

## Personal Styles and Perceived Effectiveness in Decision-Making: A Comparative Study between Public and Private University in Brazil

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### ABSTRACT

This study looked for to distinguish between personal styles of decision makers and perceived effectiveness, in a public higher education institution and other private. This is an exploratory-descriptive research, whose analysis (multiple correspondence analysis) was applied with 60 respondents from these institutions. The results indicate that the answers denoting increased perception of effectiveness were found by the public institution, as well as, in this institution the decision-makers carefully consider the alternatives, often refer their subordinates and often provide feedback on the decisions taken.

**Keywords:** Decision-making styles, Higher education institutions

### I. INTRODUCTION

Decision making is one of the main functions of the management process, being essential in the daily work of managers. Moreover, it influences the performance and success of organizations being relevant for the survival, growth and profitability [1]. In this sense, the idea that organizations and individuals carry cognitive and motivational biases, to their decision making process is relevant. [2]. Also, another factor is related to the differences in the decision-making process: the public or private nature of the organization [3].

This research therefore seeks to identify distinctions perceived by decision makers at a public university and one private (both Brazilian), about their own styles and effectiveness of decision-making. The choice of this theme is justified as follows: (1) we must consider the social, economic and strategic relevance of higher education institutions [4]; (2) studies involving the styles of decision makers show is important because of the relationship between them and the organization's success [5] and; (3) the lack of research addressing the difference between the behavior of employees of public and private companies [6].

### II. THEORETICAL FRAMEWORK

In this section we will present the theoretical background regarding the theme discussed. There is no claim to exhaust the subjects addressed, but bring enough elements that can support the achievement of the research objectives.

#### 1.1 Decision-making styles

Every decision can be understood as a chronological process involving a few steps: (1)

initially, the decision maker establishes goals and objectives to be achieved; (2) identifies the problem; (3) develop alternatives or options; (4) evaluate, select and implement alternatives; (5) finally, the decision maker seeks to control and analyze the effects of selection held [7].

Is possible to notice, therefore, the importance of the individual in this process. In this sense, the decision-making style can be understood as the standard of usual response of a person when faced with a situation that requires your decision. [8]. In this line of thinking, several studies addressing decision-making in two ways: (1) normative, which highlights the presence of formality and rationality, and; (2) descriptive, based on bounded rationality, has more features related to the spontaneity and creativity of the decision maker [9]. Also based on the personal characteristics of the decision-makers, it is possible to find research dealing exclusively of individuals personality traits: individuals with higher Introversión tend to think and operate their ideas before externalize it; on the other hand, extroverts seek to discuss their ideas with others to clarify it; additionally, cognitive style of some makers can be marked by a rapid and orderly thought, while others are characterized by a more careful analytical process employing a more reflective approach [8]. Specifically, it is possible to distinguish patterns of personalities among decision makers: (1) intuitive and spontaneous people have some relation to each other, given the tendency of the intuitive style of quickly analyze your choices; on the other hand, spontaneous style can take advantage of the characteristics gathered by the intuitive style, that confer certain agility and simplification the decision-making; (2) another

approach occurs between dependent and elusive styles, in a way that the invasive agent can pass the responsibility of its decision to the advice sought by dependent style [10].

Other studies look for features that distinguish the decision makers about the personal styles built in a cultural context [11,12,13,14]. These research study features such as: the consideration of the opinions of peers and/or subordinates; form of enforcement of the decision; rationality (or emotionality) employed; propensity to risk; foreknowledge of the consequences; evaluation of alternatives; temporal guidance for the decision; participation in the own team selection and; feedback elements and review of the decisions.

Anyway, we cannot state that there is a consensus, even clearness, in the approaches used in various studies [10].

### 1.2 Higher education in Brazil

While it cannot take higher education in Brazil, as a theory in itself, it is important to be contextualized this phenomenon to allow a greater understanding subject.

Higher education in Brazil had its beginning during the monarchical period of incipient form, with the arrival of the Portuguese royal family to Brazil in 1808, in order to meet the demand for professionals originated at the time [15]. The first higher education institutions (HEI) were consolidated in the 30s of the twentieth century, highlighting the recent temporality of this type of institution in the Brazilian reality [16], however, having been noticed a visible expansion in quantitative and qualitative terms of these institutions [17].

Since 1995, Brazil experienced a pronounced increase in the number of private institutions, leaving a total of 684 private in 1995 to 2070 in 2014, whereas public, were 210 in 1995 and became 298 in 2014 [17]. As for issues related to the

performance of these institutions (measured by an index called General Index of Courses), the same source [17] mentions that in 2014, the 25 higher education institutions located in the range indicating better performance, fifteen were public institutions and ten were private.

In Brazil, HEIs are administratively classified according three criteria: (1) property; (2) origin of the funds and; (3) form of social control – market forces in the case of private organizations and greater susceptibility to governmental authority in the case of public organizations [18]. In this regard, while the public segment is more geared to meet specific demands and focused on a scientific view and search (hardly maintained with the payment of fees), the private sector has a community orientation (closest to the public sector) and another, aligned to business conduct [19].

### III. METHODOLOGICAL PROCEDURES

This is a survey on the border between descriptive and exploratory studies, whereas while describing the characteristics of a sample also search for patterns present in existing subliminal characteristics.

The questionnaire used as data collection instrument was based on [13,14] and deals with issues related to decision-making style, as shown in

Table 1:

Table 1 – Decision-making style

Question	Scale	Theoretical support
Considerations for oriented decision to the present or the future	1 to 5, where 1 is equivalent to short-term orientation and 5 long term.	[9,20]
Collective/individual decisions	1 to 5, where 1 is equivalent to the total individuality and 5, the total community.	[7,21]
Authoritarian/consultative style	1 to 5, where 1 is equivalent to the purely autocratic style and 5, purely democratic.	[10,22]
Making slow/fast decision	1 to 5 where 1 equals slow and 5, quick decisions.	[7,8]
Rational/emotional decision maker	1 to 5, where 1 equals purely rational decisions and 5, purely emotional.	[23,24]
Propensity to risk	1 to 5, where 1 corresponds to purely risky decisions 5, and purely secure.	[22,25]
Foreknowledge of the	1 to 5, where 1 means rarely and 5, always.	[7,20]

consequences of decisions		
Careful consideration of the alternatives	1 to 5, where 1 means rarely and 5, always.	[8,9]
Refers to the work team	1 to 5, where 1 means rarely and 5, always.	[7,8,26]
Consultation of the subordinates	1 to 5, where 1 means rarely and 5, always.	[7,8,27]
Occurrence of the decision feedback	1 to 5, where 1 means rarely and 5, always.	[28]
Reevaluation of the decisions	1 to 5, where 1 means rarely and 5, always.	[27,28]
Participation in team selection	1 to 5, where 1 means rarely and 5, always.	[29,30]

In addition to these questions, we asked the respondents, their perception of the effectiveness of its decisions, in which the response vary in a range of 1 to 10 where 1 represents no effective decisions and 10, totally effective. Also asked questions related to control variables, namely: age, time in the institution, time in the job, education and hierarchical level.

The sample, not probabilistic, intentional, was composed of employees of the two institutions, in strategic, tactical and operational levels, occupying positions of teachers, professionals from

the information technology and communication, administrative staff of the sectors of human resources and finance and coordinators and secretaries, resulting in 30 respondents in each institution. The questionnaire was submitted to the respondents in the period January-June 2015.

The data analysis was performed according to the methodological procedures presented in

Table 2:

**Table 2 – Analysis protocol**

Stage	Procedures	Purpose	Theoretical support
1	Descriptive statistics	Describe the data set	[31,32]
2	Contingency tables (X <sup>2</sup> ) and Kruskal-Wallis H test	Check for differences between groups	[33,34]
3	Cronbach's Alpha, eigenvalues and inertia	Determine the appropriate number of dimensions to represent the studied phenomenon	[35,36]
4	Discrimination measures	Identify the best represented groups	[35]
5	Joint plot of category points	View the distribution of the categories in a graph with the number of dimensions chosen	[35,37]
6	Correlations transformed variables	Determine the degree of association between the variables	[33]

Microsoft® Excel® 2013 and IBM® SPSS® Statistics 21 software's were employed to achieve the analysis activities.

#### IV. FINDINGS

The description of the personal characteristics of respondents revealed an average age of 39.35 years, observed standard deviation of 12.02, being the youngest, presented 21 years and the oldest 66 years. As for the time in the institution, the average value was 11.04 years, with a standard deviation of 10.15, including respondents with less than a full year, reaching up to 45 years. The professionals reported having an average of 19.07 years of profession, with standard deviation of 11.22, and the lowest observed profession time was three years and the highest, 47 years. As for education, 10.7% of decision-makers claimed to have high school, 42.6% graduation, 33.6%

specialization, 8.2% reported having master's degree and doctorate, 4.9%. As for the hierarchical level they occupy in the institution, 66.4% declared to belong to the operational level, 21.3% at the management level and 12.3% at the strategic level.

As for the variables related to decision-making styles, by a relatively small number of responses, we chose to classify them into three groups, with the first two values of the scales formed the first group (identified by corresponding meaning to the first scale value), the last two, the third group (identified by corresponding meaning to the last value in the scale) and the intermediate value, the second group. The same procedure was employed as the perceived effectiveness of the decision, so that the first third of the scale grouped as "low" effectiveness, the third "high" and the rest as

"intermediate". Thus, the Table 3 shows the frequency responses found:

**Table 3 – Decision styles frequencies**

Questions	Categories	Private (%)	Public (%)
Considerations for oriented decision to the present or the future	Short term	52.4	47.6
	Intermediate	58.2	41.8
	Long term	41.3	58.7
Collective/individual decisions	Individual	65.7	34.3
	Intermediate	60.0	40.0
	Collective	34.6	65.4
Authoritarian/consultative style	Authoritarian	66.7	33.3
	Intermediate	63.6	36.4
	Consultative	50.8	49.2
Making slow/fast decision	Slow	45.5	54.5
	Intermediate	50.0	50.0
	Fast	52.3	47.7
Rational/emotional decision maker	Rational	50.7	49.3
	Intermediate	51.7	48.3
	Emotional	50.0	50.0
Propensity to risk	Risky	25.0	75.0
	Intermediate	55.0	45.0
	Safe	51.0	49.0
Foreknowledge of the consequences of decisions	Rarely	78.6	21.4
	Intermediate	66.7	33.3
	Often	36.2	63.8
Careful consideration of the alternatives	Rarely	80.0	20.0
	Intermediate	78.6	21.4
	Often	38.1	61.9
Refers to the work team	Rarely	85.7	14.3
	Intermediate	83.3	16.7
	Often	44.7	55.3
Consultation of the subordinates	Rarely	54.5	45.5
	Intermediate	80.0	20.0
	Often	44.0	56.0
Occurrence of the decision feedback	Rarely	81.5	18.5
	Intermediate	63.0	37.0
	Often	33.8	66.2
Reevaluation of the decisions	Rarely	64.3	35.7
	Intermediate	62.5	37.5
	Often	45.2	54.8
Participation in team selection	Rarely	50.0	50.0
	Intermediate	46.7	53.3
	Often	53.8	46.2
Decision effectiveness	Low	58.2	41.8
	Intermediate	49.1	50.9
	High	28.6	71.4

There are no statistical differences between the control variables and the questions involving decision-making aspects. On the other hand these differences were found in some crossings of personal styles and decision effectiveness: careful consideration of alternatives ( $X^2(4) = 11,550$ , p-value < 0,021), consultation of the subordinates ( $X^2(4) = 14,690$ , p-value < 0,005) and feedback ( $X^2(4) = 13,650$ , p-value < 0,008).

With the existence of statistically significant differences between the groups proceeded to multiple correspondence analysis to identify the categories that are differentiated. The first procedure requires to evaluate the Cronbach's alphas, eigenvalues and inertias of the nine possible dimensions, in an attempt to highlight the minimum feasible number of representative dimensions of the

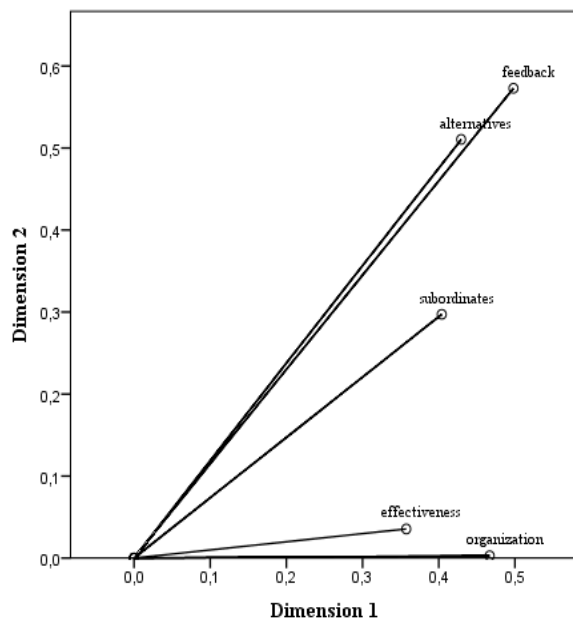
variables involved. The Table 4 shows the values obtained:

**Table 4 - Cronbach's alpha, eigenvalues and inertia**

Dimension	1	2	3	4	5	6	7	8	9
Cronbach's alpha	0,670	0,369	0,157	0,008	-0,169	-0,561	-0,600	-1,122	-1,244
Eigenvalues	2,156	1,419	1,144	1,007	0,881	0,690	0,676	0,527	0,501
Inertia	0,431	0,284	0,229	0,201	0,176	0,138	0,135	0,105	0,100

The reliability presented for the first dimension has acceptable value in studies of Social Sciences [36]. However, in order to provide a more comprehensive view of the found scenario, the study will employ a two-dimensional plane, since, when evaluating the eigenvalues, it appears that the first two dimensions representing 39.71% of all possible dimensions.

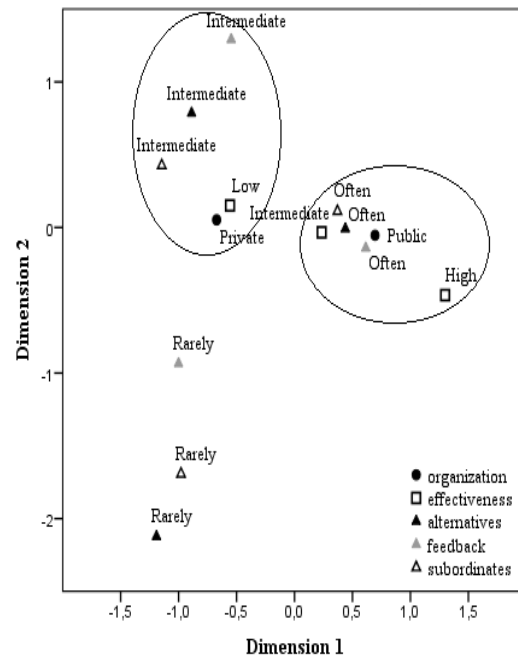
In two dimensions, the variables best represented by their discrimination measures are observed in the Figure 1:



**Figure 1 - Discrimination measures**

It is noted that the variables "effectiveness" and "organization" are the least representative in the Dimension 2. Moreover, "feedback" and "alternative" shows high ability to share their representations in two dimensions.

Thus, the quantified categories are distributed in a two-dimensional plane as shown in the Figure 2:



**Figure 2 - Joint plot of category points**

It is possible to notice the formation of two distinct groups. In one, the features related to the frequent consideration of alternatives, feedback decisions and consultation of the subordinates approach the respondents who identified themselves as being of public institution and in this case, there is also close to the high and intermediate perception of effectiveness in yours decisions. In the other group, there is proximity between the responses that indicate intermediate perceptions of the same elements associated with decision-making styles, and this group concentrates respondents of the private institution that also realize low effectiveness in decisions.

The strength of association between these groups can be verified, based on the analysis of Pearson correlation coefficients (r) shown in the Table 5:

**Table 5 - Correlations transformed variables**

	organization	alternatives	subordinates	feedback	effectiveness
organization	1.000	0.377	0.242	0.399	0.179
alternatives	0.377	1.000	0.229	0.264	0.281
subordinates	0.242	0.229	1.000	0.331	0.309
feedback	0.399	0.264	0.331	1.000	0.267
effectiveness	0.179	0.281	0.309	0.267	1.000

Although the Pearson correlation coefficients ( $r$ ) have not shown high values, the variation found between the frequency with which the alternatives are evaluated is able to explain 14.20% of the variation in the type of institution, so that answers indicate higher frequencies are more easily found in public institutions. Also the frequency with which feedback is given is able to explain 15.92% of the distinction between public and private institution. Finally, the variation in frequency of perceived effectiveness is responsible for explaining 7.87% of the variation in the frequency of the evaluation of alternatives, and 9.55% of the subordinate consultation.

## V. FINAL CONSIDERATIONS

As for the initial purpose of the research (to identify distinctions perceived by decision makers at a public university and one private, about their own styles and effectiveness of decision-making) it can be said that in the obtained sample, there are elements capable of distinguishing educational institutions (public and private) for the perceived effectiveness of the decisions as well as on some of the characteristics of their decision makers. It was noted that, in the public institution, decisions are perceived as being more effective; besides, their decision makers often carefully evaluate the alternatives, consult subordinates and provide the decision feedback. On the other hand, in the sample obtained in the private institution, the decisions are less effective, and the frequency with which evaluate alternatives, provide feedback and consult subordinates is lower than that found in public institution.

In any case, the results should be carefully evaluated: besides the fact that the sample was intentional and not probabilistic, the number of respondents does not allow the generalization of results. It should also be take into consideration that the effectiveness of the decision was obtained from the own perception of the decision maker – although they have not been identified during the data collection, we cannot rule that personal opinions on their own decisions, may vary circumstantially.

On the other hand, the results point to the need for further research. First of all, it is necessary to expand the number of respondents and the institutions participating in the research, in order to prove (or even reject) the results, de in such a way it is possible to categorically identify personal characteristics that can contribute to more effective decisions. In addition, future studies should consider elements such as the foundation time of the institutions – it is possible that more mature organizations have different behaviors in their decision-makers.

Either way, the results can contribute to studies related to Decision Theory, since rescues elements used in previous research [11,12,13,14] linking them to the very effectiveness of the decision. The results also show an organizational contribution, since the evidence may come to be used in the establishment of the patterns among decision makers in order to provide input on the effectiveness of their decisions.

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