



ORGANIZATIONAL CHANGE EFFECT ON INNOVATIVE WORK BEHAVIOUR

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ABSTRACT

Today, change and innovation concepts have become the most important components for organizational success. In this context, this paper tries to explain the effects of innovative work behaviors of employees and managers on the organizational change. For this purpose, in a public university in Istanbul, 150 master degree students working have been questioned to collect data regarding with understanding the relation between variables. The data gathered has been analyzed using SPSS.

Keywords: Organizational change, Innovative work behaviour, Structure Equation Model

JEL Classification: C12, D23, I25

ÖRGÜTSEL DEĞİŞİMİN YENİLİKÇİ İŞ DAVRANIŞINA ETKİSİ

ÖZET

Günümüzde örgütlerin başarısı için değişim ve yenilik en önemli unsurlar haline gelmiştir. Bu bağlamda bu çalışmada, çalışanların ve yöneticilerin yenilikçi iş davranışının örgütsel değişim üzerindeki etkisi açıklanmaya çalışılmıştır. Bu amaçla İstanbul'da bulunan bir devlet üniversitesinde yüksek lisans yapan çalışan 150 kişiden elde edilen veriler değişkenler arasındaki ilişkiyi açıklamak için kullanılmıştır. Veriler SPSS programında analiz edilmiştir.

Anahtar Kelimeler: Örgütsel değişim, Yenilikçi iş davranışı, Yapısal eşitlik modeli

1- INTRODUCTION

In recent years, changes and developments in technology have affected on organizations and workers. For this reason, technology utilization in organizations is being tried to be expanded. Organizations which apply these developments and changes gain



competitive advantage. This case is seen on the behaviors of organization members and gives rise to the innovative work behavior to appear. For the future of organizations, innovative work behavior should be supported extensively. Innovative work behavior has been allowing for new approaches and new processes. (Çalışkan, 2013:95)

Another concept which is important for organizations is change. Depending on change, organizations should solve their problems and create changes which they need in operation environment. In a time period in which competition is increasing due to barriers in economies and globalization are removed, organizations should do some changes in order to survive. These changes are sometimes planned and sometimes unplanned. In this context, change is a requirement and important component for organization to survive. Schumpeter, an economist and policy scientist who makes considerable contribution to the academic literature, defines innovation as a new product which customers have not met so far or adding new attributes to existing products. Innovation means discovering new methods in production and the success of the organization depends on improving innovative capacity. (Avcı, 2009:125)

2- INNOVATIVE WORK BEHAVIOR

In recent years, innovation and innovative work behaviors of workers have become an important subject for organizations. Organizations which like to survive, should concentrate on the their members behaviors and abilities. New ideas coming out, new experiences gained, new approaches for solving problems increase organizational productivity. (Çalışkan, 2013:95)

According to Janssen, innovative work behavior is generating and implementing new ideas for the benefits of role performance and organization. (Janssen, 2000:288) According to Scoot ve Bruce, innovative work behavior is a process involving many behaviors required. Organization members are expected to show these behaviors. This process is evaluated as a behavior group including idea generation, idea introduction and application. The first step for innovative work behavior begins with idea generation. Then, idea generation goes on. (Amabile et al.,1996:1155)

Innovative work behavior in an organizational level should be supported and led by individual operations being generated, introduced and applied. (De Jang and Kamp 2003:190) By some researchers, innovative work behavior in the academic literature is investigated in three categories. However, by some researchers, it is investigated in four categories. (Rodelli, 2014:401) These are,

Three categories as

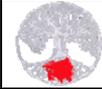
- Idea generation
- Idea support and introduction
- Idea implementing and application

Or four categories as,

- Discovering opportunities
- Generating ideas,
- Defending ideas
- Implementing ideas

In this process, as new ideas are discovered, available services are improved and new alternatives are considered. (De Jang and Hartog, 2010: 192)

First target for the innovative work behavior is making new ideas come out willingly. By the way, it is aimed to induce workers to produce new ideas for the organization's benefit.



(Ceylan and Özbal, 2005:169) There are internal and external factors which help innovative work behavior to come out. (Narvekar and Jain, 2006:178) Internal factors are research and development, management's innovation vision and individual interference of workers. External factors are needs of the market and competitive superiority. Innovative work behavior in the literature has been analyzed in different dimensions. The figure below shows common elements with the model.

First of these elements is identifying the problem and discovering the innovative idea. Then, solution ways for the problem is generated. These two elements are generally called as introducing the idea. After the evaluation of the solution ways, innovative idea is developed. Idea generated should find support and it is applied at the end. These processes happen in the application phase.

3- INNOVATIVE WORK BEHAVIOR IN TERMS OF WORKERS

This term is defined as new idea-product-process and method generating success for the workers in a group or organization which they belong to. Sönmez and Yıldırım (2014:50) explains that innovative work behavior of workers is influenced by characteristics of the person, motivation and cultural values. By the way, trust, feedback and empathy are variables which provide continuity for innovative work behavior.

Workers are in an expectation for putting effort on innovative behaviors to be rewarded. Dealing with the workload workers have, innovative work behavior will help them perceive their demand and their motivation will rise. This process affecting on workers effort-reward perceptions is very productive in terms of organization and worker. (Janssen, 2000)

4- INNOVATIVE WORK BEHAVIOR IN TERMS OF THE ORGANIZATION

Sustaining the competitive advantage, organizations use innovative activities. (Ellonen, 2008:160-161). So, giving importance and being volunteer to innovation are essential. Organizations should allow workers to show innovative activities in idea generating, making changes and innovation. (Li and Zheng, 2014:446) In this context, increasing the productivity of the organization, workers should develop new ideas and jobs and organizations should be in an ability to respond to these demands. (Bysted, 2013:269)

Achieving innovations in the organization and sustaining this process depends on the abilities, knowledge of organization members and implementing all of these. (Turgut, Beğenirbaş, 2013) The reason is that the innovative work behavior includes the workers support this process. Workers being satisfied about the innovations reflect the work environment positively and increase their performance. (Yeşiltaş et al.)

Organizations should implant workers about the innovation being a value and contribution requirement for innovation and change. According to Radelli (2014) new idea generation, development and application are needed for increasing individual and organizational performance.

5- ORGANIZATIONAL CHANGE

In today's conjuncture, in which competition is increasing due to barriers in economies and globalization are removed, organizations should do some changes in order to survive. These changes are sometimes planned, and sometimes unplanned. As a result of these changes, organizations may increase their productivity to survive or end up in the history. Organizational change is a vital and crucial matter because of the sustainability of the organization. However, this concept is sometimes getting confused with innovation. Innovation is an activity to respond to changes around and a new product development



activity. (Narayanan, 2001:67) In terms of technology, innovation is product and production improvement (Mogee and Schact), in terms of product and process, it is new product, process or service creating for the job unit. (Tushman and Nadler)

Organizational change which means differentiation in organizational lower functions and relations with the external environment, occur in terms of goal, structure, process and strategy. These changes are sometimes planned, and sometimes unplanned. (Özdemir, 2013) Güçlü and Şehitoğlu, in their study, by the side of the change concept, have interpreted “innovation, improvement and reform” concepts and concluded that these concepts have been different but one within the other. (Güçlü, 241) In academic literature, change concept, by Toffler (1981) has been defined as “events in an obvious process”. On the other hand, Blake and Jervenpaa (1991) has defined change as “a planned or unplanned organization’s movement from a certain situation to another”. By the way, Tunçer clarifies that “change is reality of today’s world and when everything changes so fast, organizations should keep up with it and try to survive but keeping up with the change is really difficult and requires a planned study. According to Garvin, (1993;78-91), “In this age, factors leading change are so strong that change is inevitable. Because of this requirement, organizations use planned or unplanned change activities and by the help of new conditions, change is continuous. So, various programs should be implemented in order to be productive.”. Dalton defines organizational change as “the change of behaviors of workers, especially the managers and positive improvements in decisions which come out.” For Şimşek and Akın, change can be investigated in three dimensions. Social, technologic and economic. (Çelebioğlu, 1982:10)

Understanding from change and organizational change, organizational change can be explained as planned or unplanned, conscious or unconscious beginning and coming out differences in a time period to survive and also change is made under competition and external conditions to survive. The basic reason for this is the need to survive. Organizational change is a must to expand the organization, to improve and to survive. To achieve this goal, the method is using the knowledge and the abilities. (Katz and Kehn, 1977:440)

Dicle in his paper of organizational change explains that if organizational change is not monitored, organization may not find itself improving productivity in a positive way, in contrast, the organization may fall into pieces scattered.

Organizational change is analyzed in three groups such as progressive change, transitive change and transformative change. (David J. Cherrigton) Progressive change is periodic improvements in abilities, methods or processes which make an organization stronger. Transitive change is similar to progressive change but it is more comprehensive and in a longer time period. On the other hand, transformative change is by far the most effective change type. However, this type of change from a to z takes shorter time and larger cost. For the transformative change, uncertainty and resistance are quite high.

6.METHOD

6.1. RESEARCH MODEL AND HYPOTHESIS

In order to examine the theoretical relations between innovative work behavior and organizational change including in the study, the model of the research has been formed as in figure 1. To test the lower dimensions of innovative work behavior on the organizational change, conceptual model and hypothesis have been developed in the model.

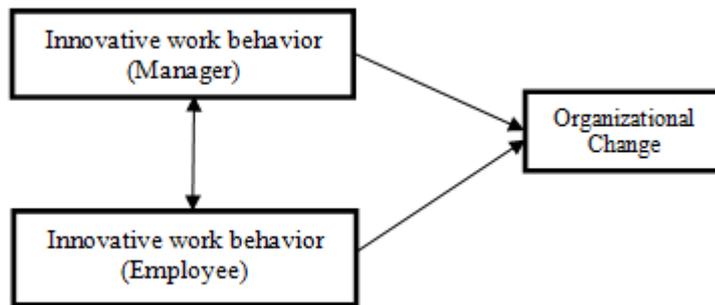


Figure 1. Conceptual Model

Alternative hypothesis have been developed to test the causality relations among the variables and first conceptual model as follows.

H₁: Innovative work behavior of the manager has significant effect on the organizational change.

H₂: Innovative work behavior of the employee has significant effect on the organizational change.

6.2. POPULATION AND SAMPLE

Population of the research includes 150 master degree students working employees working in number of employees have been given the questionnaire out of 83 numbers have been responded suitably. Demographic attributes of the participants are given in Table 1.

Table 1. Frequency and Percentage Distributions With Respect To Demographic Attributes

Attributes	Frequency	Percentage	Attributes	Frequency	Percentage
Gender			Working Time In The Firm		
Female	44	53,0	1 Year and less	26	31,3
Male	39	47,0	2-5 Years	35	42,2
			6-9 Years	16	19,3
			10-13 Years	1	1,2
			14 years and more	5	6,0
Age			Working Time in Business Life		
18-25	18	21,7	1 Year and less	35	42,2
26-35	51	61,4	1-5 Year	26	31,3
36-45	13	15,7	6-10 Year	16	19,3
55 and more	1	1,2	10 years and more		
Education			Income		
Associate	1	1,2	1500 TL and less	5	6,0
Degree	24	28,9		8	9,6



Under Graduate	57	68,7	1501—2000 TL	15	18,1
Graduate	1	1,2	2001-2500 TL	19	22,9
Graduate Ph.D			2501-3000 TL	36	43,4
			3001 TL and more		
Marital Status					
Single	54	65,1			
Married	29	34,9			

According to the data in Table 1, 53 percent of the participants are women and 47 percent is men. 65,1 percent of the participants is single and 68,7 percent is graduate. Participants between 26 and 35 are 61,4 percent of the participants. Working time of employees in business life is between 1 and 5 years with 42,2 percent and between 6 and 10 years with 31,3 percent. Evaluating the employees working time in the firm, 42,2 percent of the participants work between 2 and 5 years and 31,3 percent of the participants work 1 year and less. 43,4 percent of the participants earn more than 3001 TL.

6.3. DATA COLLECTING TOOLS

Two measurement methods have been used in the research in terms of the aim of the research. Demographic questions have been asked in order to identify the demographic attributes of the participants. Explanations in the questionnaire measure according to 5 likert scale based on “1-Strictly Disagree” and “5-Strictly Agree”

“Innovative work behavior” used in the study has been developed by Jeroen De Jong, Deanne Den Hartog, 2010, 19 explanations include in the study and the original scale is made of two dimensions. First 16 explanations in the scale are for the manager evaluating the employees and latter 6 explanations are for the employees evaluating the manager.

“Organizational Change” scale included in the questionnaire is taken from the study of Griffin, Rafferty, 2006, Scale includes 13 explanations and a single dimension.

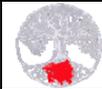
7.FINDINGS

7.1. MEASUREMENT MODEL

In order to confirm the factor validity of the measurement model, confirmative factor analysis (CFA) have been used. For this aim, convergent validity and discriminant validity analysis have been applied.

Convergent validity shows which factors should be accepted to measure a single structure. Convergent validity is tested when factor loads are significant and more than 0,5, composite reliability is higher than 0,6 and average variance is higher than 0,5 for all structures. (Wang ve Wang, 2012). In this meaning, factor loads for each item are found. In the measurement model of the research, it has been found that factor loads and composite reliabilities are in accepted level. When the items whose factor loads are less than 0,5 have been excluded, factor loads of the remaining explanations have been found between 0,538 and 0,894. Composite reliabilities (CR) are between 0,806 and 0,938. Average variance values are between 0,506 and 0,608. These findings justify that the measurement model shows convergent validity.

Internal reliability of the measurement tool has been evaluated using Cronbach’s alpha. Nunnally ve Berstein (1994) explains that alpha values higher than 0,70 means that the research is reliable. Cronbach’s alpha values obtained in the research are between 0,806 and



0,938 and since these values are higher than 0,7, internal reliability has been assured. (Table 2).

Table 2. CFA Results and Internal Reliability Analysis

Factor	Average	SH	Item	Factor Load	AV	CR	Cronbach's α
Innovative Behavior (Manager Evaluating The Employee) MEE	3,26	0,63	YC2	0,575	0,506	0,988	0,938
			YC3	0,617			
			YC4	0,717			
			YC5	0,770			
			YC6	0,796			
			YC7	0,638			
			YC8	0,774			
			YC9	0,805			
			YC10	0,804			
			YC11	0,746			
			YC12	0,788			
			YC13	0,538			
			YC14	0,800			
			YC15	0,642			
YC16	0,679						
Innovative Behavior (Employee Evaluating The Manager) EEM	3,41	0,87	CY1	0,724	0,574	0,960	0,892
			CY2	0,627			
			CY3	0,779			
			CY4	0,845			
			CY5	0,758			
			CY6	0,796			
Organizational Change	2,99	0,45	OD11	0,596	0,608	0,845	0,806
			OD12	0,894			
			OD13	0,818			

Discriminant validity analysis is obtained by comparing average variance of a factor and correlation coefficient squared for a structure with other structures. Correlation for the factors and explained average variance are shown in Table 3. Values in the diagonal show average explained variance for each structure. Values outside the diagonal row and column are the squares of correlation coefficients between structures. For discriminant validity analysis, Fornell and Larcker approach has been used and values on the diagonal have been found higher than their row and column values as should be. (Fornell ve Larcker 1981). Each diagonal element is experienced more than elements different than the diagonal. All these values can be accepted in terms of item and structure.

Table 3. Discriminant Validity

Factors	Innovative Behavior Manager > Employee (MEE)	Innovative Behavior Employee > Manager (EEM)	Organizational Change
Innovative Behavior Manager > Employee (MEE)	0,51		
Innovative Behavior	0,181	0,57	



Employee Manager (EEM)	>			
Organizational Change		0,016	0,034	0,61

Goodness of fit indices used in structural equation modeling for comparing theoretical model and measurement model are absolute fitness indice, growing fitness indice, constrained fitness indice, deductive, descriptive and alternative or normative or nonnormative fitness indices. (Hooper vd., 2008:53-56). For each goodness of fit indice, there is a standard value but this may change according to the researchers. Standard values in Table 4 have been obtained from different researchers.

When the values in Table 4 are compared to the standard values, these values have been accepted and justified the structural model. According to the findings, it has been found that χ^2 =Chi-Square value was not significant, χ^2/df =Chi-Square/Degree of Freedom was good for fit, CFI=Comparative Fit Index value was very close to the standard, RMSEA=The Root Mean Square Error value was acceptable and GFI=Goodness Of Fit Index value was not acceptable. Thus, the model fits well to the data used and research hypothesis can be explained.

Table 4. Confirmative Factor Analysis for Goodness of Fit Index

Uyum İndeksi	Good Fit	Acceptable Fit	Model 1
χ^2 (CMIN)	$0 < \chi^2 < 2df$	$2df < \chi^2 < 3df$	240,973
χ^2/df (CMIN/df)	≤ 3	$\leq 4-5$	1,071
GFI	$\geq 0,90$	0,89-0,85	0,819
CFI	$\geq 0,97$	$\geq 0,95, \geq 0,90$	0,986
RMSEA	$\leq 0,05$	0,06-0,08	0,03

Resource: Meydan, 2011.

7.2. STRUCTURAL MODEL

The study aims to explain the causality between innovative work behavior and organizational change. Thus, first, the relations between variables have been analyzed and then, the effect between variables have been analyzed using structural equation modeling. In this meaning, lower dimensions of innovative behavior are independent variable and organizational change is dependant variable. However, relations explained in the research's conceptual model have not been found significant using the structural equation modeling. For this reason, to understand if demographic attributes have an intermediary role in the lower levels of innovative work behavior affecting on the organizational change, income variable has been found out as having intermediary role. So, the hypothesis of the research have been changed as follows.

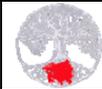
H₁: The innovative work behavior of the manager has significant effect on organizational change.

H₂: The innovative work behavior of the employee has significant effect on organizational change

H₃: The innovative work behavior of the manager has significant effect on income.

H₄: The innovative work behavior of the employee has significant effect on organizational change

H₅: Income has significant effect on organizational change.



According to the findings, the structural equation modeling which shows income as an intermediary role in innovative behavior effect on organizational change is given in figure 2. The results of figure 2 indicates that between the dimension which employee evaluates the manager and organizational change, there has been a same way, weak and significant relation ($\beta= 0,267, p<0,001$). By the way, between the dimension which employee evaluates the manager and income, there has been a same way, moderate relation. ($\beta= 0,463, p<0,05$). As another finding, between income and organizational change, an opposite and weak relation has been found out. ($\beta= -0,316, p<0,05$) Results of the analysis are shown below in Table 5.

Table 5. Regression Matrice and R² Values Based On Structural Equation Modeling

Variables	B	β	S _h	t (Critical Ratio)	R ²
Innovative Behavior (Employee > Manager) → Income (EMC → Income)	0,625	0,463	0,151	4,135	0,214
Income → Organizational Change (ORG)	0,162	0,267	0,081	2,008	0,093
Innovative Behavior (Employee > Manager) → Organizational Change (EMC → ORG)	-0,259	-0,316	0,118	-2,196	

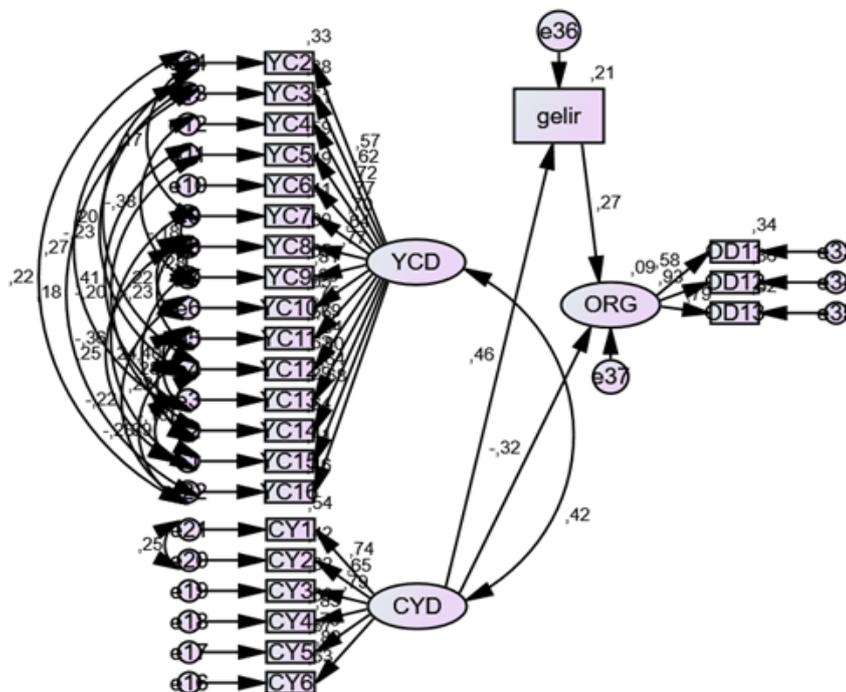


Figure 2. Income as an intermediary role in innovative behavior effect on organizational change



Path analysis in Figure 2 show direct effects between the variables. However, to investigate the intermediary effect, independent variable should have effect on the intermediary variable and dependent variable. In addition, intermediary variable should be affecting dependent variable. When intermediary variable inserted into the model with the independent variable, if the effect of independent variable on the dependent variable drops significantly, this is called as partial intermediary. If this effect disappears, it is called as full intermediary. (Baron ve Kenny, 1986:1175). In this mean, analyzing the model in detail, direct and indirect effects can be identified. In this study, direct, indirect and total effects for the variables used are given in Table 6.

Analyzing direct, indirect and total effects, innovative behavior of the manager has direct effect on income which employee evaluates and it has direct and indirect effect on organizational change. Thus, innovative behavior of the manager has effect on organizational change in which income has a partial intermediary effect

Tablo 6. Total, Direct and Indirect Effects

Predicting Variable	EMC	Income
Direct Effects		
Income	0,625	0,000
Organizational Change	-0,259	0,162
Indirect Effects		
Income	0,000	0,000
Organizational Change	0,101	0,000
Total Effects		
Income	0,625	0,000
Organizational Change	-0,157	0,162

In Table 7, Goodness-of-fit indices compared to the standard values are acceptable and justifies the structural equation model.

Table 7. Goodness of Fit Index With Respect To Structural Model

Goodness of Fit	Good Fit	Acceptable Fit	Model 1
χ^2 (CMIN)	$0 < \chi^2 < 2df$	$2df < \chi^2 < 3df$	273,222
χ^2/df (CMIN/df)	≤ 3	$\leq 4-5$	1,102
GFI	$\geq 0,90$	0,89-0,85	0,805
CFI	$\geq 0,97$	$\geq 0,95, \geq 0,90$	0,979
RMSEA	$\leq 0,05$	0,06-0,08	0,035

Resource: Meydan, 2011.

Evaluating the hypothesis, one of the lower dimensions of the innovative work behavior which employee evaluates the manager has significant effect on organizational change. (Hypothesis 1), By the way, Innovative work behavior of the manager has significant effect on income (Hypothesis 4) and Income has significant effect on organizational change. (Hypothesis 5)



No	Hypothesis	Decision
H ₁	Innovative work behavior of the manager has significant effect on organizational change	Not verified
H ₂	Innovative work behavior of the employee has significant effect on organizational change.	Verified
H ₃	Innovative work behavior of the manager has significant effect on income.	Not verified
H ₄	Innovative work behavior of the employee has significant effect on income.	Verified
H ₅	Income has significant effect on organizational change.	Verified

As a result, income variable has a partial intermediary role on organizational change in which employee evaluates the manager.

To analyze whether the independent variable has indirect significant effect on dependent variable, some tests are used. In this mean, Sobel test was used to understand if income variable has a partial intermediary role on organizational change in which employee evaluates the manager. According to Sobel test results, innovative work behavior of the manager has significant effect on organizational change as the income variable being partial intermediary. ($z=2,41$, $p=0,016<0,05$)

8.RESULTS

Innovative work behavior used in this research has been used widely for the employees in the literature, however, innovative work behavior of the manager have not been analyzed so much. From this view, innovative work behavior of managers together with the innovative work behavior of employees may affect on the organizational change and innovative skill.

In the study, first, it has been looked into if innovative work behavior has direct effect on organizational change in terms of employee and manager. However, the analysis performed show that there is not such a direct relation. So, demographic attributes have been investigated if having an intermediary effect. So, just the income variable has been found out to have a partial intermediary effect among other variables.

In recent years, organizations try to keep up with changing conditions by innovation. So, they must innovate and be open to change. Thus, besides the organizational learning and organization culture, innovative work behavior of the employees are so much important. Gürkan and Demiralay (2017) explains that leadership, leader and member effects, creative and innovative organization climate variables are those which can affect innovative work behavior of employees.

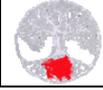
According to the findings, innovative work behavior of the manager has significant effect on organizational change as the income variable being partial intermediary. Intermediary effect of income and innovative work behavior of the managers affect on organizational change positively. Here, the direct effect of income in the intermediation is negative. This means that manager role people evaluated by the employees if get what they deserve, they contribute to organizational change. Otherwise, there will not be such a contribution and organizational change will decrease. Leadership attributes of the managers are effective on the organizational change according to Sayılı and Tüfekçi (2008) and especially transformative leadership create consciousness in employees and initiates and leads change.



Managers being open to change and keeping up with it, can increase their organizational change skills. Besides that a research in which leadership attributes used in a new model might be the topic of a further research. Taking into account different sample and different sectors might result in different outcomes, adding organizational climate and leadership attributes, new conceptual models might contribute to the academic literature.

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