the shortest time being five years.

From the limitations observed and of the data obtained, future studies may be suggested. It is recommended for future studies that researchers consider the comparison between companies of different sizes within the SME segment, allowing the verification of possible differences. It is also suggested that multidisciplinary studies consider values and culture of different countries in order to analyze issues related to family involvement and intuition in the strategic decision-making. Additionally, multidisciplinary studies could also turn to research to examine the personal characteristics of business owners and how they conduct strategic decisions in their companies.

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