

THE INFLUENCE OF STUDY LENGTH ON RESOLUTION ABILITY OF STUDENTS OF MANAGEMENT

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Abstract

Length of study influences the quality and level of education among students of management. Therefore the aim of the survey was to establish a direct correlation between length of study and number of resolution levels of significance of the variables. For the research the group of students from different Slovak Universities was chosen. The group included the students of management from the University of Žilina (the fifth year of the study), Catholic University in Ružomberok (the first year of the study) and students from Matej Bel University in Banská Bystrica - the first year of the study.

Key words: power distance, resolution ability, level of significance, variables of significance.

Introduction

To determine the influence of study length on the resolution ability of management students was used Hofstede theory of regional culture. Geert Hofstede, who is considered the “father of modern cross-cultural research”, says that “...nation and also regional culture are for management very important” (Hofstede 1996: 244). Even on the basis of these opinions it can be concluded that they confirm culture as a collective programming of the mind which distinguishes members of one group from another group and it is essential to realize that the importance of the human factor for the successful operation of the company in a difficult market environment is particularly important (Hittmár 2011: 129). Another opinion is offered by Droppa, who states that when analyzing the success of various management strategies, production, sales and return of investments it is confirmed that they depend on those who manage these processes (Droppa 2010: 6).

Hofstede points out, that national and regional cultures differ in 5 basic dimensions. The first dimension reflects the ways in which a given culture perceives inequality, respectively the extent to which inequality is accepted as a natural part of social hierarchy. This dimension is called a power distance. The degree of integration of the individual to

the group is a dimension named as individualism and collectivism. Different perceptions of the social roles of men and women called masculinity and femininity. The tolerance for new and unknown is the fourth dimension, which is called uncertainty avoidance. Willingness to satisfy own needs from different time perspectives is a fifth dimension called long-term and short-term orientation.

To evaluate this problem we used dimensions of culture by Hofstede: Power Distance, Individualism and Collectivism, Masculinity and Femininity, Certainty and Uncertainty and Time orientation (Hofstede 2003: 17).

1. Material and methods

In the context of above was conducted the research at the research sample of 120 management students of selected universities in the Slovak Republic: University of Prešov in Prešov – 1st. year of the study, The Catholic University of Ružomberk – 1st. year of the study and Matej Bel University in Banská Bystrica- 5 th. year of the study.

The main goal of research was to ascertain how the study length influence the resolution ability of students.

Hypothesis

If the study period is longer, than students' education level is higher, which is reflected in the fact that they numerically differentiate more levels of variables importance.

Methods

For research was used the theory of G. Hofstede's national culture, which is reflected in five dimensions - power distance, Individualisms and Collectivism, Masculinity and Femininity, Certainty and Uncertainty and Time orientation. For each dimension were defined 12 variables (after consultation with practitioners). Based on assigned values by respondents (scale of 1-12, 1 - the lowest significance) to the twelve selected variables for each dimension of national culture, arithmetic average was calculated for each variable. By the Student t-test (for the probability = 0.95) were compared the differences between the arithmetic averages of pairs of the individual variables (listed from the maximum to the minimum value) - see (1) to (7). For the resolution ability of the respondents it was determined the reference value of the various levels of significance equal to the value 2 (depending on the number of respondents - Student's t-test).

Variable dimensions of national culture

In this article are specifically presented results of Power Distance dimension and results of other dimensions of culture are calculated analogously.

For research purposes for each dimension of culture - in consultation with experts in the field - were selected following variables "Power distance":

1. *Power distance*

X1 - distance from the employees; X2 - decisions consultation with subordinates; X3 - duty to make decisions; X4 - acceptance of participation the other team members

in decision-making; X5 - significant wage differentiation within the organization; X6 - privileges and symbols include the performance of the managerial functions; X7 - acceptance of dissenting opinions of the subordinates; X8 - mutual trust among employees is normal; X9 - adaptation to the interests of the team; X10 - hierarchy of the organization reflects the true existential and social inequality; X11- informal influence on the others; X12 - willingness to listen to the employees at the deficit of your time.

From a methodological point of view was observed value the significance of individual variables. To ensure a high validity of the results was elected Student's paired t-test comparison variables (Riečan et al.1992: 302).

Based on respondents assigned values (scale of 1-12, 1 – lowest importance) of twelve selected variables was calculated arithmetic average for each variable. Student's t-test was used to compare the difference between arithmetic average of pairs of the investigated variables (ranked by maximum for a minimum value), see (1), (2), (3), (4), (5), (6) and (7).

The difference between the variables:

$$d = \sum_{i=1}^n d_i \quad (1)$$

The squared difference:

$$d^2 = \sum_{i=1}^n d_i^2 \quad (2)$$

Average difference:

$$\bar{d} = \frac{1}{n} \sum_{i=1}^n d_i \quad (3)$$

The average value of the second squared differences:

$$d^2 = \frac{1}{n} \sum_{i=1}^n d_i^2 \quad (4)$$

Dispersion of differences:

$$\sigma^2 = \overline{d_i^2} - \bar{d}^2 \quad (5)$$

Unbiased estimate of the standard deviation:

$$s^2 = \frac{n\sigma^2}{n-1} \quad (6)$$

The test value:

$$t = \frac{\bar{d}\sqrt{n}}{s} \quad (7)$$

2. Results

Calculated models are made up of different levels of significance, which contain a different number of variables e.g. in the dimension of „power distance“ (Table 1) at the Catholic University of the model consists of four levels of significance - the first level contains the variable X_3 , the second level contains the variable X_2 , X_{12} , X_9 , X_4 and X_7 , the third level contains the variables X_5 , X_6 and X_{10} , the fourth level contains variables X_1 , X_{11} and X_8 , the University of Žilina this model consists of four levels of significance - the first level contains the variables X_4 and X_3 , the second level contains variables X_{12} , X_7 , X_2 , X_9 and X_8 , the third level contains the variables X_{10} , X_{11} , X_6 and X_5 , fourth level contains the variable X_1 at the University of Matej Bel, this model consists of five levels of significance - the first level contains the variables X_3 and X_{12} , the second level contains the variable X_9 , X_2 and X_7 , the third level contains the variables X_9 , X_6 , X_5 , X_{11} and X_{10} ; fourth level contains the variable X_1 the fifth level contains X_8 .

Analogical was ascertain structures of models of regional culture - the “Individualism and-Collectivism”, “Masculinity and Femininity”, “Certainty and Uncertainty “ and “Time orientation”.

Table 1. Models of variables cultural dimensions of “Power distance”

Catholic University in Ružomberok			University of Žilina			University of Matej Bel in Banská Bystrica		
Variable / Arithmetic average	Compared variables / Value of test	Significance of variables	Variable / Arithmetic average	Compared variables / Value of test	Significance of variables	Variable / Arithmetic average	Compared variables / Value of test	Significance of variables
X_3 9.18	$X_3 - X_2$ 2.28	1. LS	X_4 9.26	$X_4 - X_3$ 1.00	1. LS	X_3 8.92	$X_3 - X_{12}$ 1.41	1. LS
X_2 7.86	$X_2 - X_7$ 1.79	2. LS	X_3 8.90	$X_4 - X_{12}$ 3.14		X_{12} 8.00	$X_3 - X_4$ 2.40	
X_{12} 7.84	$X_2 - X_5$ 2.52		X_{12} 7.42	$X_{12} - X_8$ 1.42	2. LS	X_4 7.66	$X_4 - X_9$ 2.06	2. LS
X_9 7.76			X_7 7.36	$X_{12} - X_{10}$ 2.97		X_2 7.52		
X_4 7.12			X_2 6.88			X_7 7.52		
X_7 6.71			X_9 6.84			$X_9 - X_{10}$ 6.58	$X_9 - X_{10}$ 2.06	fff 3.LS
X_5 6.16	$X_5 - X_{10}$ 1.00	3. LS	X_8 6.46		3. LS	X_6 6.30	$X_9 - X_1$ 3.05	
X_6 5.69	$X_5 - X_1$ 2.50		X_{10} 5.34			X_5 6.10		
X_{10} 5.57			X_{11} 5.24	$X_{10} - X_1$ 3.72		X_{11} 5.68		
X_1 4.73	$X_1 - X_8$ 0.84	4. LS	X_6 5.06		4. LS	X_{10} 5.26	$X_1 - X_8$ 2.47	4. LS
X_{11} 4.47			X_5 4.88			X_1 4.76		
X_8 4.27			X_1 3.06			X_8 3.56		5. LS

Source: own elaboration.

Note: LS – level of significance;

Table 2. Number of levels and the number of variables depending on dimensions of regional culture

University	The number of occurrences/Number of occurrences of variables at each level				
	Power distance	Individualism and collectivism	Masculinity and femininity	Certainty and uncertainty	Time orientation
University of Žilina in Žilina	4 / 2, 5, 4, 1	3 / 4, 4, 4	4 / 4, 4, 3, 1	5 / 4, 2, 4, 1, 1	3 / 5, 5, 2
Catholic university in Ružomberok	4 / 1, 5, 3, 3	3 / 6, 5, 1	2 / 7, 5	3 / 5, 3, 4	2 / 7, 5
University of Matej Bel in Banská Bystrica	5 / 2, 3, 5, 1, 1	3 / 3, 5, 4	3 / 5, 4, 3	4 / 5, 4, 1, 2	4 / 2, 5, 4, 1

Table 3. Number of occurrences of variables at one level of importance depending on the dimensions of regional culture

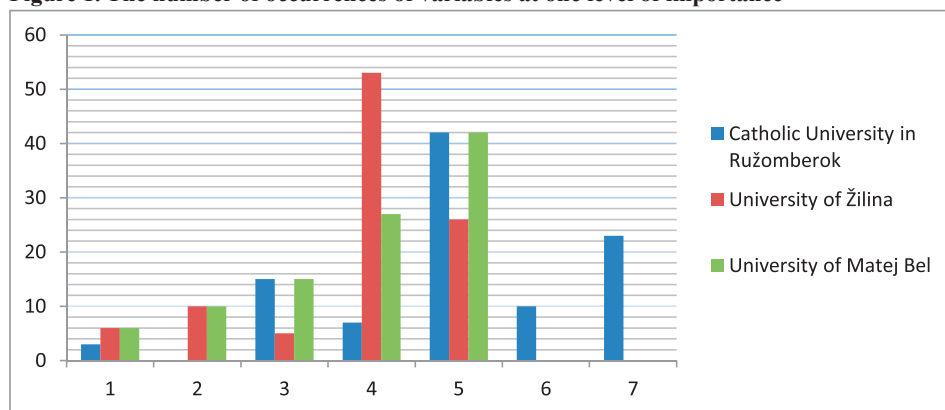
University – year of study	The number of occurrences of variables at one level of significance (all 5 dimensions)														Note
	1	%	2	%	3	%	4	%	5	%	6	%	7	%	
University of Žilina – 5. year of the study	4	6	3	10	1	5	8	53	3	26	0	0	0	0	1 variable = 1,67 %. Eg: University of Žilina - 4 times 1 variable is on 1 level of significance by calculation 1,67 %x4=6%
Catholic university in Ružomberok – 1. year of the study	2	3	0	0	3	15	1	7	5	42	1	10	2	23	
University of Matej Bela in Banská Bystrica – 1. year of the study	4	6	3	10	3	15	4	27	5	42	0	0	0	0	

Note:

1 -Ideal area -1 and 2 variables at one level of significance.

2 – Required area - 3 and 4 variables at one level of significance.

3 – Undesirable area -5, 6 and 7 variables at one level of significance.

Figure 1. The number of occurrences of variables at one level of importance

Table 4. Evaluation of the quality of distinctive ability of students of management

University – year of study	Ideal area (%) – (each % = 10 points)	Required area (%) – (each % = 5 points)	Undesirable area (%) – (each % = 3 points)	Ranking of the Universities
Catholic University in Ružomberok – 1. year of the study	3	22	75	3. (365 points)
University of Matej Bela in Banská Bystrica – 1. year of the study	16	42	42	2. (496 points)
University of Žilina in Žilina – 5. year of the study	16	58	26	1. (528 points)

Ranking of the Universities is calculated as the sum of the percentage of variables in each area, multiplied by the assigned point values. Based on the results obtained (Tables 2-3, Figure 1 and Table 4), we can say that in terms of the level of resolution the best scores were achieved by the students of the University of Žilina. In turn, the worst results were achieved by the students of the Catholic University.

Based on the results it can be stated that the length of study in direct proportion affects the quality of the study. This claim is based on the data presented in Tables 2-3 and Figure 1. The most successful are students of University of Žilina, who reached 528 points. In turn, the students of the Catholic University reached 365 points and students of University of Matej Bela - 496 points. Decisive is not the number of levels of significance, but the number of variables located in ideal area and the required area.

3. Discussion

Based on the results achieved it can be stated that the investigated hypothesis was confirmed. Length of study corresponds proportionately to the higher quality (higher frequency) of students' resolution ability. It can be concluded that it is reasonable to include this important issue for management students' practice into several semesters and to achieve the assumption of higher quality of its comprehension and its strengthen for execution of the managerial positions.

Conclusions

In terms of the future development of the market (its character affects the required capabilities of the managers) it will be important to define its character. On this basis, it is necessary to determine the abilities of the students. These capabilities are necessary to implement into the study documentation with the necessary time subsidy. In this way, one may create conditions for their successful implementation.

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