Strategic orientation in small business: systematic mapping and exploratory research in technology-based companies

Orientação estratégica em pequenas empresas: mapeamento sistemático e pesquisa exploratória em empresas de base tecnológica

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Abstract

Small businesses are of great importance to society. In most countries, they make up the majority of businesses. In Brazil, for example, small businesses account for about 98.5% of all businesses and are responsible for about 70% of formal private sector jobs in the country. However, small businesses have a high mortality rate. Given the socioeconomic importance of small businesses and the problems faced by organizations of this size, it is important to understand the types of strategies used by these organizations and the different impacts they have on business performance. Therefore, a strategic leadership model is necessary for the study and analysis of small businesses. In the literature, there are few authors that deal with this topic. In this sense, this work aimed to contribute by presenting a systematic mapping that

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takes into account the specificities of small businesses. As a basis for the mapping, case studies were conducted with five technology-based companies in Brazil.

**Keywords:** Small Business. Strategic Orientation. Innovation. Systematic Mapping. Case Study.

**Introduction**

Small businesses are important in Brazilian and global socioeconomic development. In Brazil, micro and small enterprises (MSEs) account for 98.5% of all businesses and contribute 27% of gross domestic product (GDP) (Brazilian micro and small business support service - Sebrae, 2017). In addition, small businesses are an important source of income in Brazil (National Confederation of Commerce - CNC, 2017; Santos et al., 2012) and are responsible for 70% of formal jobs in the private sector (Sebrae, 2017).

Given the importance that small businesses have to social and economic development, it is necessary to understand how strategies affect and define their performance in terms of innovation. Since small businesses have a high mortality rate, a strategic orientation that can
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increase the level of innovation and the overall performance of the organization is very useful. Therefore, understanding the strategic orientation models and considering the context of small businesses is crucial to provide better guidance to small business managers and policymakers. The situation in which small businesses find themselves and the fundamental role that strategic orientation plays in the survival and success of these organizations, this thesis aims to contribute with a presentation of the main models used to study and analyze the strategic orientation of small businesses.

In order to achieve the proposed objective, an overview of strategy, strategic orientation and small businesses is first provided. Then, the methods and parameters used for the study are presented. The results obtained are then presented and discussed. And finally, the concluding considerations for systematic mapping are presented.

Strategic Types and Strategic Orientation on Small Business

The strategic direction pursued by an organization can be classified based on an overall strategy pursued by the company. For example, Porter (1980) divides the strategic orientation of companies into three generic strategies: Differentiation, Cost Leadership, and Focus. The author states that a company can only be efficient and competitive if it chooses a single generic strategy, otherwise it cannot achieve the best possible result ("stuck in the middle").

As pointed out by (Dess & Davis, 1984), most existing typologies of strategic management have methodological limitations. The study of these types of strategies is limited only to the markets studied, making it impossible to generalize to other industries. In contrast, the generic strategies proposed by (Porter, 1996) are applicable in any industry. Thus, this methodology provides valuable and useful support for identifying, categorizing, and analyzing the strategies used by all competitors in an industry.

Criticisms of this model focus mainly on the fact that it limits the choice of a single generic strategy. (Murray, 1988), for example, argues that there is no reason for firms to limit themselves to a single generic strategy. In the author's view, each generic strategy is associated with an integrated set of strategic means. That is, the external context provides opportunities in which to incorporate elements that are simultaneously compatible with all generic strategies.

The theoretical framework proposed by is (Miles & Snow, 1978) an alternative way to examine how firms define their strategies and build the mechanisms that make them viable. To this end, as proposed by the authors, there is an adaptation process consisting of three main
problems of organizational adequacy (entrepreneurial, engineering, and administrative) that must be fully undertaken.

For (Gimenez, 1999) unlike the generic typology used by (Porter, 1996), the proposal of (Miles & Snow, 1978) is more comprehensive and offers better conditions in terms of theoretical structure, so that a more accurate classification can be made in terms of strategic types. The typology (Miles & Snow, 1978) considers the relationships between strategy, structure, and processes in an integrated way and takes into account the interaction with the environment. (Miles & Snow, 1978) propose a different way to examine how firms define their strategies and build the mechanisms to make them viable in four strategic types: Defenders, Analysts, Prospectors, and Reactors.

Strategic orientation has a significant impact on a company's performance because it drives decision-making throughout the organization. Particularly for small businesses, strategic decisions play a critical role in the success of the company due to the organizational constraints of companies of this size. These constraints are mainly due to the lack of availability of capital (Wang & Ahmed, 2009) and low influence in the industry in which they operate (Parnell, 2013).

In the literature on organizational management, there are a variety of views on strategic orientation or strategic types. However, few authors address this concept with respect to the specificity of small businesses. Among these approaches, there is a consensus that the purpose of strategic alignment is to minimize the difficulties faced by these organizations.

As pointed out by (Leone, 1999) management theory was developed to solve the problems of large companies. Therefore, the management tools available in the literature are of minor use for the management of small businesses (Escrivão Filho, 2005). According to the authors, these methods are expressed in small businesses in different ways and at different levels, although they are also good management indicators.

Most researchers argue that the analysis of small business is difficult due to the great heterogeneity present among them. Even so, according to (Leone, 1999) there are common features among small and medium-sized firms, such as the entrepreneur's influence on the organization, the need to adapt to the environment, and a greater propensity for specialization strategies (focus strategy). In addition, (Cêra & Escrivão Filho, 2003) states that the specificities of small companies can be understood as different manifestations of Administrative Theory in these organizations.

In the literature there has been an increasingly widespread perception that small companies have their own characteristics that distinguish them from large organizations, in
addition to structural dimensions. These specificities can be observed in the organizational structure, in individual aspects of the owner-manager, and in the context of the company (Leone, 1999). Thus, given the socioeconomic importance of these firms, researchers have sought to understand them to solve their own problems.

Some authors perform this differentiation based on the administrative structure that the company presents. (Aragon-Sanchez & Sanchez-Marin, 2005), for example, claim that small companies have a low amount of information about the environment and less professional management.

Other authors point out that the owner-manager of a small business has different personal characteristics from the manager of a large company. (Moraes et al., 2014), in a systematic review of the specificities of the small business, showed that there is a close association between the small business and the entrepreneur, where the personal objectives of the owner are focused on administration.

It is also perceived in the literature that small companies have different contexts compared to large ones. According to (Leone, 1999), SMEs are very dependent on the resources available to them, due to their little control of the external environment, that is, their low bargaining power in the market.

Methodology

3.1 Phase 1 – Systematic Mapping of Literature

The method used in this research is the systematic mapping of the literature. This procedure consists of deciding on the search system and identifying and analyzing the data relevant to the research through a reliable and reproducible scientific process. Thus, the phases of systematic mapping can be described as follows: Planning the review, conducting the review, reporting, and disseminating the results (Tranfield et al., 2003).

In the planning phase, the research problem was first identified. Then, the criteria for including research relevance papers and the method of data extraction and analysis were determined. The purpose of this systematic review is essentially to answer the following questions:

- Is there a difference between small and large companies in the literature on strategic management?
- How is strategic orientation understood in studies of small businesses?
What classification typology has been most commonly used to study and analyze the strategic orientation of small businesses?

To answer these questions, a search pattern was created. First, the Web of Science was defined as the database. It was selected because of the large quantity and quality of publications on strategic management. The search terms were composed of "strategic orientation" and "small business" which can be seen in Table 1. The search settings looked for results that included the two key terms in the title of the document. The following criteria were considered in the selection of papers:

II. Minimum number of two citations.

<table>
<thead>
<tr>
<th>TERM</th>
<th>Small business</th>
<th>Strategic orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRING</td>
<td>“SME*” OR “small business*” OR</td>
<td>“STRATEGIC ORIENTATION*” OR</td>
</tr>
<tr>
<td></td>
<td>“small firm*” OR “small enterprise*” OR</td>
<td>“GENERIC STRATEG*” OR</td>
</tr>
<tr>
<td></td>
<td>“small company*”</td>
<td>“STRATEGIC TYPE*”</td>
</tr>
</tbody>
</table>

Table 1 – List of strings used in the search for articles.
Source: Developed by Authors

The search for scientific documents resulted in a total of 31 papers. The data was extracted into a Microsoft Excel® spreadsheet. After reading the titles, a new selection was made, resulting in 14 papers that were read in their entirety to gather the necessary information and answer the research questions. Thus, the data were classified and presented in the results section.

3.2 Phase 2 - Exploratory Research in Small Companies

To verify the main theoretical constructs in Systematic Mapping, case studies were conducted in five technology-based companies located in the State of Goias, west central region of Brazil. For the data collection, a questionnaire was used, divided into three main parts: general information about the company, type of strategic orientation, and specificity of the small business. For the part related to strategic orientation, the questionnaire proposed by (Conant et al.,1990) based on (Miles & Snow,1978) typology was adopted and the part on the specificity of small business was elaborated using a theoretical construct, using the Likert scale. Innovation performance was measured by the new products or processes developed by the companies.
Systematic Mapping of the Literature

Among the authors of strategic orientation, 78.6% understand that small companies have different characteristics from large organizations (specificity), as shown in Figure 1.

![Figure 1 - Proportion of authors that consider specificities in small business. Source: Developed by Authors](images/figure1.png)

Examples of the specificities of small businesses, in relation to large ones, are more flexible administrative structures (Laforet & Tann, 2006) and greater influence of owners (Escribá-Esteve et al., 2009).

It was found eight typologies of strategic orientation presented in Table 2. This represents how strategic orientation in small businesses is studied and interpreted by different authors.

<table>
<thead>
<tr>
<th>EO</th>
<th>AUTHORS</th>
<th>TYPOLOGY</th>
<th>ADOPTED THE TYPOLOGY</th>
<th>THE</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Miles &amp; Snow, 1978</td>
<td>Prospector orientation; analytical orientation; defensive orientation, and reactive orientation.</td>
<td>Aragon-Sanchez &amp; Sanchez-Marín, 2005; Laforet, 2009; Parnell, 2013; Massa &amp; Testa, 2009.</td>
<td></td>
</tr>
<tr>
<td>05</td>
<td>Birley, 1999</td>
<td>Family; business and balanced orientation</td>
<td>Birley, 1999</td>
<td></td>
</tr>
<tr>
<td>06</td>
<td>Laukkanen, Nagy &amp; Hirvonen, 2013</td>
<td>Business; market and brand orientation</td>
<td>Laukkanen, Nagy &amp; Hirvonen, 2013</td>
<td></td>
</tr>
</tbody>
</table>
Among these typologies of strategic orientation, (Miles & Snow, 2003) with 29%, Covin and Slevin (1989) with 22% and Naver and Slater (1990) with 14% are the most frequent. The other models had a frequency of 7% each, as shown in Figure 2.

<table>
<thead>
<tr>
<th>Table 2 - List of strategic orientation typology for small business</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Bagchi-Sen &amp; Kuechler, 2000</th>
<th>Proactive orientation and reactive orientation</th>
<th>Bagchi-Sen &amp; Kuechler, 2000</th>
</tr>
</thead>
</table>

In the typologies presented in Figure 2, we note that all models use the profile of the entrepreneur and/or the segmentation of priorities as classification parameters. In this sense, a possible explanation for the greater use of the typology of (Miles & Snow, 2003) is the inclusion of these two indicators in the proposed typology, that is, the consideration of the characteristics of the entrepreneur and the different priorities of the organization in the classification of strategic types.

In turn, the typology of (Covin & Slevin, 1989) also stood out in the analysis conducted. It considers the main characteristics of the entrepreneur, such as initiative, innovation, and assertiveness. In addition, there are new classifications that are less used as a reference compared to the more traditional typologies.

An example of this is proposed by (Laukkanen et al., 2013). This typology extends the strategic type of (Covin & Slevin, 1989) to include market and brand parameters.
The researchers of strategic orientation understand strategy in small firms in four different ways, as can be seen in Table 3.

<table>
<thead>
<tr>
<th>AUTHORS</th>
<th>COMPREHENSION OF THE STRATEGIC ORIENTATION IN SMALL BUSINESSES</th>
<th>DESCRIPTION</th>
<th>TOTAL (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aragon-Sanchez &amp; Sanchez-Marin, 2005; Hagen, Zucchella, Cerchiello, et al., 2012; Laukkanen, Nagy, Hirvogen, et al., 2013; Parnell, 2013; Massa &amp; Testa, 2009</td>
<td>Set of guidelines</td>
<td>Previously defined directions</td>
<td>35.7%</td>
</tr>
<tr>
<td>Leitner &amp; Gueldenberg, 2010; Okpara, 2009</td>
<td>Plan</td>
<td>Fixed action sequence</td>
<td>14.3%</td>
</tr>
<tr>
<td>Escriba-Esteve, Sanchez-Peinado &amp; Sanchez-Peinado E., 2009; Bagchi-Sen, Kuechler, 2000; Brouthers, Nakos &amp; Dimitratos, 2015; Gallardo-Vazquez &amp; Isabel Sanchez-Hernandez, 2017; Idar, Yusoff &amp; Mahmood, 2012</td>
<td>Managerial posture</td>
<td>Decision-making ability of top management</td>
<td>35.7%</td>
</tr>
<tr>
<td>Wang &amp; Ahmed, 2009; Laforet, 2009</td>
<td>Moderating process</td>
<td>Intermediation between variables (contingent) that influence organizational performance</td>
<td>14.3%</td>
</tr>
</tbody>
</table>

Table 3 – Authors’ perception of strategic orientation in small businesses.

As shown in Table 3, the authors understand strategic orientation in small businesses to mean, for the most part, the previously defined directions (35.7%) and the decision-making ability of top management (35.7%). To a lesser extent, it is also understood as a fixed plan of action (14.3%) and a process of response to contingencies (14.3%).

4.1 Case Study in Technology-Based Companies

As mentioned earlier, the managers of five technology-based companies were interviewed, and the general profile is shown in Table 4.
Strategic orientation in small business: systematic mapping and exploratory research in technology-based companies

<table>
<thead>
<tr>
<th>Company</th>
<th>Partners</th>
<th>Employees</th>
<th>Operation Area</th>
<th>Years in Business</th>
<th>Main Products/Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
<td>0</td>
<td>Information technology</td>
<td>5</td>
<td>Software to nutritionists</td>
</tr>
<tr>
<td>B</td>
<td>6</td>
<td>0</td>
<td>Marketing</td>
<td>5</td>
<td>Data base for marketing</td>
</tr>
<tr>
<td>C</td>
<td>3</td>
<td>0</td>
<td>Agribusiness</td>
<td>4</td>
<td>Agritech</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
<td>8</td>
<td>Food</td>
<td>2</td>
<td>Nutritious chocolates and catering service</td>
</tr>
<tr>
<td>E</td>
<td>2</td>
<td>1</td>
<td>Education</td>
<td>2</td>
<td>Educational robotics classes</td>
</tr>
</tbody>
</table>

Table 4 – Data from technology-based companies
Source: Developed by Authors

The case study companies (Table 4) have a very small number of employees, and often only the founding shareholders are the ones who fully operate the company, as would be expected for a start-up. The areas of operation are diverse, such as information technology, marketing, agribusiness, food, and education. In terms of time on the market, all are less than five years old.

In order to verify that the companies have the characteristics of small businesses described in the literature, the parameters of small business specificity listed in Table 5 were defined.

<table>
<thead>
<tr>
<th>Characteristics Analyzed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small business organizational structure (simple structure)</td>
</tr>
<tr>
<td>Informal, intuition-based planning</td>
</tr>
<tr>
<td>Communication with customers is done directly and without intermediaries</td>
</tr>
<tr>
<td>Business management and operation influenced by the owner's beliefs and values</td>
</tr>
<tr>
<td>Centralization of decision-making by the owner</td>
</tr>
<tr>
<td>A close collaborative relationship with employees</td>
</tr>
<tr>
<td>Limitations on financial resources</td>
</tr>
<tr>
<td>Low bargaining power vis-à-vis customers and suppliers</td>
</tr>
<tr>
<td>Difficulties in obtaining accurate market information</td>
</tr>
</tbody>
</table>

Table 5 – Small business specificities
Source: Developed by Authors

The managers of small businesses agreed to some extent with the characteristics related to the specificity of the small business (69%), as indicated in Table 4 and further explained in Figure 3. Another finding relates to the strategic orientation of the companies, with the predominant type of strategy being that of the prospector (Figure 4).

The theoretical model proposed by (Miles & Snow, 1978) provides an approach to study how companies set their strategies and develop the mechanisms to implement them. According to the (Miles & Snow, 1978), an adaptive process is established that includes three main challenges of organizational adequacy (entrepreneurial, engineering, and administrative)
that must be solved in their entirety. Based on this, the proposed model identifies three types of strategies capable of addressing these challenges: Defender, Analyzer, and Prospector. In addition, strategic failure is identified as a reactor type.

As stated in the study of (Aragon-Sanchez & Sanchez-Marín, 2005), the classification of (Miles & Snow, 1978), can be considered unique, since it fully encompasses and interacts with all environments and business profiles. The authors also state that these strategy types have significant implications for management as they focus on different factors such as innovation, financial structure, and technological positioning.
In turn, the typology of (Covin & Slevin, 1989) also stood out in the analysis conducted. This type of strategy considers the main characteristics of the entrepreneur, such as initiative, innovation, and assertiveness. In addition, there are new classifications that are less used as a reference compared to the more traditional ones.

In terms of innovation performance, 4 of the 5 case-studied companies have implemented some type of innovation in the last three years. Of these companies that have innovated, the most common types of innovation are shown in Figure 5.

![Figure 5 - Occurrence of types of innovation in companies](source: Developed by Authors)

**Conclusion**

Based on the results of the systematic mapping, it can be stated that the authors dealing with strategic orientation aim to distinguish between small and large companies in their studies.

It was also found that despite the emergence and development of other typologies, the strategic alignment model proposed by (Miles & Snow, 1978) is still the most applied for studying and understanding the strategic management of small businesses. This is due to the comprehensiveness of the typology, which covers both the characteristics of the entrepreneur and the priorities of the business.

Another widely used reference is the proposal of (Covin & Slevin, 1989), which, unlike (Miles & Snow, 1978), does not classify typologies. They state of business orientation. Business orientation can be understood as the characteristics of the entrepreneur, such as
initiative, innovation, and assertiveness.

However, in the research on this topic, strategic orientation in small businesses is largely understood as strategic options and management positioning. That is, strategic orientation in small businesses can be understood as the ability to set organizational directions in advance and make management decisions.

The case study provides a preliminary overview of the scenario of small technology-based companies in Brazil and considerations for continuing new research on the same basis as before, or on the way to new models and insights on the topics of strategic orientation and innovation.

Some authors over time have highlighted the specificities of small companies, for example (D’Amboise & Muldowney, 1988; Filho & Carvalho, 2005; Leone, 1999; Torres & Julien, 2005; Welsh & White, 1981), and the managers participating in this study not always agreed with these particularities’ characteristics of organizations. One explanation would be that small businesses have specificities, but at the same time are heterogeneous (Torres, 2005), meaning that innovative and technology-based companies do not have the same characteristics as, for example, a traditional technology company.

As noted in the case study, the strategic type of prospector also emerges as a trend in small business research (Laforet & Tann, 2006). This strategic orientation is an indicator of innovation initiatives and is directly related to technology-oriented companies. This is further reinforced by the performance of firms that have developed some type of innovation in the last three years. According to the respondents, partnerships with other stakeholders (suppliers, other companies, and research centers) were the driving factor for these innovations.

In this regard, for future research, it is suggested that a survey be conducted with a substantial sample of small businesses to broaden the scope of the study and confirm or not the trend found in this survey.

References


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