

# Relationship Between Cybernetics Management and Organizational Trust Among Librarians of Mazandaran University of Medical Sciences

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## ABSTRACT

**Background and purpose:** Organization must keep current skills, abilities, and in the current field of competition, and move one step ahead of other competitors; for this purpose, must be a high degree of trust inside the organization. Cybernetic management is a new approach in management of organizations that its main task according to internal issues. This study aimed to investigate the relationship between cybernetics management and organizational trust among librarians of Mazandaran University of Medical Sciences. **Materials and methods:** This is applied and analytical survey, which its population included all librarians of Mazandaran University of Medical Sciences, amounting to 42 people which were selected by census and participated in this research. **Results:** There has no relationship between components of Cybernetics management (participative decision making, commitment, pay equity, Correct flow of information, develop a sense of ownership, online education) with organizational trust amongst librarians of Mazandaran University of Medical Sciences. And there has a significant relationship between flat Structure of cybernetics management and organizational trust. For data analysis was used Kolmogorov-Smirnov test and linear regression. **Conclusion:** There is no significant relationship between Cybernetic management and organizational trust amongst librarians of Mazandaran University of Medical Sciences.

**Keywords:** cybernetics, trust, librarians, universities.

## 1. INTRODUCTION

With the expansion of globalization, the importance of trust in social, economic, political and organizational relationships, dramatically is taken into consideration, so that, the majority of experts in different fields have pointed to the importance of trust in organizations (1). Some of the studies such as McKnight, Chervany and Arab Salehi showed that beliefs that consider the necessity of building confidence, the most important element that determines intentions confidence, Trust is an interdisciplinary subject and stems from disciplines such as psychology and sociology stems (2, 3). Experts believe that trust can lead to cooperation among individuals, groups and organizations, therefore, more than ever, consider to trust and how to strengthen and focus its actual building (4). In addition, the increase in confidence in organizations creates the perfect environment for collaborative activities, also affects the organization's performance (5). Trust is a multifaceted concept. It has

been problematic topin down because it is based on many factors, varies with the expectations held in different kinds of relationships and changes over the course of a relationship (6, 7). Organizations have recognized the importance of trust in the knowledge management literature as a means to gain and sustain competitive advantage (8).

Loss of confidence and loss of employee commitment to the organization, understanding that the employees need to know about the rate of their autonomy and Meta role behaviors in the organization will be obvious for decision; there are many management theories. One of these theories is the cybernetic model, Management Cybernetic means efficient and organized knowledge. Management cybernetics is the concrete application of natural cybernetic laws to all types of organizations and institutions created by human beings and to interactions with and within them. For this reason, Stafford Beer's management theory is not limited only to industrial and commercial

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enterprises. It also relates to the management of all types of organizations and institutions in the profit and non-profit sectors: from individual enterprises to huge multinationals, in the private and public sector, in associations and political bodies, and lastly in professional and private life. Ross Ashby once called cybernetics “the science of practice” (9). The notion of meta-frameworks is well-known in Managerial Cybernetics Management (10). The idea that living beings and machines function on the basis of the same principles dates back to long before the birth of cybernetics. Cybernetics is the application of cybernetics to management and organizations. “Management cybernetics” was first introduced by Stafford Beer in the late 1950s (11). Cybernetic management, is a new approach in organizational management which its main task according to internal issues and considers topics such as goal setting and control, participatory decision making, flat structures, proper flow of information and develop a sense of ownership (12).

Management Cybernetics has unique features such as: goal setting and control which generally understood as the science of effective organizations (13). Details a discussion with Stafford Beer about the rationale of his cybernetic books published in the twentieth century (1959-94). Includes a dialogue concerning his contributed works: Cybernetics and Management; Decision and Control; Management Science; Designing Freedom; Platform for Change; The Heart of Enterprise; Diagnosing the System for organizations; and Beyond Dispute. Concludes with a perspective of some of his important early work and some unpublished contributions which have been collected into one book (13). Decision making in bureaucratic organizations, decisions has taken at the highest levels of the organization and its results without considering the ideas of the employees must be implemented (14). It seems cybernetic management could affect trust in the organization. Therefore, one of the required prerequisites, is building trust in the workplace. Because, failure to create an atmosphere of trust, commitment and collaboration, requires an increase in cost to create precise and complex control and monitoring systems. So, considering the importance of trust in the organization and its impact on information sharing, commitment to decisions, extra-role behavior and improve employee morale in this research, seeks to understand the relationship between trust in the organization of extra-role behavior that is not part of their job responsibilities and duties and is a voluntary behavior in library which is a center for learning and library services, and discussion of organizational trust and extra-role behavior, because of the relationship with customers is extremely important. Therefore, the main issue of this research is Relationship Between Cybernetics Management and Organizational Trust Amongst Librarians of Mazandaran University of Medical Sciences.

**2. MATERIALS AND METHODS**

This is applied and analytical survey which its population included all librarians of Mazandaran University of Medical Sciences,

amounting to 42 people which were selected by census and participated in this research. Date of study was restricted to the period from January 2017 to April 2017. Data collection includes two standard questionnaires: cybernetic management and organizational trust. Asadpours’ cybernetic management questionnaire have 7 components (participatory decision making, commitment, pay equity, flat structure, correct flow of information, develop a sense of ownership, online education) with 23 statements and all measures were assessed using 5-point Likert scales (15) and Organizational Trust Inventory (OTI) with 12 statements which have evaluated in a thesis (16) and all measures were assessed using 7-point Likert scales. The Organization Trust Inventory (OTI) is a 12-item scale to measure an individual’s level of trust in his or her supervisor and in his or her work organization as a whole. For data analysis, SPSS software version 17 was used and Kolmogorov-Smirnov tests, Fisher test and regression test with significance level of 0.05 was used.

**3. RESULTS**

To investigate the relationship between cybernetics management and organizational trust amongst librarians of Mazandaran University of Medical Sciences and according to the normality of the dependent variable (organizational trust), To determine the predictive variables cybernetic management used regression test in the method of ENTER was used. The multiple correlation coefficient between the variables is equal to R=0.699. Which demonstrated that there are correlations between variables (variables cybernetic management and organizational trust), that is, there is a significant relationship between the variables of organizational trust cybernetics management (Table 1).

Normal test	Standard errors approximation	Adjusted coefficient of determination	Correlation Square	Multiple correlation coefficient
0.859	0.395	0.364	0.488	0.699

Table 1. Summary of the linear relationship between the variables.

Since in the 95% confidence level and measurement errors= 5%, significance level = 0.001, Sig = (p) is calculated, the assumption of a linear model is confirmed (relationship of linear between variables is considered one of the requirements for entry to regression (Table 2).

Variable	Test	Sources of changes	Sum of squares	DF	Mean Square	F ratio	Significance level
Variables of Cybernetics management and organizational trust	analysis of Regression	Regression	4.91	8	0.615	3.935	0.0022
		Residual	5.155	33	0.156		
		Total	10.07	41			

Table 2. analysis of Regression of data of the main research question

Coefficients	Non-standard factors	Standardized coefficients	t	Sig
	B	Standard errors		
Fixed	2.272	0.569	-	3.993 0.000
Participative decision making	0.209	0.151	0.228	1.380 0.177
Commitment	0.013	0.127	0.016	0.100 0.921
Payequity	0.011	0.058	0.030	0.190 0.850
Flat structure	0.455	0.102	0.630	4.477 0.000
Correct flow of information	0.083	0.134	0.100	0.620 0.540
Developa sense of ownership	0.036	0.039	0.157	0.937 0.356
Online education	0.032	0.051	0.122	0.647 0.522

Table 3 Estimation in the regression model coefficients presented

Since in the 95% confidence level and measurement errors=5%, the significance level for all variables is greater than the calculated error. Therefore, they cannot be considered predictive for organizational trust, and the only variable can be considered as a good predictor is flat structure (Table 3). To compare the effects of components of cybernetic management in the regression model on the dependent variable of organizational trust, beta factor was used. Accordingly, most closely related to the flat structure and the lowest was related to the trust.

#### 4. DISCUSSION

There was no significant relationship between organizational trust management cybernetics. Compared of the results of this study with results of the previous findings, it can say that in general, all the studies the opposite results with this study. In the study of Mohammadi Moghaddam and et al (2013) Cybernetics Management has been affected on organizational trust by examining the role of interactive perception of equity (17). Also, O'Grady and et al (2016) showed that it can be used by means of cybernetics for controlling of the management system the organization (18). Schuh and Kramer (2016) concluded that cybernetic perspectives can be very effective in the control and establishment of the of new management technologies in the interactive way (19). In the Consistent research also exploration of management cybernetics in the employing energy of organizations and individuals is shown to achieve effectiveness (12) and cybernetics management have been effective in learning organizations.(13). Some investigations considered management cybernetics has effective on knowledge management (20). A number of investigations considered management cybernetics to has effective on organizational learning (21). According to results disagree with our results, one can argue management cybernetic in some organizations, including libraries, it cannot have important role in the creation of the necessary infrastructure for trust making in the organization. According to the fact that staff endeavors focusing of libraries, comprehensively have centralized activities and scientific leap that takes place in these centers, the conditions are widely involved for staff. Therefore, the staff cannot devote themselves to trend of management cybernetics. Using management cybernetic features such as deciding making of experts cannot lead to organization trust; because library staff, all with high academic levels, as well as, to a sense of ownership in among them, could not lead to organizational trust in the libraries. Organizational commitment and equity of payment, could not increase organizational trust, also, Correct flow of information and online education in libraries did not affect in the changes organizational trust, But, creating a flat structure in libraries is able to reduce the layers of management in libraries which, significantly effective in the process of organizational trust. In general, management cybernetics has not been effective in decrease or increase of organizational trust in these Medical Libraries.

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