Structure of Students Hierarchical Management Potential

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Abstract

The purpose of this study was to determine management potential of students. In this case the students are future, not only professionals, but managers as well, both within their professional domains and wider in the society. Social relations are established on the basis of relations between individuals in compliance with their goals and interests. Therefore, the initial survey collected the indicators that showed the degree of individual management potential. After that these indicators were placed in relations, which, after factor analysis, resulted in obtaining the final set of management mechanisms. Four mechanisms were recorded, i.e. four global modes of student's actions within the area of resource management and identified as: leadership, management, opportunism and delegation. Organizing companies, schools, governing bodies, corporations, etc., in order to achieve efficiency is inevitably followed by some general patterns of structuring and management. It is obvious that the results of this study can significantly improve many aspects of planning, design and implementation of organizational models. Recognition of mechanisms isolated in this study provides us with the option to timely select appropriate experts as regards their positioning in the right jobs and tasks, which is a valuable find as far as sociology is concerned. The existence of latent mechanisms of management potential in students was experimentally proven precisely because of the relevance of the fact that they are the most immediate future managers. The research was carried out in 10 different areas of three states with students from different faculties; however, the research results should be checked after the 10-year period in order to identify any changes caused by the general social processes that will eventually follow.

Keywords: Students; Management resources; Factors

Introduction

One of the fundamental characteristics of human beings is precisely the one which describes them as "social beings". In the extremely abstract view, a man can apparently live solely as an independent individual, alone, without others, because first of all one must exist as a separate and a complete self-contained being in order to be able to interact with one another and contribute to this relationship. In reality, a man is always a part of a group or multiple groups, possibly because of the way he is, he necessarily interacts with his own kind [1,2]. Such interactions create permanent or virtual groups of a lesser or greater dimensionality, depending on the permanent or current objectives, activities and perceptions. In this sense as well students are very specific. Their most important characteristic is that they are – future managers, a generation that will govern our states, cities, schools, kindergartens, factories, banks, sports clubs, etc. Literally, "the world relies on them". Who are they? Obviously they are no longer children and have formed their opinions. However, they are not yet fully grown up, because they are still intensively and actively learning and discovering, which means that their knowledge can nevertheless be influenced in some way.

Students can be directed in appropriate directions in order to take up their place in the social structure in the most proper way for themselves and for the society in question, which directly depends on their capabilities [3] and can be particularly important in private sector [4]. The fact that the management will change and evolve is not negligible [5]. In this respect we are particularly interested in management, so that it is of vital importance to be acquainted with the latent structure of students' position in terms of management resources within the area of social attributes [6]. The first attributes that should be analyzed are the attributes of resource management so that we would be able to say whether there is a stable set of features of the management potential of students. Only if such a set exists and only if it is stable, it is possible to explore mutual potential relations between social attributes.

The problem of this research was the absence of perceptions regarding the position of students in relation to leadership potential.

The objective of the study was to identify the basic structure of management resources, i.e. to identify which distinctive management mechanisms actually exist in the population of students.

Methods

Namely, it is reasonable to assume that upon completion of their education, most students will take part in professional activities that are within their professional scope, and within a few years of initial employment they will surely start to make decisions in their occupational domain. In this way, it can be claimed that they will be the ones that will perform managerial functions in the society (companies, schools, governing bodies, expert committees, politics, universities). The best time to explore any potential leadership potential of students is precisely when they decide to pursue higher education. The sample in this study was comprised of the students of 19 to 26 years of age who already had an established system of values and who will upgrade and shape their value systems by gaining higher education as their last educational activity system.

To determine the position of sociological attributes of the analyzed population, the primary collection of data was performed in 10 university environments of Croatia, Bosnia and Herzegovina, and Serbia (predominantly to overcome language differences, although the survey was translated and prepared for areas in which other language

were spoken). For this research we used a questionnaire, which contained 138 indicators and validated by Bonacin [7]. The questionar was applied on the students of Kinesiology, Graphic Arts, Science, Education Faculty, Faculty of Economics, College of Management and Design. The total of respondents in the project amounted to 2700 with more than 200 indicators. The sample for this analysis totaled 408 respondents selected by a pseudo-random key from the basic in such a way as to select up to 60 entities in compliance with the totally polled number from each environment.

The value of each question to which students were answering was estimated by five-point Likert scale, where the highest grade 5 students have awarded to the activities that they like best, and 1 that was in their opinion for getting the worst score. The questionnaire was conducted with students during regular hours during the second semester. The instrument consisted of 138 indicators divided into the following blocks: 39 indicators of sociological stratification, 30 potential indicators of control, 15 indicators of cultural dimensions, 12 indicators of political dimensions, 12 indicators of economic dimensions, 12 indicators of motivational dimensions and 18 indicators of utilization of resources. Students were informed that their participation in the research was voluntary and that the questionnaire is anonymous.

Since this is a wide-raging project aimed at assessing the situation and the purpose of identifying the inherent general management principles in students, the intentional sample was not stratified by any means. Indicators were applied which, according to a classical model, cover three basic levels of management (operational, tactical and strategic), but which are also functionally allocated, in accordance with the results of the research conducted by Rađo, Bonacin, Bonacin, Bilic, Manic [8], to individual functions in management structure (a complete list of indicators can be found in Table 1).

Statistical analysis

The statistical Package for Social Studies SPSS (v17.0., SPSS Inc., Chicago, IL) was used for statistical analysis. As for data processing, normalization of data was done using 30 primary indicators which were assessed by a 5-point Likert scale. Upon normalization of each indicator by categories the value of cases was defined, so that the discrete and qualitative values served to produce continuous values [9]. Correlations of indicators were then calculated followed by spectral correlation matrix decomposition. The initial component solution, obtained by the Guttman-Kaiser's criterion, and done in order to obtain the parsimony structure was rotated into the orthogonal Varimax and finally oblique Orthoblique position [8]. Effective exchange rate of the sample allows us to conclude that each correlation or projection on latent mechanisms higher than 0.0971 was considered to be significant at p = 0.05, and each loading higher than 0.1271 was considered significant at p = 0.01.

Results

The results showed consistency of indicators contributing to the common area, because communality indicators ranged from 0.60 - 0.75 and the total amount of common variance was 62%. Four latent mechanisms were obtained, which made it obvious that the structuring of higher-order mechanisms was executed in an extremely simple way since the set of dimensions was extremely simple for interpretation. Therefore, as for the results of factor analysis regarding hierarchical resource management, the existence of four latent mechanisms was identified, i.e. four factors responsible for the variations of the initial indicators. The first factor was described by variables as follows: each

organization has to include a real leader (0.85); true managers transfer their visions and missions to their subordinates (0.74); when making important decisions it is always necessary to consult the first assistant (0.86); a potential leader must be ready to jump in and lead the employees at all times (0.90); business results depend directly on good management of key segments (0.75); it is very important to coordinate the human resources and certain organizational blocks (0.59); highly ranked people "behind the scene" often recognize good solutions better (0.29); competent advising by top-managers is very important (0.57); sometimes it is very important to appoint a temporary project manager (0.61); parts of the organizational structure require strong mutual linking (0.76); management processes require constant monitoring (0.85); direct control of certain organizational segments is inevitable (0.64). A very high negative screening indicator was evident – if an individual is satisfied in an organization, then everyone is satisfied (-0.83). The second factor was described by the variables as follows: seizing opportunities is almost always justified and necessary (0.73); the benefit of an organization must always be of paramount importance (0.59); a large share of individual actions for one's own benefit is justified (0.92); if an individual is satisfied in an organization, then everyone is satisfied (0.84). A mechanism described in this way represents opportunism.

The third factor was described by the variables as follows: certain actions should be completely independent of the goals of the organization (0.69) and the existence of individuals who are completely outside the system of organization is necessary (0.72). Some other indicators can also be found here, e.g. a good deal of human resources must be available for the manager if necessary (0.51); a greater number of jobs does not require too much influence in decision-making (0.85); it is good that not more jobs require complex competencies (0.79). A mechanism described in this way represents leadership.

The fourth factor was described as follows: parts of less important tasks should be assigned to less influential people (0.89); every good organization is based on good bosses (0.75) and management of small segments of work should be assigned to good workers (0.65). A mechanism thus described represents delegation.

The results of the analysis have shown that the factor of leadership had a mild bipolar distribution, striving more towards positive values, which means that the pattern was polarized in terms of a leader or not a leader. Other factors were normally distributed. Positive factor correlations, as well as moderate and uniform values indicate that the analyzed space was homogeneous. The factor of leader-management correlated with the factors of opportunism (0.63), leadership (0.58) and delegation (0.67), and the factor of opportunism correlated with the factors of management (0.63), leadership (0.60) and delegation (0.60). Further, the factor of leadership correlated with the factors of management (0.58), opportunism (0.60) and delegation (0.55), and the factor of delegation correlated with the factors of management (0.67), opportunism (0.60) and leadership (0.55).

Discussion

The results of this study primarily showed the existence of a stable set of management tendency of the population investigated. It is also apparent that this tendency may be placed into a relatively small number of higher-order mechanisms upon which the manifestations in the visible domain depend. These mechanisms are considerably interrelated, i.e. they form a coherent set of latent features that certainly lead to an integrated management complex in the society. Identification of mechanisms was simple and it is evident that some management

Indicators	OBQ1	OBQ2	OBQ3	OBQ4
Each organization has to include a real leader.	**0.85**	0.02	-0.02	-0.05
True managers transfer their visions and missions to their subordinates.	**0.74**	0.07	0.00	-0.02
In important decisions it is always necessary to consult the first assistant.	**0.86**	-0.15	0.06	0.07
A potential leader must be ready to jump in and lead the people at all times.	**0.90**	-0.06	0.00	0.05
Business results depend directly on good management of key segments.	**0.75**	0.03	0.00	0.11
It is very important to coordinate the human resources and certain organizational blocks.	**0.59**	0.15	0.01	0.12
Highly ranked people "behind the scene" often recognize good solutions better.	**0.29**	0.25	0.11	0.12
Competent advising by top-managers is a very important role.	**0.57**	0.22	-0.16	0.14
It is very important to appoint a temporary project manager.	**0.61**	0.22	-0.02	0.01
Parts of the organizational structure require strong mutual linking.	**0.76**	0.18	0.00	-0.09
Management processes require constant monitoring.	**0.85**	0.14	-0.06	-0.12
Direct control of certain organizational segments is inevitable.	**0.64**	0.39	-0.21	-0.07
Seizing opportunities is justified and necessary.	0.25	**0.73**	-0.02	-0.18
The benefit of the organization must always be of paramount importance.	0.48	**0.59**	-0.12	-0.14
A large share of individual actions for one's own benefit is justified.	-0.36	**0.92**	0.10	0.04
If an individual is satisfied in an organization, then everyone is satisfied.	**-0.83**	**0.84**	0.06	0.31
In the management process trustworthy people are very important.	**0.83**	-0.02	0.02	0.05
Reliable associates are the key people to assist in the management of decision-making.	**0.75**	-0.05	-0.01	0.18
Parts of less important tasks should be assigned to less influential people.	-0.37	-0.02	0.11	**0.89**
Diligent associates often provide value to the organization with their work.	**0.62**	-0.14	0.03	0.36
Each good organization is based on good bosses.	0.12	-0.02	-0.10	**0.75**
Management of small segments of work should be assigned to good workers.	0.15	0.07	-0.07	**0.65**
Without people who transfer tasks properly, business is impossible.	**0.55**	0.00	0.03	0.29
Without the right selection of information, specific tasks cannot be accomplished.	**0.70**	0.00	0.17	0.02
Certain actions should be completely independent of the goals of the organization.	0.07	-0.14	**0.69**	0.18
The existence of individuals who are completely outside the system of organization is necessary.	0.20	-0.16	**0.72**	-0.03
It is good to have people in the organization who can deal with a number of different operational tasks.	**0.71**	-0.10	0.39	-0.10
Human resources must be available for the manager if necessary.	0.46	0.09	**0.51**	-0.21
A greater number of jobs does not require too much influence in decision-making.	-0.22	0.21	**0.85**	-0.11
It is good that not more jobs require complex competencies	-0.32	0.11	**0.79**	0.09
	OBQ1	OBQ2	OBQ3	OBQ4
OBQ1	1.00	0.63	0.58	0.67
OBQ2		1.00	0.60	0.60
OBQ3			1.00	0.55
OBQ4				1.00

Table 1: Oblique position of Orthoblique students' management potential set of indicators.

features have appeared that are also frequently referenced in literature. For example, the first factor (management) was comprised of by far the largest number of indicators and it described the mechanism of interactive actions for the largest number of properties that are expected in management.

All indicators were mostly uniform projections and all except one were positive. The existence of leaders in organizations was emphasized, as well as their willingness to jump in and guide people, the importance of the possible assistant's alternative opinion, constant supervision, trustworthy people, etc. Although different opinions can sometimes be found in literature and the role of a manager and of a leader can sometimes be equated, this description of the first factor shows the possible denotation of the generic phrase characteristics of a natural, born leader.

The third factor clearly showed that this is true in that it described a largely technological view of management with features such as procedures independent of the goals of the organization, the existence of individuals outside the system, monitoring of operational activities, availability of human resources, the level of decision-making and levels of competence. This certainly describes the concept of continuous and competent implementation of managerial tasks of the highest level in order to regulate the organizational structure. These and similar jobs require a complex high education and an appropriate degree of independence in decision-making. These are, undoubtedly, the competencies that can be learned so that they could be described by the syntagma highly trained leaders. Clearly, in compliance with what was said previously, this mechanism contains some divergence regarding the mechanism described by the first factor because the specificities are reflected across the whole series of indicators, and to some extent,

such systems partially polarize leadership from management. This is especially true as regards the overall structure of the mechanism that relies on human values such as trust, which means that managers have a completely different way of acting than the leaders and that this acting is probably the most evident in critical situations or in decision-making which are of vital importance. Such situations are rare and are generally linked to the global status-related issues [10-13].

At the same time, the leaders, i.e. their acting, described by the mechanism implied by the third factor, requires constant activity, analyses, benchmarking, or comparisons. Their actions are top-level activities aimed at preserving the effectiveness of a certain organization, so that it is realistic to expect that such performance, although strategically defined, will in its most important elements include the pragmatic picture of the situation that will be realized in a long-run [14,15]. The best operation mode was probably set by the interaction of these two actions/activities also demonstrated by factor correlations.

As presented, these mechanisms really exist in student population, and it is only natural that the students express these global values. But, it is also inevitable that some of them, according to the described activities, will aspire to one of these two mechanisms of behavior. This means that the identification of potential managers and leaders in this population is possible and even desirable in order to be expressed in the best possible way later in the actual business conditions and labor [16,17].

The second factor was defined by the indicators that suggested that these actions did not have any pronounced tendencies of the highest governance dimensions, but were obviously directed towards limited objectives aimed at gaining personal benefits in accordance with possible opportunities. This also means that such acting does not aim to continuously create the conditions for the realization of the individual or the system achievements, but that it is usually a form of supporting system activities and of searching for self-promotion in situations that allow such promotion.

The degree of interest in active participation in some organization is usually directly proportional to the level that is reached and the total knowledge required for such an achievement. In the case of the mechanism described in the second factor, there is a large share of stochastic effects on the achievement of realistic goals and they often result either in natural absence of their achievement or too large a share of their achievement depends on unknown events. In any case, this mechanism should be kept in mind because by taking into account and by quality formatting of active processes (in companies, schools, businesses, administrative bodies, etc.) large effects and results can be accomplished that partly rely on this type of activity if put under control. Vice versa is also possible, i.e. if there are enough people with such pronounced tendencies, the structure of this organization will certainly be inert and will not have enough "courageous" attempts that may enhance the total effect. A characteristic of such a system becomes a permanent attribute and vertical conflicts in the implementation of the alternative solutions generated "from the top" are emphasized.

Finally, the fourth factor describes the mechanism which most directly qualifies the lower structures in the hierarchy of decision-making for an extremely important segment of the distribution of duties, rights, power, etc. which organizational structure managers and leaders are usually responsible for, according to the definition of duty allocation. As already mentioned, the perception that the described

mechanisms consistently exist in a population of students is important, because in a few years, after they have completed their education [18-20].

Conclusion

In this study the hierarchically structured leadership potential of students was analysed. It was defined as a potential since students, as a population, have not yet completed their formal education, and are therefore not in a position to implement the possibly existing managerial skills that are currently in the position of the tendency. It is not improbable that many of them are not entirely aware that they possess such skills. A structured survey consisting of 30 targeted questions that were assessed by the respondents on a Likert scale was conducted on a total of 408 students from different countries (Croatia, Bosnia and Herzegovina, Serbia). The final results were correlated and translated into the Orthoblique factor position in order to determine the existing mechanisms.

The importance of the research is reflected in the fact that the students who participated in this study will, within the next few years, take roles in the decision-making process in their home communities, which means that what is now treated as their managerial potential will become their permanent repertoire of behavior to the fullest extent. At the same time the research made it possible to regard the possible forms of the potential structure: management, opportunism, leadership and delegation. Through these four mechanisms of action, which are in solid and consistent correlation, clear modalities of future activities of students in the governance structure could be identified.

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