AN INTEGRATIVE MODEL FOR STRATEGIC ANALYSIS: FOCUSSING FIRMS IN BRAZIL *

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ABSTRACT

The discussion in strategic management regarding what factors influence most performance has been shifting its focus from the organization's context to its competencies. Simultaneously, new models are being proposed that combine these perspectives. This paper explains how the author developed such an integrative model and used it for strategic analyses of organizations in Brazil. It briefly describes its evolution from a framework for implementing total quality to a model for analyzing critical internal variables, potentially also from a resource-based perspective, in interaction with relevant environmental variables for strategy formulation and deployment. An example is given of some results of its application in a leading firm.

Key-words: Strategic Management; Strategic Fit; Strategic Framework; Performance Improvement Strategies; Socio-technical Systems; Resource-based Theory

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1. Introduction

The discussion in strategic management regarding what factors influence most performance has been shifting its focus from the organization's context to its competencies[1]. Simultaneously, new integrative models are being proposed that combine these perspectives[2] [3]. In a certain sense, they draw upon the classical concept of *strategic fit*: to be effective a strategy should be consistent with both the organization's external environment and its internal resources, competencies and systems, as well as its goals and values[4].

In Brazil, the viability of sustaining strategies, in a context of uncertainty especially at the economic level, has always been viewed with some skepticism. Recently, interest in the resource-based paradigm has been growing as downsizing has forced firms to focus on their core business and competencies. At the same time, empirical investigations on customer-oriented performance improvement initiatives suggest that the lack of such initiatives' commitment to and alignment with a clear strategy may be a principal reason for their ineffectiveness[5].

Strategy is understood here as a "a unifying" proposition "that gives coherence and direction to the actions and decisions of an (...) organization" [6], especially for levering and allocating the necessary resources for improving or sustaining its performance, in keeping with its vision, and considering the internal and external environmental conditions.
Strategy's role for optimizing performance is thus assumed to be fundamental.

It is also assumed that models can be useful for strategic management (strategy development, implementation and evaluation), because inspiration and intuition are necessary but not sufficient for doing so. Drawing partly upon Van der Heijen[7], strategic management is viewed as implying at least three crucial assessments:

1) assessment of the organizational success factors, broadly defined, in terms of constituting potential and actual strengths or weaknesses for achieving the organization's key goals;

2) assessment of the interacting environmental factors, notably their strategic implications, in terms of constituting potential and actual opportunities or threats;

3) assessment of the fit or congruence between the strategy and all these factors.

One of the objectives of the author's wider research on competitive strategies in Brazil was to develop a model, in the sense of an analytical tool, to help carry out such assessments and, thus, also, to help formulate options regarding policies/actions to improve the fit when necessary, or, eventually, even to question the existing strategy and develop a new one.

The purpose of this paper is to present the results of this endeavor, precisely an integrative model that was effectively applied to the case of over 50 firms in this country [8][9].

2. Methodology and Theoretical Reference

The model's current design evolved from a framework developed for analyzing customer-oriented quality improvement or so-called total quality strategies. It was the result of a synthesis of elements from frameworks and theoretical constructs identified throughout an extensive literature review, with other elements from primary sources, such as studies and surveys, all conducted in the scope of the wider research[10][11][12]. It originally built on the premises of the socio-technical school[13], the work of Sjölander[14], Child[15], and Nadler[16], as well as the new approach of Xerox Corporation at the time[17]. Its design was tested in the scope of the case studies of two multinationals[18]. As the research progressed, minor improvements were made. Notably, it incorporated Austin's[19] environmental constructs for strategic analyses in developing countries.

3. Results: The Model

Introducing the Model

In the proposed model, the organization is portrayed as a diamond to suggest a balanced system because the congruence of the factors at play is viewed as fundamental for the organization's performance and the strategy's success, in keeping with the concept of strategic fit (see Figure 1). These factors are divided into two main categories: 1) ***principal*** *variables* within the organization, and 2) ***secondary*** *variables,* both within and outside the organization, respectively, called *specific*

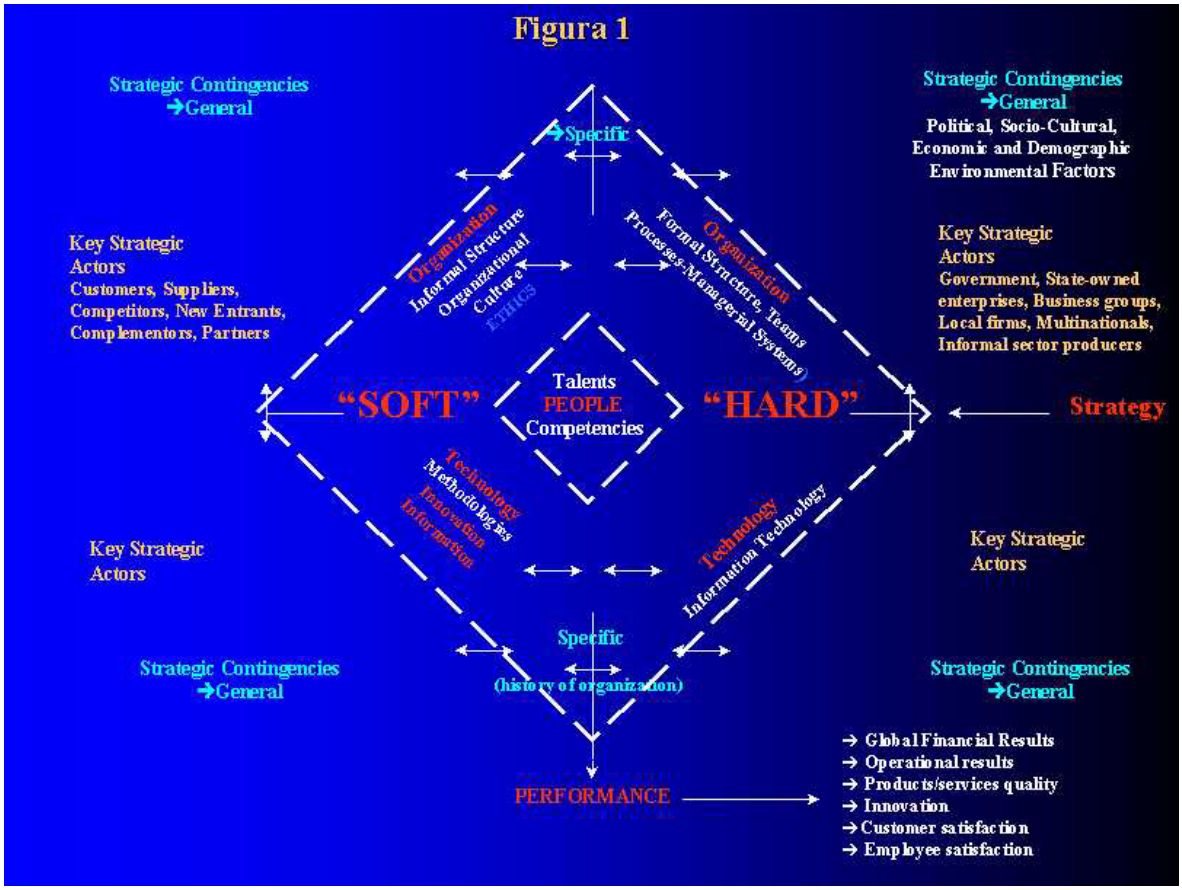
and general strategic contingencies[20]. The dotted lines indicate that it is viewed as an open-system[21], in that the interacting external factors are considered strategically important.

The principal variables are the organizational success factors, broadly defined, in the sense that they are deemed necessary for optimizing the organization's performance in keeping with its strategic goals. They are divided into independent and dependent variables. The independent ones refer to determinants of performance; they are the controllable variables, classified into three categories: 1) **people**, placed in the center, surrounded by 2) **organization** and 3) **technology**. These last two categories include both "hard" and soft" variables. Arrows in both directions indicate that also all these factors interact.

A few examples of types of variables included in each category are given in Figure 1. A case in point are the potential of talents and competencies, in the category "people", whose obvious central role for strategic decision-making warrants it being placed in the center. Another case in point are the formal organizational structure, the documented processes, the formal managerial systems, in the "hard" organizational category. The organization's culture, its leadership style, its informal communication channels are considered "soft" organizational variables. Information technology is an example of a "hard" technological variable. "Soft" technological variables refer to the techniques and methodologies to effectively put into practice the different systems. Information, especially in the form of know-how, and innovation are also included in this category.

As the one-way arrow indicates, **performance** is the *dependent* principal category of variables, because it is the result of the management of the independent principal variables in interaction with the secondary ones. It, too, is factorized in two dimensions: hard and soft. Examples of hard and soft performance variables are, respectively, global financial results (ROA or ROI) and perceived customer satisfaction. Product/service quality and innovation are placed on the frontier of hard and soft, because they can be measured by both objective and subjective dimensions (e.g. for product quality, number of defects and perceived quality of product/ service; for innovation, number of new products developed and perceived process innovation).

Figure 1: Integrative Model for Strategic Analysis (Macedo-Soares 2000, evolution of Macedo-Soares and Chamone 1994 [18])



As to the strategic contingencies, they are considered secondary variables because they merely influence the principal variables' performance, by way of their positive and negative implications. In this sense, they can be viewed as potential and actual opportunities or threats, to be exploited or neutralized. Inspired by Austin[22], they are categorized as economic, political, socio-cultural, and demographic factors, and further classified in sub-categories with corresponding indicators.

A major difference between Austin's framework and the proposed model is that his framework does not distinguish between principal and secondary variables within the organization. The main advantage of such a distinction is to be able to identify more easily the organizational success factors, among the internal factors, in terms of strengths and weaknesses, and, thus, assess their congruence with the strategy and the other variables at play. Such an assessment is fundamental for deciding what changes, if necessary, some of these factors would have to undergo to improve the fit, and, consequently, that of the organization's performance, depending on the type of strategy. This difference is essential in that it reflects a difference in paradigm. While Austin's framework

draws upon work from the positioning school, the proposed model is consistent with a basic contention of the resource-based view: sustainable superior performance, in the sense of prolonged above average industry returns, has to do especially with the firm's internal factors.

The example shown in Figure 1 of a *specific strategic contingency*, i.e. a secondary internal variable, is the history of the organization[23]. Cases in point of, for example, cultural specific contingencies would be the development of a quality-of-working-life culture in the firm's history, or the management style of its founders. These are factors that cannot be controlled, but that favor or constrain the principal variables' effectiveness, depending on the type of strategy. In the case of a customer-driven total quality strategy, not having previously created a quality-of-working-life culture was found to be a highly constraining factor when it comes to developing the necessary quality improvement culture for effectively implementing such a strategy[24][25]. Note that although, the secondary variables cannot be directly controlled, it is believed that, by way of the strategy, the principal variables can contribute to changes in the secondary ones, and thus, alter the dynamics of the environmental forces.

Examples of relevant external secondary variables, i.e. *general strategic contingencies*/indicators, for most firms in Brazil, in the economic category of factors, are capital/level of inflation, labor/degree of qualified labor, and infrastructure/strength or weakness. For the socio-cultural factors, cases in point are the perceptions of human nature regarding the degree of goodness of human beings and the changeability of their nature, as well as the local culture's orientations towards time and space. In the political category, the institutions/strength or weakness sub-category is currently one of the most relevant. In the demographic category, population/growth rates, age structure/young or old, and health status/life expectancy and sickness rates, are the most significant variables.

The model also features the key strategic actors, in the firm's external environment that can assume any one of the generic roles proposed by Porter[26] (customer, supplier, competitor, new entrant, substitute), as well as that of partner/complementor suggested by Brandenburger and Nalebuff[27]. In accordance with Austin[28], these key strategic actors include the Government and five institutional categories: state-owned enterprises, business groups, local firms and cooperatives, multinationals, and informal sector producers. It is assumed that the general strategic contingencies

give rise to and shape the behavior of these strategic players, when performing their roles, and that, conversely, these players, through their behavior, influence the dynamics of the environmental forces. The trend towards key actors assuming multiple roles obviously adds to the complexity of these dynamics that must be considered in the strategic assessments.

Application of model

To carry out the assessments at issue, certain assumptions regarding congruence of factors must have been previously established. Towards this end, it is helpful, first, to identify, by way of a rigorous literature review, or results of empirical investigations, at least some of the necessary/desirable attributes for the different categories of principal variables for bringing about superior performance, depending on the strategy at issue. For an example of such attributes, see Table 1[29]. As to the secondary variables, documental research can help identify the relevant specific contingencies, as well as provide information on the general contingencies at the country and industry levels.

Instruments must be designed to collect the relevant strategic data. To ensure coherence, the model's assumptions and constructs should guide their development. Questionnaires, constituted of structured questions with a format that enables statistical treatment of data (e.g. Likert scale), can be applied in the scope of a survey of the perceptions of key players, not only outside, but also within the firm (e.g. its managers), when it is possible to have a statistically significant sample of these players. Loosely structured questions can also be used for interviews with key people within or outside the organization. In the research on strategies in Brazil, the model was created both to guide the development of the instruments for collecting relevant strategic data and to analyze this data[30]. Note that, in some cases, the organization decided to adopt the instrument used in the scope of the investigations for its regular performance assessments[31].

In terms of operationalizing the assessment of the congruence of the variables at play with the strategy, the following steps are recommended:

1) Characterize the organization's current explicit or implicit strategy in terms of its content, namely its goals, broadly defined (strategic intent or vision), its scope (product, customers, etc.), and its posture (product/service features emphasized, price structures, etc.)[32]

2) Identify the environmental factors (both specific and general strategic contingencies at different levels) making use of Austin's categories, constructs and indicators, as well as the key strategic actors/roles, and analyze their implications for the strategy in terms of constituting potential and actual opportunities or threats. Alternatively, these implications can be viewed as constraining or favoring factors for leveraging the organization's success factors, considering the characteristics of the strategy.

   The following question can be posed: "Does the strategy, given its characteristics, have the potential to exploit the opportunities and threats created by the environmental factors and by the key actors/roles?

Table 1 – Principal necessary/desirable attributes, for each of the principal independent variables, for successfully implementing/managing a customer-oriented performance improvement strategy

Category of VARIABLES	**Variable**	**Necessary/Desirable attributes in *the case of a hospital.***
Organizational *Hard*	Organizational Structure Teams Processes Managerial Systems Educational Systems Performance Measurement Systems Performance Reward and Recognition Systems	• Flexible, *flat,* with some degree of decentralization of power. • Multifunctional and inter-functional with fair degree of *empowerment.* • Documented, at least at hospital's macro level as cross- functional processes (i.e. spanning both hospital's clinical and administrative processes). • Integrated by hospital's cross-functional processes with a customer driven perspective. • For ongoing education of management and staff, to acquire the necessary competencies for continual performance improvement, including regular on the job follow-up training for staff in the new techniques and methodologies. • Reliable, visible, balanced, comprehensive, consistent, and adaptable to changes, integrating all measurement subsystems and aligned with the strategy's clinical and administrative global objectives. • Employee performance appraisal and compensation system integrated with hospital's performance measurement system.
Organizational Soft	Organizational Culture	• Culture of continual hospital performance improvement oriented towards its customers (patient, referring physician, family, financing and regulatory organizations) as well as other

	Leadership Communication	stakeholders, with concern to quality of life, environment and ethics. Participative management culture. • Visible commitment of management to new strategy. • Extensive, cross-functional communication, favoring constant feedback regarding the hospitals' strategic goals and performance measures.
Technological *Hard*	Information Technologies	• Comprehensive, integrated, real-time information systems (*hardware, software*), with full access to and on the part of decision-makers at all hospital levels.
Technological *Soft*	Methodologies and specific techniques Innovation	• Customer-oriented cross-functional process management (cross-functional key and support process documentation, control and continual improvement techniques, including *PDCA*). • Methodology for performance measurement at global, operational, individual and group levels, that includes quantitative and qualitative dimensions in a balanced fashion; for coach-style leadership and participative management; for management by fact. • *Examples:* - Training, programs and incentives to develop new solutions that incorporate patients' requirements with a view to ensuring the hospital's success in the future. - Development of new measures/indicators referring to progress derived from innovative projects (e.g. percentage of new exams in the total mix of hospital's exams), or for intangible factors, such as empathy, courtesy, respectability that count when providing patient care. - Forecast of necessary new indicators derived from innovative projects (e.g. development of new techniques for ensuring quality patient care treatment by way of genetic engineering).
Human	Talents Abilities Competencies	• Skills, knowledge and potential to acquire the necessary competencies to apply new methodologies and practices, including problem solving, process improvement and balanced measurement of relevant qualitative and quantitative dimensions.

3) Identify the organization's success factors in terms of principal independent variables, according to Macedo-Soares' categorization of variables into: Organization (hard and soft), Technology (hard and soft) and People. Analyze these variables in terms of constituting potential and actual strengths or weaknesses, in the light of the strategy's characteristics, and the secondary variables' implications.

   The following question can be posed: "Does the strategy, given its characteristics, capitalize on the organization's potential and actual strengths, and avoid its weaknesses, in order to effectively exploit the existing and potential opportunities while neutralizing the threats created by the environmental factors and key actors when assuming their roles?

4) In case the answer to the last question is negative, changes regarding the principal independent variables should be considered in order to improve the fit, and, thus, ensure the success of the strategy in terms of contributing to the achievement or sustainability of superior performance. These changes would be determined on the basis of the assessment of the principal variables' attributes, in terms of actual and potential strengths/weaknesses for exploiting the opportunities and neutralizing the threats, by way of the strategy, considering its characteristics.

Example

The case of a leading firm in Brazil that adopted a customer-driven performance improvement strategy, as its new business strategy, is referred to here to illustrate the sort of results that can be achieved by applying the model.

In keeping with previous case studies, the assessment of the firm's organizational factors, both hard and soft, indicated an inconsistency between the basic tenets of this strategy, customer orientation and continual performance improvement at all levels, and the existing hierarchical structure and traditional centralized decision-making management style. Similarly, the analysis revealed an inconsistency between the soft technological factors, namely, the existing, function-oriented process improvement methodologies and the flatter, inter-functional process-based type of structure with decentralized decision-making that would be more appropriate for the strategy in question. This led to the conclusion that, to successfully implement the strategy, changes had to be carried out at both the organizational and technological levels.

The evidence strongly suggested that the challenge was especially at the "soft" level: developing a new organizational culture, that of participative management with a significant degree of empowerment of lower level staff, so as to attend more quickly to the customer. The assessment of the people's variables suggested, however, that a good part of the staff might not have the potential to develop the new capabilities required to effectively perform in accordance with such a new culture.

The analysis of the implications of the external socio-cultural factors revealed that this challenge was all the greater that the changes at issue were not consistent with deeply-rooted characteristics of the Brazilian culture, such as paternalism and personalism that generally created a vicious cycle of centralized control, dependency and passive participation[33]. On the other hand, some positive cultural traits, such as creativity, flexibility and ability to improvise, were identified as potentially useful to initiate some of the necessary changes. The conclusion was that creative cultural adaptations of the strategy to local conditions had to be realized. To a certain extent, this was effectively carried out. The new procedures and processes introduced in the scope of the strategy had a high degree of informality. Namely a "live" informal Policy Deployment process was established[34]. Also, paradoxically, paternalism and personalism were positively exploited to contribute to the effectiveness of leaders who would encourage by their example the new behavioral patterns required by the strategy.

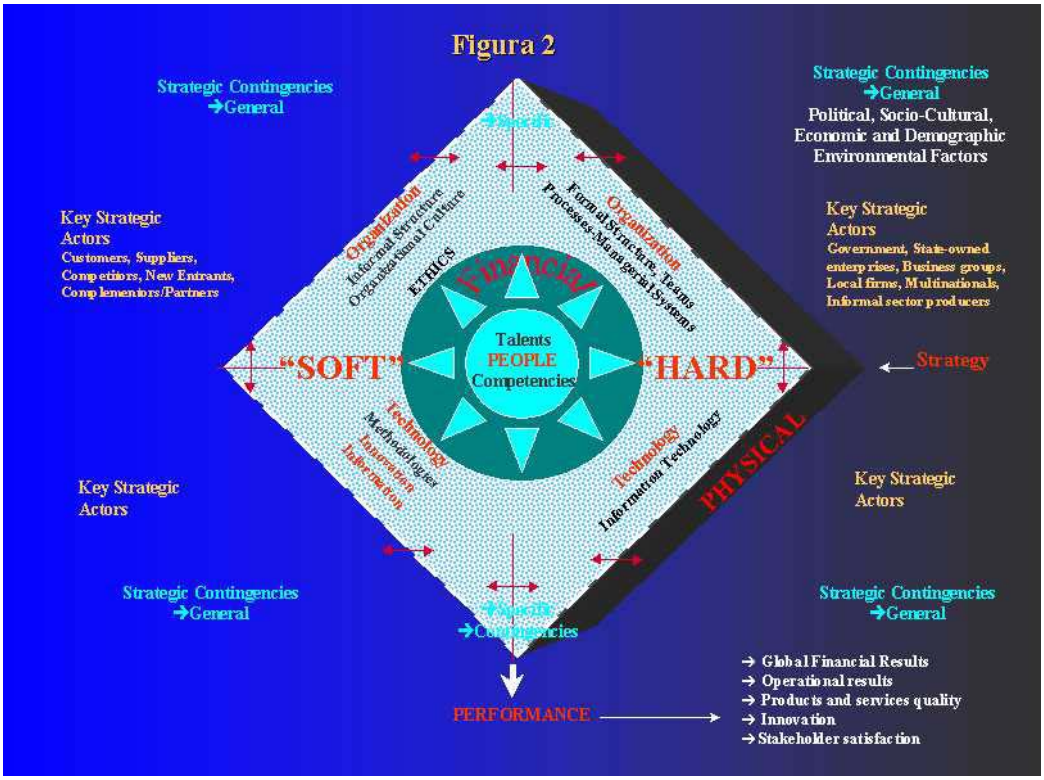
4. Discussion

By way of a conclusion, the potential to use the model for analyses from a resource-based (RB) view is briefly discussed. As was already noted, the model's main assumptions regarding the principal variables' role for performance, and the importance of their integration and congruence for optimizing and sustaining performance, are consistent with basic tenets of the RB view in terms of offering an explanation for intra-industry performance variability. 1) Sustainable superior performance has to do with the firm's internal factors, precisely its distinctive, hard-to duplicate resources[35][36]. 2) These resources comprise integrated combinations of both tangible and intangible assets[37][38], including competencies.

Inspired by the RB classification of resources into financial, physical, human and organizational categories[39][40], a variation of the integrative model is being designed to feature financial and

physical categories of resources, besides its current ones. In Figure 2 a draft of this variation is shown. In the latter, the physical category excludes technological resources. On the other hand, it maintains the distinctions, not only, between the technological and the organizational variables narrowly defined, but, also, between the tangible (hard) and the intangible (soft) ones, and continues to consider people (human resources) as central to the organizational resources broadly defined. Thus, it has the advantage of enabling a deeper analysis of the distinctiveness of these resources, by helping to identify more easily their knowledge component and especially the different dimensions/categories where it is embedded, and to assess their fit. It is assumed here that distinctive competencies reside in knowledge-based resources and in a dynamic resource fit[41]. It is also assumed that causal ambiguity regarding the relationship between a firm's resources/competencies and its competitive advantage contributes to their distinctiveness inasmuch as it is a main reason for their inimitability[42]. The assessment of the resources' congruence/fit, especially where knowledge-based resources are concerned, is all the more important that this fit can enhance ambiguity by increasing the intricacy and glue of the factors involved in the causal relationship.

Figure 2 – Draft of a variation of the Integrative Model (Macedo-Soares 2000) to incorporate RB categories of variables



The model could thus complement tools such as Barney's[43][44]frameworks for testing resources in terms of having the necessary attributes (value, rarity, inimitability/non-substitutability) for becoming distinctive competencies. It could also be effectively used together with Vollmann's[45] classification of competencies in terms of distinctive, essential, routine and outsource(d). It could help identify the competencies that are responsible for the distinctiveness of the combination of resources, and help assess the mix of the different types of competencies involved, the integration of which contributes to increasing their causal ambiguity, and consequently, also their inimitability.

Research is currently in progress on how this model could be effectively adapted, to be used in conjunction with the above mentioned tools, with a view to evaluating the firm's potential to sustain the distinctiveness of its resources/competencies, and consequently its performance, in the light of the interacting environmental factors. Its results will be detailed in future papers.

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