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STRUCTURE OF ORGANIZATIONAL EFFICIENCY OF STATE VOCATIONAL SPORT FEDERATIONS IN BOSNIA AND HERZEGOVINA

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Original research:

Abstract

The aim of this paper is to determine structure of factors of organizational efficiency in state vocational federations and to evaluate structure of components of belonging variables for analyzing factors of sport organizational efficiency of state vocational sport federations of B&H. Sample subjects were 36 state sport vocational federations, which are members of Olympic committee of B&H, and 36 representatives of administrative expert bodies of those federations, vocational federations. Sample is made of 8 components and 60 variables, in total. Criteria variables for evaluation of sport organization efficiency are modified according to Hossein Eydi (2013), 8 components: Flexibility, Resources, Planning, Productivity, Information Accessibility, Stability, Cohesive/Joined Work Force, Vocational work force. Research Data are collected by a survey. Normality of distribution of data is tested by Kolmogorov/ Smirnov test, while reliability of measure scale of researched variables is evaluated by Cronbach alpha coefficient. Keiser-Mayer-Olkin and Bartlett test of sphericity confirmed marginal level of benefits of correlation of matrix for conducting factor analysis. Factor analysis, method of main components and Varimax rotation led to the number of structure factor, which determined level of organizational efficiency of state sport vocational federations. Gutman-Kaiser criterion was used for selection number of main components. Keiser-Guttman criterion obtained 86,91% of common variance, which can be explained by 11 isolated factors, (table 1) of samples of sport organizational and vocational sport federations of B&H, respectively. Individual contribution in explaining common variance after Varimax rotation for the first component was 21,70%, *F1 Management of processes with compliance of strategic and organizational goals and plans*, for the second 13,35%, *F2 Quality of intern and extern communication*, for the third 9,08%, *F3 Financial management in sport organizations*, for the fourth 8,34%, *F4 Efficiency in performance of decisions made in sport organizations*, for the fifth 7,12%, *F5 Factor of rewarding*, for the sixth 5,81% *F6 Competences and efficiency of management*, for the seventh 5,60%, *F7 Increase of work force*, for the eighth 5,47%, *F8 Efficiency of attracting the audience*, for the ninth 4,18%, *F9 Factor of sponsorship*, for the tenth 3,97%, *F10 Adequacy of sport facilities* and the eleventh 2,24% *F11 Adequacy of compensation and rewarding system for coaches*. Organizational efficiency is maybe the most critical dependent variable in all organizational analysis and almost all organization theories include the term efficiency. Organizational efficiency is multidimensional construct; therefore, it is impossible to disregard factors of management. They are expressed differently, depending on direction of the research. Therefore, it is necessary to analyze those points, in order to ensure efficient usage of human resources, through development of strategic activities for issues regarding management of human resources.

Key words: organization, sport federation, efficiency, factors, latent structure.

Introduction

Organizational efficiency is maybe the most critical dependent variable in all organizational analysis and almost all organization theories include the term efficiency. Despite its significance, construct escaped from clear definition and/or description. Instead, it became one of the most complex and controversial issues of management (Chelladurai, 1987). Organizational efficiency is broad concept. It implies series of variables on different organizational levels.

According to theory: Understanding organizational efficiency includes understanding more models. Since no model is universally applicable, understanding relative participation of several models and how these models are interconnected, is the only way to understand this construction. Concept of efficiency is very important for understanding organization (Chelladurai & Haggerty, 1991). However, organizational efficiency is a complex and controversial

term, difficult for conceptualization (Chelladurai, 1987). It seems there is no universal answer to what organizational efficiency exactly means, because organizational efficiency means different things for different people. Although there is no defined meaning of organizational efficiency, most authors agree that organizational efficiency includes measurement of more criteria and evaluation of different organizational functions, using different features. Also, means (processes) and goals (outcomes) need to be taken into consideration. Different models and theoretic approaches are developed for its evaluation. Herman & Renz (1997) stated that there are as many models of efficiency as models of organizations. Different models connected to criteria maintain different values and priorities of schools and their opinions regarding efficiency (Walton & Dawson, 2001). Therefore, the aim of this paper is to determine structure of factors of organizational efficiency in state vocational sport organizations and evaluation of the structure of components of belonging variables for analyzing factors of sport organization efficiency of state vocational sport federations of B&H.

Methodology

Sample subjects and variables

Sample subjects of this paper were 36 state vocational federations, which are members of Olympic committee of B&H and 36 representatives of administrative expert bodies of those federations.

Set of variables is presented by variables of sport organization efficiency of state vocational federations. It is composed of 8 components with 60 variables, in total. Criterion variables for evaluation of sport organization efficiency, are modified according to Hossein Eydi (2013) 8n components: Flexibility, Resources, Planning, Productivity, Information Accessibility, Stability, Cohesive/Joined Work Force, Expert work force.

Methods of Data Collecting

Data used in this research are collected by a survey. The survey is created of set of variables-information about:

- organizational efficiency of state vocational federations (survey according to Hossein Eydi (2013))

Methods of Data Processing

Normality of distribution of all variables is tested by Kolmogorov-Smirnov test and determination of reliability of measured scales of researched variables by alpha Cronbach test.

Latent structure of set of variables of organizational efficiency is determined by Factor analysis., method of extraction of main components and their rotation by Varimax solution.

Results

Latent structure of set of variables of organizational efficiency is in table 1. Variables of organizational efficiency are subjected to Factor analysis, in order to condense great number of interconnected manifest variables and to reduce into smaller number of relative independent latent variables, which can explain their latent structure of analyzed set of manifest variables, and to ensure better conditions for determining structure and size of significance of variables, as important indicators of organizational efficiency in sport organizations.

Keiser-Guttman criterion (lambda bigger or equal) obtained 86,91% of common variance with 11 isolated factors, (table 1) from sample of sport organizations and vocational sport federations of B&H, respectively, in the area of variables of organizational efficiency.

Individual contribution in explanation of common variance after Varimax rotation, for the first main component was 21,70%, for the second 13,35%, for the third 9,08%, for the fourth 8,34%, for the fifth 7,12%, for the sixth 5,81%, for the seventh 5,60%, for the eighth 5,47%, for the ninth 4,18%, for the tenth 3,97% and for the eleventh 2,24%.

Table 1. Latent structure of set of variables of organizational efficiency in sport organizations

| Component | Total Variance Explained | | | | | |
|-----------|--------------------------|---------------|--------|-------------|---------------|--------|
| | Initial Eigenvalues | | | Rotation SS | | |
| | Total | % of Variance | %C | Total | % of Variance | %C |
| 1 | 30.432 | 50.720 | 50.720 | 13.024 | 21.707 | 21.707 |
| 2 | 4.824 | 8.041 | 58.760 | 8.013 | 13.355 | 35.062 |
| 3 | 2.991 | 4.986 | 63.746 | 5.453 | 9.089 | 44.151 |
| 4 | 2.671 | 4.451 | 68.197 | 5.007 | 8.346 | 52.496 |
| 5 | 2.323 | 3.872 | 72.069 | 4.277 | 7.128 | 59.624 |
| 6 | 2.041 | 3.401 | 75.470 | 3.490 | 5.817 | 65.441 |
| 7 | 1.692 | 2.820 | 78.289 | 3.361 | 5.601 | 71.042 |
| 8 | 1.557 | 2.595 | 80.884 | 3.285 | 5.474 | 76.516 |
| 9 | 1.367 | 2.278 | 83.162 | 2.512 | 4.186 | 80.702 |
| 10 | 1.212 | 2.020 | 85.182 | 2.384 | 3.974 | 84.676 |
| 11 | 1.041 | 1.736 | 86.918 | 1.345 | 2.242 | 86.918 |

Cross Varimax rotation of extracted factors obtained matrix, which shows projection of certain variables of practice of management of human resources of sport organizations on isolated components, table 2. In order to have better overview and analysis matrix shows only variables, where projection on main components is bigger than 600. On the first main component, which explains 21,70% of common variance of projection above given criterion (60) have following variables:

Table 2. Structure of the first factor

| | | |
|-----|--|----------|
| 1. | Strategic plan includes measurement of efficiency | r = .891 |
| 2. | Strategic plan includes identification of resources necessary for the plan | r = .860 |
| 3. | Strategic plan includes clear action | r = .847 |
| 4. | Organization encourages and supports education of the employees | r = .839 |
| 5. | Strategic plan includes clear and achievable goals | r = .799 |
| 6. | Strategic plan includes view/vision on the future | r = .799 |
| 7. | Organization regularly monitors realization of strategic plan | r = .745 |
| 8. | Organization achieves its strategic plan | r = .645 |
| 9. | Organization maintains good public profile | r = .639 |
| 10. | Organization tries to accept views/ opinions of all constitutive groups | r = .638 |
| 11. | Organization looks for possibilities for development of sport | r = .607 |

Isolated variables, which make main component, indicate that there is coherent anticipation of activities, as well as monitoring of integral human resources in work organization, in order to fulfill organizational goals, which explains strategic modeling. Therefore, this factor could be defined as factor- *Management of processes with compliance of strategic and organizational goals and plans.*

The second main components, which explains 13,35% of common variance of projection above given criterion (.60) has following variables:

Table 3. Structure of the second factor

| | | |
|----|---|----------|
| 1. | Organization is successful in provision of services, which meet expectations of coaches | r = .826 |
| 2. | Organization communicates well with government bodies and institutions | r = .700 |
| 3. | Organization functions well, with minimal inner conflicts | r = .688 |
| 4. | Organization attracts satisfying number of coaches | r = .658 |
| 5. | Organization has ability to maintain financial base | r = .608 |

Variables that represent second main component indicate the process of transmission of information within sport organization and can be defined as factor *Quality of intern and extern communication.*

The third main component, which explains 9,08% of common variance of projection above given criterion (.60) has following variables:

Table 4. Structure of the third factor

| | | |
|----|--|----------|
| 1. | Organization can gain funds from different resources | r = .819 |
| 2. | Organization is financed adequately by the government | r = .678 |
| 3. | Paid staff gains adequate compensation | r = .644 |
| 4. | Organization is successful in providing services which meet expectations of athletes | r = .622 |

Third main component is described by projections of variables, referred to management of flow of the money, and can be formulated as factor: *Financial management of sport organizations.*

The fourth main component, which explains 8,34% of common variance of projection of above given criterion (.60) has following variables:

Table 5. Structure of the fourth factor

| | | |
|----|---|----------|
| 1. | Organization appoints members of the board based on skills they can bring to the organization | r = .693 |
| 2. | Decisions are made more efficiently on the level of the board | r = .644 |

Variables which represent fourth main component indicate factors of organizational behavior. Therefore, this factor is called: *Efficiency in performance of decisions made in sport organization.*

The fifth main component, which explained 7,12% of common variance of projection above given criterion (.60) has following variables:

Table 6. Structure of the fifth factor

| | | |
|----|--|----------|
| 1. | Organization has adequate compensation and system of rewarding for athlete's achievement | r = .808 |
| 2. | Organization has adequate compensation and system of recognition for efficiency of staff | r = .750 |
| 3. | Organization has adequate compensation and system of recognition for coaches | r = .626 |

Common feature of variables with the highest projection on the fifth factor refers to motivation directed to provision and improvement of material position of athletes and employees and financial compensations for work. Therefore, this factor is called *Factor of rewarding.*

The sixth component, which explains 5,81% of common variance of projection above given criterion (.60) has the following variables:

Table 7. Structure of the sixth factor

| | | |
|----|---|----------|
| 1. | Organization has enough human potential to achieve its goals | r = .824 |
| 2. | Organization has ability to stop expert/professional staff from leaving | r = .637 |

The sixth main component include variables, which refer to management activity, which implies maintenance, adjustment, guidance and usage of human potentials. Therefore, this factor is called *Competences and efficiency of management.*

The seventh main component, which explains 5,60% of common variance of projection above given criterion has variable Professional staff and volunteers work on achieving common goals $r=.887$. Seventh main component is defined as factor: **Increase of work efficiency**.

The eighth main component, which explains 5,47% of common variance of projection above given criterion (.60) has variable *Organization is successful in attracting the audience* $r=.834$. Eighth main components is defined as factor: **Efficiency of attracting the audience**.

The ninth main component, which defines 4,18% of common variance of projection above given criterion (.60) has variable *Organization has significant sponsors of private sector* $r=.828$. Variables which represent ninth main component are defined as factor: **Sponsorship**.

The tenth main component, which explains 3,97% of common variance of projection above given criterion (.60) has variable *Organization has adequate sport facilities for all levels of competition* $r=.755$. Variable that represents tenth main component is defined as **Adequacy of sport facilities**.

Eleventh main component, which explains 3,97% of common variance of projection has variable *Organization has adequate compensation and system of recognition for coaches* $r=.400$. Variable which represents eleventh main component is defined as factor: **Adequacy of compensations and system of recognition for coaches**.

Table 8 (list 1). Matrix of components – projection of variables on isolated components in the area of organizational efficiency

| | 1 | 2 |
|---|------|------|
| Strategic plan includes measurements of efficiency | .891 | |
| Strategic plan includes identification of resources necessary for the plan | .860 | |
| Strategic plan includes clear action | .847 | |
| Organization encourages and supports training for the staff | .839 | |
| Strategic plan includes clear and achievable goals | .799 | |
| Strategic plan includes view/vision on the future | .799 | |
| Organization monitors regularly realization of strategic plan | .745 | |
| Organization achieves its strategic plan | .645 | |
| Organization is able to maintain good public profile | .639 | |
| Organization tries to acknowledge views/opinions of all constitutive groups | .638 | |
| Organization seeks for opportunities for development of sport | .607 | |
| Organization is successful in providing services, which meet the expectation of coaches | | .826 |

Component

Identification factors are interpreted based on results, which are shown in table 8. Based on shown results, factors which describe activities of organizational efficiency in analyzed vocational sport federations in B&H are defined in the following way:

Discussion

Latent structure of organizational efficiency in state vocational sport federations of B&H.

Variables of organizational efficiency are submitted to Factor analysis, for great number of interrelated manifested variables to condense and reduce into smaller number of interrelated relative independent latent variables, which can explain their latent structure of analyzed set of manifest variables and to ensure better conditions for determination of structures and the size of significance of variables as an important indicator of organizational efficiency in sport organizations.

Factor analysis resulted with identification of eleven factors of efficiency, which were based on sixty variables of efficiency and made 86,91% of common variance.

Those factors describe key activities of organizational efficiency in analyzed vocational sport federations in B&H in the following way as presented in table 10.

Results of Factor analysis support general assumption that organizational efficiency is multidimensional construct. However, eleven factors of efficiency obtained in the context of Bosnian vocational sport federations in compliance with previous research, which was suggested by Chelladurai et al. (1987), Chelladurai and Haggerty (1991), Morrow and Chelladurai (1992) and Papadimitriou and Taylor (2000), Eydi (2013), Laroche et al. (2014). described features of the process (e.g., managing business processes, communication and relationships with staff, resources, programming, planning, financing,

Table 9 (list 2). Matrix of component – projection of variables on isolated components in the area of organizational efficiency

| Rotated Component Matrix ^a | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|------|------|------|------|------|------|------|------|------|------|
| Organization communicates well with government bodies and institutions | | .700 | | | | | | | | | |
| Organization functions well with minimal inner conflicts | | .688 | | | | | | | | | |
| Organization attracts satisfying number of coaches | | .658 | | | | | | | | | |
| Organization has ability to maintain financial base | | .608 | | | | | | | | | |
| Organization can gain funds from different resources | | | .819 | | | | | | | | |
| Organization is financed adequately by the government | | | .678 | | | | | | | | |
| Paid staff gains adequate compensation | | | .644 | | | | | | | | |
| Organization is successful in providing services which meet expectations of athletes | | | .622 | | | | | | | | |
| Organization appoints members of the board based on skills they can bring to the organization | | | | .693 | | | | | | | |
| Decisions are made more efficiently on the level of the board | | | | .644 | | | | | | | |
| Organization has adequate compensation and system of rewarding for athlete's achievement | | | | | .808 | | | | | | |
| Organization has adequate compensation and system of recognition for efficiency of staff | | | | | .750 | | | | | | |
| Organization has adequate compensation and system of recognition for coaches | | | | | .626 | | | | | | .400 |
| Organization has enough human potential to achieve its goals | | | | | | .824 | | | | | |
| Organization has ability to stop expert/professional staff from leaving | | | | | | .637 | | | | | |
| Professional staff and volunteers work on achievement of common goals | | | | | | | .887 | | | | |
| Organizations successful in attracting audience | | | | | | | | .834 | | | |
| Organization gets significant sponsors of private sector | | | | | | | | | .828 | | |
| Organization has adequate sport facilities for all levels of competition | | | | | | | | | | .755 | |

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Table 10. Names of the factors

| | |
|----------|--|
| F1 (OE) | Management of processes with compliance of strategic and organizational goals and plans. |
| F2 (OE) | Quality of intern and extern communication. |
| F3 (OE) | Financial management in sport organizations. |
| F4 (OE) | Efficiency in performance of decisions made in sport organization. |
| F5 (OE) | Rewarding |
| F6 (OE) | Competences and efficiency of management |
| F7 (OE) | Increase of work efficiency |
| F8 (OE) | Efficiency of attracting audience |
| F9 (OE) | Sponsorship |
| F10 (OE) | Adequacy of sport facilities |
| F11 (OE) | Adequacy of compensations and system of recognition for coaches |

rewarding.etc) which contribute efficiency of national sport organizations. This is determined in this study.

Conclusion

In this study, without diminishing importance of other factors, but for differentiation state vocational federations by the level of sport organizational efficiency, between federations with higher and lower level of sport organization efficiency, isolated two latent dimensions of variables of sport organizational efficiency, which are named as : first- *Management of business processes with compliance of strategic and organizational goals and plans* and second – *Quality of intern and extern communication*.

Employees are one of the most important means or resources of organizations because they contribute its growth and success (Selemani et al 2014). Although human empowerment is necessary for organization, in order to gain its goals, it will not enable it long-term achievement of success (Tohidi, and Jabbari, 2012). Employees are not aware of the great force of the organization they belong to. Therefore, manager of

human resources guides and monitor employees for effective work, in order to achieve the goals of the organization. Today, sport organizations use strategic approach to human resources as crucial method of management their human resources for the purpose of efficient work.

Communication on the higher level is competence for management of human resources, which increases efficiency (Tripolitsioti, 2017). Important factor of management efficiency is communication. Sport organizations need to be extremely careful with chosen communication system.

Organizational efficiency is maybe the most critical dependent variable in all organizational analysis and almost all organizational theories include term efficiency (Baruh & Ramalho, N. 2006, Papadimitriou, 2007).

Organizational efficiency is multidimensional construct (Shilbury & Moor, 2006). Therefore, it is impossible to disregard factors of management in that system, processes and structure. They are expressed differently, depending on the direction of the research and it is necessary to analyze those different points of views, in order to ensure efficient usage of human resources through development strategic activities, referring to the management of human resources (Unlua et al., 2012).

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