

INTEGRATION OF TECHNOLOGICAL STRATEGY WITH BUSINESS STRATEGY: EXPERIENCE REPORT OF A COMPANY COMPANY FROM GUARATINGUETA

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SUMMARY

The objective of this paper is to reflect on marketing strategies aligned with business strategy, as well as how technology fits into the company's strategic direction. The objective is to reflect and analyze how an organization as a whole integrates its business strategies with technology. The methodology used was a case study developed in a Brazilian company linked to the education sector. The company has extensive experience in the market. It was found in the company studied that the use of technology as a strategic variable translates into the adoption of innovative strategies and the effort of technological qualification, based on a conscious and favorable stance regarding the value of technological development as an effective alternative to increase its competitiveness.

Keywords:Competitive Strategies, Sales,Planning.

1 INTRODUCTION

Envisioning a new market scenario and innovation in their activities to stand out in competitiveness and survival, companies have been seeking to adapt to globalization based on their characteristics (ECHEVESTE *et. al.* 1999, p. 168).

However, the literature presents some aspects to be considered in this process regarding economic, social, cultural, political, legal and financial differences that can promote uncertainties in this process (HILAL; HEMAIS, 2003; HAIBIN, 2010). Therefore, managers need to analyze these differences as challenges to be overcome, as well as a way to adapt their profile to specific attributes (Echeveste *et. al.*, 1999).

In this sense, planning is essential, as to observe how, when and in which markets to enter so that strategic decisions in terms of search (of market, natural and financial resources and capabilities) demonstrate the success of globalization, as in the case of the engineering sector (MACADAR, 2009). Thus, the objective of this *paper* is to show that technology is crucial for the competitiveness of companies as technological changes have begun to generate immediate impacts in the reduction of the product life cycle, in the reorganization of production, in the redefinition of market segments, in the emergence of new sources of competition, in the change of relations with the workforce and in the redesign of business processes. This study is based on a case study and a bibliographic research with a qualitative approach.

2 THE COMPANY

In a market where innovations mark adaptation to the resulting social, economic, political and technological changes, Clínica da Engenharia, a company with 100% national capital located in the city of Guaratinguetá, which produces no-breaks. It currently has a team of 60 employees and annual sales of approximately US\$ 1,000,000.00, starting its operations in 1996 with five friends at the university and the now deceased professor of UNESP in Guaratinguetá.

The Engineering Clinic equipped a research laboratory and its industrial facility with the intention of producing, on demand, Electric Energy Demand Controllers. The Engineering Clinic was a pioneer in Brazil in this market segment and contributed to the transformation of analog demand controllers into authentic microprocessors – the first major technological change promoted by the company.

However, at the same time that it brings them closer together, the market is permeated by differences that distance organizations in economic, social, cultural, political, legal and financial aspects that, if not taken into consideration, can constitute challenges to be faced by managers with marketing and technology management strategies, as warned by (Suen; Kimura, 1997). Differences that, in the integration process, can be seen within the scope of their market counter-hegemony (Gandin; Hypolito, 2003).

What contributed to standing out in the market in the technological context was the introduction of microprocessors in the Clínica da Engenharia's UPSs, the result of the fusion of knowledge in the areas of power electronics and microprocessing that had been accumulated throughout the company's history and which, until then, had materialized in the design and manufacture of microprocessed demand controllers, battery chargers/rectifiers and the previous generation's UPSs themselves.

2.2 THE QUESTION OF COMPETITIVE ADVANTAGE

Understanding this issue is important to understand how companies develop and maintain competitive advantages, that is, consistent levels of above-average performance are fundamental to the theory of business strategy and can be discussed along two fundamental axes (Vasconcelos and Cyrino, 2000). However, in addition to these, there is the line of thought that demarcates the competitive strategy outlined by Porter (1993) in which it focuses on “[...] markets and competitors and the competitive advantages arising from the identification of

threats and opportunities” (Jansen, Rotondaro; Jansen, 2005, p. 408) as a way for small and medium-sized companies to survive in this scenario.

Firstly, it corresponds to the origin of competitive advantage, which can be subdivided into two perspectives: (a) theories that consider competitive advantage as an attribute external to the organization, of positioning, derived from the configuration of the industry, the dynamics of the market and competition; and (b) theories that consider competitive advantage as a phenomenon derived from internal characteristics of the organization. Secondly, it corresponds to the views on competition, which can also be broken down into two main approaches: (a) one marked by the static view of competition based on the notion of economic equilibrium; and (b) another focused on the dynamic aspects of competition with a focus on innovation, discontinuity and imbalance. According to the dimensions exposed, the main theories of business strategy can be represented schematically as shown in FIG. 1.

FIGURE 1 – Explanatory trends of competitive advantage

Vantagem competitiva explicada por fatores externos à organização (mercados, estrutura das indústrias)	1. Análise estrutural da indústria	3. Processos de mercado
Vantagem competitiva explicada por fatores internos à organização (recursos, competências, aptidões)	2. Recursos e competências	4. Capacidades dinâmicas
	Visão estática da concorrência (equilíbrio)	Visão dinâmica da concorrência (mudança e incerteza)

SOURCE – Adapted from Vasconcelos and Cyrino, 2000. p. 23.

The Structural Analysis of Industry approach has its roots in studies developed by Industrial Economics and is complemented by the model that became known as SCP (Structure-Conduct-Performance) analysis. In this approach, performance in an industry or market is defined by the conduct (behavior or strategy) of companies with regard to pricing policy and practice, cooperation between firms, research and development policies, and campaigns.

2.3 TECHNOLOGICAL POSTURE: BUSINESS INTELLIGENCE

For Cunha (1999), the use of technology as a strategic variable translates into the adoption of technologically innovative strategies, which requires companies to make training efforts

technological, based on a conscious and favorable stance regarding the value of technological development as an effective alternative to increase competitiveness.

The Engineering Clinic has been doing formal strategic planning since the 1990s. However, until recently, participation was restricted to the two directors. According to the director interviewed, only now has the company begun to involve managers and other professionals who are more directly involved in the implementation and consequences of strategic planning. The company has been using data analysis and technological programs to measure its results and monitor the activities of its employees.

2.4 STRATEGIC MANAGEMENT OF TECHNOLOGY

Planning is an action that must be present in any organizational process. For each planning, managers make strategic decisions so that, in the end, success is the hallmark of the initiative, including innovation in terms of internationalizing commercial activities.

Domingues and Bueno (2011, p.14), as concluded in their research on the internationalization of emerging Brazilian companies, highlight that the ideal moment to plan and make strategic decisions in this sense is based on elements such as “[...] maturity and economic capacity [...]”, since these elements subsidize the high costs that the company has to bear, as well as adequate experience when compared to the uncertainties of younger companies.

After observing when to enter the globalized market, companies still need to analyze which markets to enter. In this regard, the same authors highlight parameters such as “[...] the sector of activity, the management style, the institutional context and the maturity of the market” (DOMINGUES; BUENO, 2011, p. 14) in order to avoid, as the authors themselves point out, the failure of internationalization processes in powerful countries worldwide.

Having analyzed, therefore, when and which markets to enter, another important aspect of internationalization planning is how to enter. In this sense, Suen and Kimura (1997), in a study on mergers with Brazilian companies, present the following strategies: merger/acquisition, licensing, direct investment, *joint venture*, strategic alliance.

On the other hand, when the Brazilian company promotes the internationalization process, the following competitive advantages are at stake as strategic decisions, according to

Dunning (2001, as cited in Macadar, 2009): search for resources; markets, efficiency and capabilities.

2.5 WORLD TRENDS

Trending topics such as big data, social media and mobile BI show the challenges that companies have to face in (further) developing their business intelligence strategy and in its operational implementation. Domingues (2011).

The integration of external data sources, for example from social media networks, and the integration of new data sources, such as web analytics, into analysis systems require a clear strategy for effective data management, especially with regard to the growing mountains of data. Viana, (1999). In addition, companies must be able to quickly draw the right conclusions for the future from the ever-increasing volumes of structured and unstructured data. As a result, companies have increasing requirements for data consolidation, data integration and data quality. Domingues (2011)

FINAL CONSIDERATIONS

Innovation is the watchword for organizations that intend to survive and remain competitive in today's globalized market. One of the innovative alternatives has been the integration of technology and intelligent management.

However, economic, political, social, cultural, financial and legal differences in the complex world are challenges that managers must overcome, for example, through data intelligence, requiring a manager profile with specific personal, organizational and professional attributes in order to avoid failure in this process. Company planning and the adoption of technology in its activities include some decision-making strategies on how to enter this market, such as mergers/acquisitions and direct solo investment, both with advantages and disadvantages that must be analyzed in terms of cost/benefit and threats/opportunities for organizations of specific sizes.

Success stories of Brazilian companies' strategies contribute to this process in such a way that competition from globalized companies emerges as a line of thought that enables their survival in terms of competitive strategies and use of technology.

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