

Survey non-linearity of sport organizations (as one of the chaotic organizations characters)

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ABSTRACT Being non-linear is one of the chaotic organizations characters, any system in which the activities range are between the limitation of stability and instability or order and disorder, and innovative management of these organizations leads to a dynamic balance of system. In non-linear systems any prolonged methods can't support the expected results, and managers should emphasize on self-regularity process which is a result of organization learning. In these organizations future will be managed by segment-by-segment and growing behavior rather than planning or pre-set goals. The study aim is to survey the non-linearity character of sport organizations, and for this purpose we used a standard questionnaire with appropriate reliability and validity. The statistical population of the study are whole staff of sport and youth head-quarter of W. Azarbaijan province that are 89 (sample number is equal to the population's). According to the results of this study and t-table we can deduce that sport organizations are non-linear organizations.

Keywords : non-linear system. chaotic organization. Sport organization

INTRODUCTION

A new subject in organizational management field, recently, is "chaotic organizations". This word is derived from a chaos theory and complexity. The word chaotic refers to anything presents order and disorder, simultaneously. That is being between order and disorder. A chaotic organization not also is a system in which no action is done like the way before (two different ways of doing a same action), but also there is enough order to prevent complete disorder and anarchy (Raide and Dainty, 2006). In other words a chaotic organization is a combination of numerous elements that create the general existence, and its behavior is unpredictable, and yet it has a pattern (order), too (Eijnatten, 2004). Chaotic demonstrated the fact that all of behaviors and actions of various phenomena such as physical and physic phenomena in an organization, which seem to be erratic, have final order themselves. In fact it is an order inside disorder or a norm inside abnormalcy (Alvani, 2000). Organizations work in competitive and turbulent environments, have to match with chaotic organizations characteristics, to save their lives. It means to achieve chaotic characteristics, like being non-linear, must act consciously, if an organization wants to benefit from a chaotic organization.

The purpose of this paper is to survey the non-linearity of sport organizations as a chaotic organization characteristic.

Non-linear System

Being non-linear is one of the chaotic organization characters. In non-linear systems any prolonged methods can't support the expected results, and managers should emphasize on a self-regulating process which is a result of organizational linearity and includes the unpredictable future and without any common initial purpose. The future will not be managed with planning and presupposed goals, but with developing and little by little behavior (Wiggins, 2007).

In non-linear systems one effect can have different causes, and thus the selection right is completely probable. Similarly a non-linear system may be much more than its total components (like the fact that a group behavior is bigger than a simple sum of complex individual behaviors) (Wiggins, 2007).

Organizations managers face numerous problems which have to make decision about them. Degree of importance for any problem the complexity and efficiency it has on organization, and every problem has its own degree of complexity and efficiency, naturally. According to Ralph Stacey there are 5 regions in which problems are created and we can recognize organizational problems and do proper actions in such regions, and the two main scale of them are "degree of creativity" and "level of agreement". Stacey has called the 5th region, the complexity region or disorder edge, this region is placed between the region of anarchy (4th region)

and the regions related to traditional management approaches (1st, 2nd, 3rd regions). There is no level of importance for traditional management approaches in the region of complexity, rather this is the region for creativity, innovation and being separated from the past and create something new. In this zone, methods like Garbage-can decision making, brain storming, usage of internal insight in fault detection, unscheduled decision making identification, creating and choosing solutions, and creating innovative routines are into action (Zimmerman, 2001).

Non-linear organizations refer to such complicated systems as self organizing and adaptive organizations, within which the complicated nature of relation among system components, increase the involuntary order, and resulted features of it are far away from its individual components, and there is no allegiance for causal linear rules (Hock, 2008). Within such systems there is a peaceful symbiosis between order and chaos, and system is always in move between order and disorder. Managers of these organizations may adopt such semi-solid strategies, that is not very fixed not so fluid.

Dee Hock argued organizations at disorder edge, as chaordic organizations. The word "chaordic" is a combination of two words: chaos and order, and it means being ordered and turbulent at the same time. This method is neither under dominance of order nor disorder. Chaordic organization is a dynamic, complicated, non-linear, creative, imbalanced, independent, and self reliable system (Eijnatten, 2004), which is placed at the edge of disorder and requires an innovative management style.

Complexity zone (the edge of disorder)

There is complexity all around the nature. Main principles of characteristics, which have to be noticed are: 1-goal and performance, 2-size and form, 3- structure (with all contents) and 4-dynamism type. These factors must be available in all of complexities. In most cases organs dynamism is high. Severity weakness transmission of this dynamism is related to environment. Structural complexity is one of most important characters. But we can not identify complexity directly and clearly (Rahman Seresht and Nobari, 2008). It can be said that complexity must not be eliminated and it has to be grown (Eijnatten et al, 2007). In fact complexity zone is between distinction zone, which shoes chaos, connection zone which demonstrates order. We called this zone the edge of complexity or disorder, in which order and disorder, and separation and dependence are involved simultaneously (Eijnatten and Putnik, 2004). According to Langton in complicated systems located at the edge of complexity, there is a kind of peaceful symbiosis between order and chaos behaviors, and system is permanently moving between order and disorder, in other words there is another type behavior called disorder edge and if organization structures placed in this zone can benefit its advantages (Geraldi, 2008). At the edge of disorder, occurrence of real behavior has an interesting complexity and systems in these points have attraction power that increase probability of complicated behaviors. In other words the edge of disorder is where butterfly effect happens. Although we think most of living systems act in such structures (Nikookar and Gorbanizadeh, 2005). The challenge a head of managers at the edge of disorder or complexity zone is how to interpret subjects innovatively and choose a solution among countless solutions, which by transmissions to a new condition can coordinate the organization effectively with other organizations and environment. Kyle says about this subject: in severe instabilities like crisis or special opportunities in which related activities of compulsive services are high, recognition of this point is vital that stabilization again can achieved only by usage of progressive strategies that are naturally unstable. Finally we have to combine instability of such environment with managers performances and organizational dynamic strategies (Nikookar and Gorbanizadeh, 2005).

Sport Organization Management

In recent decades the managers of sport organizations have much difficulty to deal with in managing their organization. Commercialization of sport, important in society's knowledge levels, high levels of athletes and participants in sporting events expectations, universal changes, increase in sporting expenses, loss of adequate budget, and also encumbering governmental rules have made managers to be consistent with new conditions and try harder to reach their organization's goals. The aim of this study is to investigate to non-linearity of sport organizations according to present circumstances in sport organizations and the way their managers deal with these circumstances.

METHODOLOGY

This paper is the result of an expanding research and is done with a descriptive method. This is a field study and for collecting data we used a standard questionnaire, with contextual validity method for evaluating the validity, and to calculate the reliability we enlisted the help of Cronbach's α , which its value was acceptable ($\alpha = 0.76$).

The statistical population of this study were whole staff of W.Azarbaijan province sport and youth headquarter that were 89 (the sample number is equal to the population's, $N = n = 89$). In the study 20

variables related to chaotic organizations characteristics were surveyed, within which some were related to the character of non-linearity, and views of managers, consultants, and masters about the presence of the variables within sport organizations were collected.

We used kolmogrov- smirnov test to study data normal distribution, and in respect of normal distribution of data to test hypothesis we used sample t test and also descriptive statistical methods like mean and standard deviation, through SPSS 18.questionnaires were filled out by whole staff of sport and youth head-quarters of west Azarbaijan province.

Findings

The study pursuits the aim if sport organizations are non-linear.

Table1. The descriptive statistics parameters of non-linearity hypothesis

Variable index	frequency	mean	Standard deviation	Deviation from mean error
Non-linearity	89	3.06	1.01	0.11

Table2. The results of one-sample t test of non-linearity hypothesis in sport organizations

Population mean	Level of confidence		Mean difference	significance	Degree of freedom	t
	Up limit	Down limit				
3	0.28	-0.16	0.06	0.56	88	0.59

According to tables and available evidences, we can conclude that the come off degree of non-linearity character in sport organizations (headquarter of sport and youth of W.Azarbaijan province), is in a desired situation, but there is no significant difference between it and sample mean in terms of statistics. Then sport organizations have the non-linearity character, and their managers must adopt proper managing strategies with these systems.

CONCLUSION AND DISCUSSION

This paper investigates a rather new subject in sport organizations, that is non-linear systems as a character of chaordic organizations. These organizations consist a set of sub-systems that have numerous elements, the elements interact dynamically and non-linear (Xiaoshu et al , 2010). Non-linear organizations are at the edge of complexity or disorder region, according to Stacey pattern, which means a region placed between order and disorder or stability and instability. In such organizations foundations are variable and the problems occur are not consonant with the earlier, and the speed of changes is high, too, that refer to the metaphor "organization as a brain" (Dealtry , 2006). This means creative and innovative resources are vital and have an important role in these organizations.

Managers must know that a successful organization has a dynamic non- linear feedback system, which acts at chaos border and through self-organizing of chaordic systems innovatively make dynamic consistency in practical fields of organization, internal sub-systems and external interactions (Gorbanizadeh and Arab , 2010).

According to the study results in sport organizations as non-linear, disassembly aspect and not following the past procedures are their characters, shows the fact that in these organizations there is a little coordination between staff responsibilities and authority, enough freedom in doing tasks, payments are not consonant with performances, management and leadership unity as features of traditional organizations are not seen here, and in such conditions if managers want to be dominant over situations must spend more hours to study technical and managerial literature.

According to above subjects managers must provide organization preparation to self-organizing, creativity, frequent and broad learning of process-oriented team work, innovative interaction with environment, and recognition of sensitive points, through characterizing more aspects of non-linear systems culture in organization(Mehdi , 2003).

Although there are little and probably no works in this field in sport organizations, there is a high consonance between our findings and studies done in other organizations.

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