

## IDENTIFICATION OF INDIVIDUALITY ON STRATEGIC KNOWLEDGE MANAGEMENT A Study on A Brazilian Public Company

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### ABSTRACT

*Systemic factors like managerial style, cognition, organizational culture, context and technology are already known as factors that influence Strategic Knowledge Management – SKM. This paper aims to present the next study in this area, showing “individuality” as a factor that also impacts SKM. Considering the results of a survey with 254 strategists and decision makers that work on a Brazilian enterprise, the study point to new relations among strategists and strategic decision makers, novices and experts, in using “individuality” to formulate and decide strategically. Findings and discussions were based on exploratory analysis and factor analysis, showing that is possible to identify tendencies on application of individuality among strategists and strategic decision makers.*

**Keywords:** *managerial, organizational culture, Strategic Knowledge Management, Brazilian enterprise*

### 1. INTRODUCTION

The actual scenario of the world economy open an interesting opportunity to discuss why some corporations win the crisis and others not. In fact, a question could be formulated: Which are the strategic knowledge used to avoid crisis' effects?

In this context, it is possible to verify which factors affect the strategic knowledge most. It is known that managerial style, cognition, organizational culture, context and technology are common factors that influence the Strategic Knowledge Management – SKM, but they are not all (Miranda and Costa, 2005).

Thus, this study presents the importance of “individuality” on SKM, as well as the relation among strategists and strategic decision makers with this factor, showing the tendency of novices and experts in using this factor in favor to formulate strategies and decide strategically.

### 2. THEORETICAL SUPPORT

#### 2.1. *Knowledge Management*

Several organizations have been studying Knowledge Management, since they realized that the management of organizational knowledge can support competitive advantage in business. Knowledge can be considered today an interdisciplinary matter that involves people, company and it's environment, which generates different studies like working knowledge (Davenport and Prusak, 1998), knowledge creation (Nonaka and Takeuchi, 1997), learning organization (Senge, 1990), teaching and learning (Figueiredo, 2005), Intangible assets (Sveiby, 1997), all them relating the corporate world with knowledge.

It is clear that the decision-making is based on information and knowledge that involves the environment of the organization. Companies are learning how to use information to construct meaning, create knowledge and make decisions (Choo, 2006). According to Tarapanoff (2006), the great challenge is to build a corporate environment where everyone can create, access, utilize and share information and knowledge.

#### 2.2. *Strategic Knowledge*

Strategic Knowledge is naturally connected to strategic management, which represents the activity involving decision-making and the formulation, implementation and evaluation of strategies that sets the overall directions

of the organization. Strategic Knowledge is important to strategic decision-making as it helps in the process of selecting the best alternative among all the situations that involves the organization.

According to Miranda (2004), strategic knowledge involves knowledge accumulated by strategists and decision makers in the process of formulation and strategic decision.

Thus, Strategic Knowledge is useful in strategic planning for defining the vision and the mission of the company, studying the scenarios, establishing the strategies, developing the strategies and evaluating the strategic actions.

### **2.3. Strategic Knowledge Management**

Strategic Knowledge Management involves, from the creation of to the dissemination of organizational knowledge, all the aspects related to the prediction, evaluation and generation of strategies, and the actions of strategists and decision makers in the process of strategic formulation and strategic decision making (Miranda, 2004)

Systemic factors like managerial style, cognition, organizational culture, context and technology are already known as factors that influence Strategic Knowledge Management – SKM (Miranda, 2004). The conceptual model is based on three main elements that compose the SKM: (1) management, (2) knowledge and (3) strategy. The management focuses in its agents (strategist and decision makers), systemic factors, management styles and management process. Knowledge deals with the formation of knowledge and type of knowledge involved. The strategy deals with the actions involved in the strategic planning, the strategic perspectives and taxonomy of the formulation of strategic actions.

## **3. SERVICE ENTERPRISE ENVIRONMENT**

The Brazilian Company is a public company linked to the Ministry of Communications. The company held more than 115,000 employees, with 85% working in operation area and 15% working in office area. The workforce is distributed in all 27 Brazilian Federated Unit. There are offices in all of the 5.565 cities in the country.

In this context, the president, the board of directors, chief of departments and managers formulate strategies and take strategic decisions. The Department of Planning is responsible for coordinating the strategic and business plan. The company has a hierarchy in the planning system and management divided in three levels:

- 1st Level - Strategic - it is the level where the decisions are taken. This level defines the mission, the vision, the values, the objectives, the policies, the recommendations, the indicators, and the business-oriented strategies. The products of this level are: the Strategic Plan, the business plan and the Budget Plan.
- 2nd Level - Tactic - it is the level where, after the definition of the strategies, the projects, actions and activities are planned. They produce a Plan of Work for all the employees.
- 3rd Level - Operational - it is the level where the projects, actions and activities are executed.

The model of Strategic Management of the Brazilian Company involves:

- Study of the Company environment;
- Definition of the strategies;
- Implementation of the plans;
- Evaluate and measure effectiveness of the strategies

The Brazilian Company was considered an excellent company for this study, since it has a well-defined structure and hierarchy, with a well-defined group of strategists and decision-makers that deals with strategic knowledge management.

## **4. METHODOLOGY AND VARIABLES**

Methodology applied in this study involved the statistical tools, like regression analysis and factor analysis. The factor analysis was used to describe variability among observed variables and the objective is to reduce de number of variables into fewer unobserved variables named factors. The regression analysis was used to validate the subfactors found in this study.

### **4.1. Method**

The method applied on this research involved a quantitative research with statistical analysis.

The study involved 695 strategist and strategic decision makers. 293 questionnaires returned in the first inquiry and 176 in the second. An amount of thirty nine questionnaires of the first inquiry were considered incomplete or

with outliers, so the survey considered 254 valid questionnaires. According to Hair et al (1998), the sample size to use factorial analysis should be, preferable, more than 100. The objective was to evaluate the grouping of variables into factors considered in the integrated model of the SKM (Miranda, 2004).

The collected data were analyzed, using Statistical Package for the Social Sciences – SPSS.

#### 4.2. Variables

The variables considered in this research are:

- (i) Professional Data
  - a) Kind of professional
    - i. Strategist that is involved with formulating strategies;
    - ii. Strategic Decision Maker, who has formal authority to decide the best strategy to be adopted;
    - iii. Both, simultaneously strategist and;
    - iv. None, neither strategist, nor strategic decision maker.
  - b) Level of expertise
    - i. Novice – less than 10 years performing strategic activities;
    - ii. Expert – more than 10 years performing strategic activities.
- (ii) Systemic Factors and Subfactors:
  - a) Cognition (CG) is a factor concerned to:
    - i. Mental process:
    - ii. Experience:
    - iii. Judge ability
  - b) Technology (IT) is a factor that interferes in the infrastructure of SKM. This factor is related to:
    - i. Information and Communication Technologies – ICT Architecture:
    - ii. Methods and Techniques:
  - c) Organizational Culture (OC) is a factor related to values and believes shared by employees in organizations. It represents the “way of life” of the organization. They are:
    - i. Motivation level
    - ii. Integration among strategists and/or strategic decision maker:
    - iii. Shared knowledge:
  - d) Managerial Style (MS) is a factor that includes:
    - i. Leadership
    - ii. Organizational power structure
    - iii. Clear proposition of values and objectives.
  - e) Context (CN) is a factor that involves subjects concerned to internal and external environment of the organization. It is important to define the timing and opportunity to adopt specific strategy in an organization. (Miranda, 2006).

## 5. FINDINGS

### 5.1. A new systemic factor: Individuality

Evaluating the grouping of variables into factors considered in the integrated model of the SKM (Miranda, 2004), the factor analysis was applied, using the following process:

- (i) Exploratory analysis of the data (evaluate the factorability of the data by calculating the Kaiser-Meyer-Olkin – KMO).
- (ii) Application of the factor analysis.
- (iii) Interpretation of the results.

The factorability of the data was analyzed by the test of adequacy of the sample by KMO (Maroco, 2003). The result of presenting  $KMO = 0,898$  revealed adequate for the continuity of the study. After several rounds of tests, 38 items were select to the final factor analysis test. The KMO test for this group of items presented  $KMO = 0,915$ , also adequate for the study.

The factorial analysis extraction was tested with different rotations and this study applied the principal axis factoring method with varimax rotation. This method presented a clearer separation of factors and this rotation simplifies the matrix of the factors, according to Hair et al (2005).

The screen plot indicated that 6 factors should be a good number for extraction. In addition, according to Harman criterion (Pasqualli, 2002), each factor should explain at least 3% of the total variance, and it happens to the 6 identified factors. The factor analysis results led to define factors as:

- Organizational Culture (OC) – composed by Motivation (level of strategists passion), Integration (level of fine-tuning among strategists) and Sharing (level of experiences exchanged among strategists).
- Management Style (MS) – Composed by Leadership (President's, Directors' and Managers' capacity of leadership), Power Structure, influence and Authority (influence of the President, Directors and Managers in and out the company) and Clear Proposition of Value (company capacity of sharing its mission and vision to the staff).
- Cognition (CG) - Composed by Mental Process (use of sense making), Experience (expertise gain over the years) and Judge Ability or Judiciousness (use of reason in taking decisions).
- Technology (IT) – Composed by Information and Communication Technology - ICT Architecture (hardware and software available to information and knowledge management activities) and Methods and Techniques (use of some kind of methodology to formulate strategies and take strategic decision).
- Context (CN) - Composed by the environment influence over the corporation (on its own context)
- Individuality (ID) – Composed by Leadership (President's, Directors' and Managers' capacity of leadership), Power Structure, influence and Authority (President's, Directors' and Managers' influence in and out the company)

From the SKM model presented by Miranda (2004), the surprise is the presence of a new factor named here as Individuality (ID). This factor is composed by:

- Personal experience importance in taking decisions.
- Professional and personal status, inside and outside of the organization.
- Leadership influence in the strategic decisions.
- Status and personality influence in formulation strategies and in strategic decisions making.
- Status and personal presence influence in the strategic decision

At this point, it is possible to identify an approach of individuality and personal behavior in these features. The study considered the individuality as a specific factor and not as an organizational culture, because organizational culture is a factor composed by collective and group behavior.

The consistency reliability of the test was analyzed by the calculation of Cronbach's Alpha that indicates the level of consistency of the data (Table 1). The results above 0,7 for all the factors indicate the consistency of the data and the adequacy for the application of the factorial analysis according to Hair et al (2005).

**Table 1:** Cronbach's Alpha for each factor

Factor	Cronbach's Alpha	Number of observations
Factor 1 – Organizational Culture	0,875	10
Factor 2 – Management Style	0,867	6
Factor 3 – Cognition	0,776	8
Factor 4 – Technology	0,733	6
Factor 5 – Individuality	0,715	5
Factor 6 – Context	0,710	3
General	0,936	38

Additionally, a regression analysis was applied in order to validate the factors founded. The six factors generated from the factorial analysis were used as dependent variables in the linear regression and the items that composed each factor was used as the independent variables. Six independent regressions had been carried through and the results of the analysis of variance of test F (sig. = 0,000 for all the values and coefficients of the regressions) and the Determination Coefficient ( $R^2$ ) of the regression validate all the factors of the study (Table 2).

Thus, determination coefficients values indicate the intensity of the relation between the independents and the dependent variable. The five first five factors had presented values of  $R^2$  above of 0,85, indicating a good adjustment of the model. Although, factor 6 - "Context" has presented a value of  $R^2 = 0,58$ , the explanatory variable had revealed significant in the model.

**Table 2:** R<sup>2</sup> of each factor

Model	R <sup>2</sup>
Factor 1 – Organizational Culture	0,848
Factor 2 – Management Style	0,793
Factor 3 – Cognition	0,894
Factor 4 – Technology	0,812
Factor 5 – Individuality	0,851
Factor 6 – Context	0,587

**5.2. Tendencies in SKM**

Considering the results of the study, it is possible to discuss how the variables defined in the item 4.2 tend to behave face to individuality factor.

Therefore, the first point to be evaluated is how novices and experts tend to perform in terms of individuality factor.

The factorability index showed that there is no significant difference between novices and experts in terms of the individuality factor. For example, both groups strongly agree that “Personal experience is important for decision making”. In other hand, they have the same opinion that leadership influence in the strategic decision, but not in a high agreement with the statement (Table 3). In fact, in all attributes considered, experts tend to be more emphatic in use individuality than novices, considering the higher score.

**Table 3:** Individuality Factor X Novices and Experts

Individuality Factor	Novices	Experts
Professional and personal status, inside and outside of the organization.	81,8%	84,8%
Status and personality influence in formulation strategies and in strategic decisions making.	75,2%	80,4%
Status and personal presence influence in the strategic decision	75,6%	77,4%
Personal experience importance in taking decisions.	92,4%	94,2%
Leadership influence in the strategic decisions.	69,6%	75,3%

The second point is to evaluate, how strategists and strategic decision makers tend to perform their jobs in terms of individuality factor.

**Table 4:** Individuality Factor X Strategists, Decision Makers and Both

Individuality Factor	Strategists	Strategic Decision Makers	Strategists and Strategic Decision Makers
Professional and personal status, inside and outside of the organization.	80,5%	80,8%	88,1%
Status and personality influence in formulation strategies and in strategic decisions making.	76,2%	80,0%	80,2%
Status and personal presence influence in the strategic decision	75,1%	80,0%	77,8%
Personal experience importance in taking decisions.	93,7%	91,2%	93,5%
Leadership influence in the strategic decisions.	68,5%	79,2%	76,8%

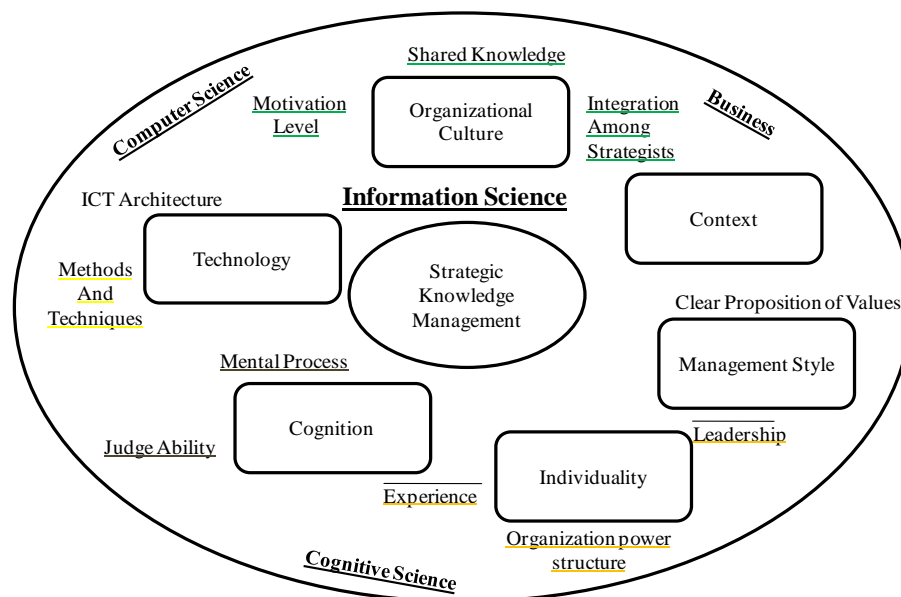
Strategists and Strategic Decision Makers also have similar opinion about Individuality Factors, showing small differences in terms of agreement in some factors. The highest difference is in the statement about “Leadership influence in the strategic decisions”. It is interesting to observe that “Personal experience importance in taking decisions” has the highest score among strategists and strategic decision makers, and also among novices and experts. It shows that strategic knowledge is fundamentally linked to personal experience and share this knowledge must increase the chances to formulate better strategies. Also, strategic decision maker can “learn” with each other and strategists, magnifying the strategic knowledge.

## 6. CONCLUSIONS

The factorial analysis application brought a new factor that influences the Strategic Knowledge Management named “individuality”. The name was given due to the characteristics of the variables that formed the factor, all of them relating to individual perform and features like personal experience, status and personality.

Both novices and experts strategists and decision makers indicated the application of individuality features in the Strategic Knowledge Management. The only difference is that experts and strategic decision makers give more emphasis to “Leadership” in the strategic decisions than novices and strategists.

Thus, this study also presented Strategic Knowledge Management as an interdisciplinary field, considering that SKM involves variables of different areas, as indicated on Picture 1.



**Figure 1:** Strategic Knowledge Management Resume

This interdisciplinarity helps to understand how the factors of the Strategic Knowledge Management influence novices and experts when dealing with strategic formulation and decisions.

This study confirmed the common factors that influence the SKM (Miranda and Costa, 2005), and also revealed that individuality has an interesting role in the Strategic Knowledge Management process.

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