

THE MEDIATING ROLE OF PSYCHOLOGICAL OWNERSHIP ON THE RELATIONSHIP BETWEEN INTERNAL LOCUS OF CONTROL AND ORGANIZATIONAL COMMITMENT

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—Abstract —

Psychological ownership reflects an individual's awareness, thoughts, and beliefs regarding the target of ownership (Avey et al, 2009). Locus of control defined as the general belief that individual's successes, failures and outcomes are controlled by individual's actions and behaviors (internal); or perhaps, people's achievements, failures and outcomes are controlled by other forces like chance, luck and fate (external) (Rotter, 1966). Individuals with high internal locus of control experience higher levels of psychological ownership. Organizational commitment can be defined as a strong belief in and acceptance of an organization's goals and values, a willingness to exert considerable effort on behalf of the organization, and a strong desire to maintain membership in the organization (Allen and Meyer, 1990). Scholars examined the link between psychological ownership of the organization and positive employee attitudes as organizational commitment.

The purpose of this study is to examine the mediating role of psychological ownership on the relationship between internal locus of control and organizational commitment. Allen and Meyer's (1990) organizational commitment scale, Rotter's (1966) locus of control scale and Avey and his colleagues' (2009) psychological ownership scale were used to collect data for the study. The findings of this study is valuable from many aspects that psychological ownership is a new area in organizational behavior literature and this study indicates

antecedent's and consequence's of psychological ownership in information technology sector.

Key Words: Psychological ownership, Internal locus of control, Organizational commitment, Information technology sector

JEL Classification: M10, M19

1. INTRODUCTION

The idea of psychological ownership for the organization has received increasing attention from scholars and practitioners as a potentially important predictor of employee attitudes and behaviors (Dyne and Pierce, 2004: 439). Psychological ownership has much in common with more widely recognized POB constructs and approaches such as psychological capital, positive organizational scholarship, character strengths and virtues and psychological well-being (Avey et al, 2009: 174). Pierce et al. (1992) defined psychological ownership as the state in which an individual feels as though the target of ownership is his (Vandewalle, Van Dyne and Kostova, 1995: 211). The psychology of possession proposes that feeling of ownership cause people to view both tangible and intangible possessions (Barki, Pare and Sicotte, 2008, 270). On the other hand, internal locus of control was accepted as an important antecedent of psychological ownership. Individuals with high internal locus of control instead of external locus of control, feel more psychologically enabled and belonged to their organizations. As a consequence of psychological ownership, organizational commitment can be seen as a positive result of psychological ownership. Also, locus of control has been shown to be an important variable influencing behavior at work by affecting a number of work related variables, including job satisfaction, job performance, turnover and commitment (Oliver, Jose and Brough, 2006: 835).

With this perspective, the aim of this study is to examine the relationship between psychological ownership, internal locus of control and organizational commitment and also to determine the mediating role of psychological ownership between these independent (internal locus of control) and dependent variables (organizational commitment) in information technology sector.

2. LITERATURE REVIEW AND HYPOTHESES

2.1. The Mediating Role of Psychological Ownership

Rotter (1966) provided grounded theory on the locus of control construct in a discussion of generalized expectancies for internal versus external control. A predisposition for internal locus of control (i.e., internality) results from the

perception that reinforcement is contingent on one's own behavior or one's own relatively permanent characteristics or traits. Perception that reinforcement is due to luck, chance, fate, or factors beyond one's control indicates an external locus of control (i.e., externality) (Kormanik and Rocco, 2009: 466).

The locus of control is a concept in psychology, originally developed by Julian Rotter in the 1950s. The locus of control represents how a person's decision making ability is influenced; essentially, those who make choices primarily on their own are considered to have internal loci, while those who make decisions based more on what others desire are said to have external loci (Srivastava, 2009: 52).

When employees believe that they create and govern their own work roles rather than that their work roles are defined by their organizations, supervisors, or coworkers, they should feel more psychologically enabled and energized (Ng, Sorenson and Eby, 2006: 1060). Internals have more positive affective reactions to the organization than externals. They are also dedicated to the organization with greater affective commitment, working longer hours and showing higher attendance.

Mowday, Steers and Porter (1979) conceptualize the strength of the psychological relationship between the individual and the organization in terms of individual's commitment to the organization. Allen and Mayer (1990) differentiated organizational commitment into three components: affective commitment, continuance commitment and normative commitment (Allen and Mayer, 1990: 3-4; Iverson and Buttigieg, 1999: 308). *Affective commitment* refers to employees' emotional attachment to, identification with, and involvement in their organization. *Continuance commitment* refers to employees' perceived costs of leaving the organization. *Normative commitment* concerns employees' perceived obligation to remain with their organization (Kell and Motowidlo, 2012: 213-214).

Organizational commitment emphasizes individual's identification and involvement in the organization, it reflects the process by which individuals link themselves to an organization and focuses on the individuals' actions (Van Knippenberg and Sleebos, 2006: 572-573; Gautam, Van Dick and Wagner, 2004: 302). As it stated above, internals may be more satisfied, more dedicated than externals, they tend to hold a more positive view of their work and organizational roles. Thus, we predict that:

Hypothesis 1a: Internal locus of control relates positively to Organizational Commitment

Organizational ownership as a psychological phenomenon was theorized by Pierce, Rubinfeld and Morgan (1991) in the development of a model of employee ownership (McIntyre, Srivastava and Fuller, 2009: 384). The core of psychological ownership is the feeling of possessiveness and being psychologically tied to an object (Pierce, Kostova and Dirks, 2001: 299). Psychological ownership refers to the relationship between an individual and an object in which the object is experienced as connected with the self (Blau and Caspi, 2009: 49).

Researchers have identified two distinct types of psychological ownership. *Organization-based psychological ownership* is concerned with individual member's feelings of possession and psychological connection to an organization as a whole. Job-based psychological ownership is related to individual's feelings of possession toward his particular jobs (Mayhew et al., 2007: 478). Pierce et al. (2001, 2003) explains the psychological ownership in three motives: the motive for efficacy and effectance, self-identity and having a place (Pierce, 2009: 481).

Feeling of psychological ownership draws upon the concepts of *territoriality, self-efficacy, accountability, belongingness and self-identity* (Avey et al., 2009: 176). Territoriality is characterized as preventative psychological ownership. When individuals feel ownership over something, they may tend to be territorial. Self-efficacy, accountability, sense of belongingness and self-identity are characterized as promotive psychological ownership. Self-efficacy constitutes one's belief in his personal ability to accomplish a given task. Accountability is the tendency for an individual to feel a sense of responsibility to hold individuals and organizations accountable for the object of ownership. Sense of belongingness assesses the extent to which an individual feels "at home" in his place of work. At the highest level of psychological ownership an individual will personally identify with the object of ownership (Avey et al., 2009: 176-178).

Locus of control has been researched extensively and many findings apply directly to the effectance motive leading to psychological ownership. Internals seek situations in which control is possible and actually exert greater efforts to control their environment. Thus, in general, individuals with a high internal locus of control would be more likely to experience the effectance motive and thus, experience higher levels of psychological ownership (McIntyre, Srivastava and Fuller, 2009: 387).

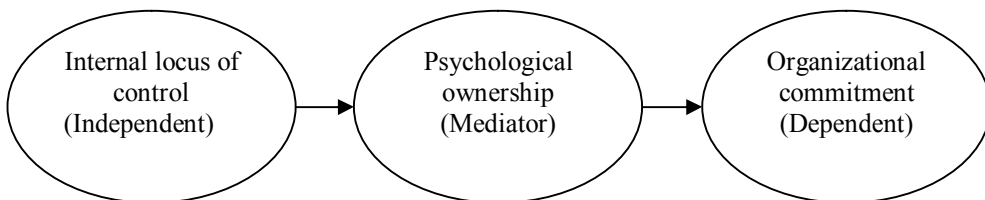
Based on Avey and colleagues (2009)'s study, there is a strong positive relationship between promotion-oriented psychological ownership and employee commitment (Avey et al, 2009: 186). Also, according to Bernhard and O'Driscoll's study, organizational-based commitment is related with affective communication (Bernhard and O'Driscoll, 2011: 364). It was also found that psychological ownership positively effects organizational commitment (Ozler, Yilmaz and Ozler, 2008: 47). Van Dyne and Pierce (2004) state that feeling possessive toward the organization (psychological ownership) should lead to high levels of organizational commitment (Van Dyne and Pierce, 2004: 444). According to Beggan (1992), people generally become more attached to things they feel they possess than similar things that they do not feel they possess (Van Dyne and Pierce, 2004: 444).

Accordingly, we examine psychological ownership as a mediator, which helps to explain how internal locus of control influences organizational commitment in this study.

Hypothesis 1b: *Psychological ownership mediates the relationship between internal locus of control and organizational commitment*

In this study, the dependent variable is organizational commitment and internal locus of control is examined as the independent variable. In the research model, psychological ownership is hypothesized to mediate the relationship between internal locus of control and organizational commitment. As a summary of the theoretical framework of our study, the research model is presented below:

Figure-1: Conceptual Model



3. METHODOLOGY

3.1. Sample and Procedures

Table 1: Demographic Variables

Gender	Man	Women			
	52	114			
Position	Employee	Manager			
	109	57			
Age	19-24	25-30	31-36	36-40	41 and above
	23	57	45	31	17
Tenure at present job	0-1	2-5	6-10	11-28	
	52	56	29	29	
Total tenure	0-5	6-10	11-15	16-20	21 and above
	53	44	33	19	16
Marital status	Married	Single			
	95	71			
Education level	High School	Undergraduate	Graduate	Master/Doctoral	
	2	32	96	36	

The sample of this study was drawn from the employees in information technology sector (n=166). The majority of the respondents are female (112), between 25-30 ages (57) and married (95). Most of the respondents are highly educated (132). In terms of working experience, 56 of them have at least 2-5 years of tenure at present job. 53 of them have 0-5 years of total tenure. Finally, 109 of the sample are employees. Convenience sampling method which is an acceptable method through which a representative sample is secured was used for the reason of convenience and accessibility of the participants from information sector. Questionnaire response rate is % 82 (Questionnaires on the internet were used to reach participants in a limited time and postal or manual distribution weren't applied for this study).

3.2. Measures

The questionnaire used for collecting data in this study consisted of four sections. In the first section, questions about demographic characteristics such as position, age, gender, marital status, total tenure, tenure and education of the respondents

were asked. In the following sections, items about psychological ownership, organizational commitment and locus of control were presented.

Psychological Ownership

Psychological ownership is measured by using the 16 item Avey et al. (2009) psychological ownership scale. The psychological ownership questionnaire assesses two forms of psychological ownership: promotive and preventative. Territoriality is termed preventative ownership and is measured with 4 items. Promotive psychological ownership is comprised of four distinct related dimensions. They are self efficacy (3 items), accountability (3 items), sense of belongingness (3 items), and self identity (3 items). Respondents were asked to indicate on a 5-point likert type of scale (ranging from strongly disagree to strongly agree) how accurately each of the items described their psychological ownership.

Organizational Commitment

Organizational commitment is measured by using 12 item Allen and Meyer (1990)'s organizational commitment scale. In this scale, there are three dimensions as normative commitment, affective commitment and continuance commitment. Respondents were asked to indicate on a 5-point likert type of scale (ranging from strongly disagree to strongly agree) how accurately each of the items described their organizational commitment.

Internal Locus of Control

17 item internal locus of control scale was adapted from Rotter's (1966) internal-external locus of control scale. Some of the items were reversed. Respondents were asked to indicate on a 5-point likert type scale (ranging from strongly disagree to strongly agree) how accurately each of the items described their locus of control.

4. FINDINGS

The results of the relationship between the research variables will be examined in this section. First, normality tests, reliability test results will be presented. Hypothesis testing is shown at the end of the section. In order to determine the normal distributions of variables, Kolmogrov-Smirnov, skewness and kurtosis analysis were performed. Results are given in Table 2.

Table 2: Normality Test Results

Variables	N	Min	Max	Mean	SD	Skewness	Kurtosis	Kol.-Smir.
Internal locus of control	166	1,00	4,10	3,34	,382	-,203	-,190	,192
Psychological ownership	166	2,00	4,31	3,28	,497	-,288	-,181	,200
Organizational commitment	166	1,83	4,08	3,05	,454	-,092	-,265	,177

According to findings of normality test results, p values are higher than 0,05 (,192 for internal locus of control, ,200 for psychological ownership and ,177 for organizational commitment). Also, Skewness and Kurtosis values are near to zero. Based on these significant results, it is accepted that all variables as internal locus of control, psychological ownership and organizational commitment distribute normally.

For the reliability analysis of the scale used in this study, the most frequently used Cronbach alpha coefficients was examined. The Cronbach alpha coefficients of both scales in general in this study are higher than the commonly accepted ,50- ,60 as shown in Table 3.

Table 3: Reliability Analysis Scores for Dimensions and Sub Dimensions

Internal locus of control	,696
Psychological ownership	,765
Territoriality	,611
Self-efficacy	,827
Accountability*	-
Belongingness	,932
Self-identity	,894
Organizational commitment	,635
Affective commitment	,868
Continuance commitment	,548
Normative commitment	,621

**This dimension of psychological ownership was omitted because of low reliability*

First of all, for the 20 item scale which measures the employees' internal locus of control, reliability analysis was performed. The cronbach alpha value of internal locus of control in general was found as ,696. For the 16 item scale that measures the employees' psychological level, the cronbach alpha value of psychological ownership scale in general was found as ,750; territoriality as ,611, self-efficacy as ,827, belongingness as ,932 self-identity as ,894. For the 12 item scale that measures the organizational commitment, 5 items were omitted because of low

reliability. The cronbach alpha value of organizational commitment scale in general was found as ,635; affective commitment as ,868, continuance commitment as ,548 and normative commitment as ,621.

Descriptive statistics (means and standard deviations) and correlation results were applied to each variable (internal locus of control, psychological ownership and organizational commitment) as shown in Table 4.

According to the results of the descriptive statistics, mean and standard deviation for the internal locus of control variable was found as 3,3/5 and ,38. On the other hand, mean and standard deviation for psychological ownership was found as 3,2/5 and ,49; for organizational commitment as 3,1/5 and 1,11 were found. These results indicate that respondents mostly selected the neutral and agree alternatives. Among the mean scores of subdimensions of variables, the highest mean score belongs to self-efficacy dimension of psychological ownership.

Among the variables in general, the highest correlation can be seen between psychological ownership and organizational commitment ($r=,371$). The relationship between internal locus of control and psychological ownership is higher ($r=,285$) than it's relation to organizational commitment ($r=,247$). Detailed correlation results of sub-dimensions are also shown in Table 4. Affective commitment dimension of organizational commitment demonstrates a highly significant correlation between belongingness ($r=,810$) and self-identity dimension of psychological ownership ($r=,584$). Continuance commitment has negative correlation with belongingness ($r=-,405$) and self identity ($r=-,293$) dimensions of psychological ownership.

Table 4: Descriptive Statistics and Correlation Results

Scale	Mean	Sd	(1)	(2)	(2a)	(2b)	(2c)	(2d)	(3)	3a	3b
Internal locus of control (1)	3,3	,38	1								
Psychological ownership(2)	3,2	,49	,285**	1							
Territoriality (2a)	2,8	,75	,153	,312**	1						
Self-efficacy (2b)	4,2	,67	,398**	,478**	,032	1					
Belongingness (2c)	3,0	1,1	,072	,691**	-,258**	,174	1				
Self-identity (2d)	3,1	1,0	,244**	,853**	-,026	,291**	,732**	1			
Organizational commitment(3)	3,1	,57	,247**	,371**	-,086	,068	,512**	,327**	1		
Affective commitment (3a)	3,1	1,11	,076	,555**	-,222*	,106	,810**	,584**	,638**	1	
Continuance commitment (3b)	3,2	,96	,199*	-,218*	,241**	-,104	-,405**	-,293**	,285**	-,314**	
Normative commitment (3c)	2,8	,82	,329**	,275**	,022	,047	,336**	,216*	,702**	,346**	,077

** p<0,01 *p<0,05

4.1. Testing of the Research Model

In order to test the psychological ownership as a mediating variable, first the effect of independent variable on dependent variable is analyzed. Secondly, the relationship between independent and mediating variables is tested. If the results of each step are significant, in the third level independent and mediating variables are tested together to see their effect on dependent variable. If the effect of independent variable on dependent variable disappears, the role of mediating variable in the research model is approved (Baron and Kenny, 1986: 1176). Results are presented in Table 5.

Table 5: Mediating Role of Psychological Ownership between Internal Locus of Control and Organizational Commitment

Dependent Variable	Independent Variable	R ²	Δ R ²	Adj. R ²	ANOVA			Coefficients			
					df	F	(p)	β	t	(p)	VIF
Organizational commitment	Internal locus of control	,061	,061	,054	1	8,089	,005	,247	2,844	,005	1,000
Psychological ownership	Internal locus of control	,081	,081	,074	1	10,959	,001	,285	3,310	,001	1,000
Organizational commitment	Internal locus of control	,160	,160	,146	2	11,692	,000	,154	1,788	,076	1,088
	Psychological ownership							,327	3,797	,000	1,088

According to three step multiple regression analysis, in the first step, internal locus of control was found to have an effect on organizational commitment ($\beta=,247$, $p<0,05$). In the second step, internal locus of control's effect on psychological ownership ($\beta=,285$, $p<0,05$) is supported. When the effect of internal locus of control and psychological ownership together on organizational commitment were analyzed, internal locus of control was found to have no effect on organizational commitment. As psychological ownership has an effect on organizational commitment ($\beta=,327$, $p<0,05$), the effect of internal locus of control on organizational commitment disappears ($\beta=,154$, $p>0,05$). As a result, psychological ownership is found as a mediating variable between internal locus of control and organizational commitment. Therefore, H1 hypothesis is accepted.

In Table 6, it is shown that internal locus of control has an impact on factors of psychological ownership. Internal locus of control mostly affects the self-efficacy

of the individuals. It has no effect on other dimensions of psychological ownership such as territoriality and belongingness.

Table 6: Internal Locus of Control Effect on Dimensions of Psychological Ownership

Psychological Ownership	F-value	β value
Self-efficacy	23,360**	,398**
Self-identity	7,822**	,244**

** $p < .000$

5. DISCUSSION

As it was discussed in the literature review, employees who have internal locus of control, create and control their destiny and feel more psychologically enabled and committed. It is believed that internals experience higher levels of psychological ownership. Psychological ownership reflects the individual's beliefs, attitudes and feelings to the target. One of the important consequences of psychological ownership is organizational commitment which emphasizes individual's identification and involvement in the organization. In this study, the mediating role of psychological ownership between internal locus of control and organizational commitment was investigated among the 166 employees in information technology sector.

When means are examined, the highest mean score was found as internal locus of control. This result shows that employees who have internal locus of control are higher than employees who have external locus of control in the sample of the study. Among the dimensions of psychological ownership, self-efficacy dimension has the highest mean score. Self-efficacy is about one's belief in his or her personal ability to accomplish a given task. Employees believe that they are competent to reach and complete tasks successfully. This belief increases the employees' psychological ownership level in information technology sector.

Our research hypothesis as "*Psychological ownership mediates the relationship between internal locus of control and organizational commitment*" is supported in our study. Both internal locus of control and psychological ownership have effect on organizational commitment, but the impact of internal locus of control disappears because of the mediating role of psychological ownership. There is another implication about the impact of internal locus on dimensions of psychological ownership. Internal locus of control has affected only two dimensions of psychological ownership as self-efficacy and self-identity. Furthermore, internal locus of control mostly affects the self-efficacy of the individuals. This finding draws our attention to the fact that, when individuals

have internal locus of control, they believe that they can motivate themselves and regulate their behaviors to attain their goals.

Recommendations and Limitations

There are some limitations to consider in this study one of which is the inability to generalize the results to other sectors than the information technology sector. The results can only be considered in the content of the sample of the study and cannot represent the whole information technology sector in Turkey as the number of the sample requires to be increased. One dimension of psychological ownership had to be omitted from the scale because of low reliability scores. To increase the number of participants may help improve the reliability of the scale and also may provide support to the research findings to evaluate general tendencies in information technology sector. As the mediating role of psychological ownership on the internal locus of control and organizational commitment relationship is supported in the content of this research, some recommendations can be provided to business managers. As it is known that organizational commitment is an important outcome in Organizational Behavior literature and research, managers should build up a supportive culture that will allow employees to use their experiences, abilities and expertise in their work processes so that employees with high internal locus of control will have opportunities to use their abilities and to possess positive attitudes toward their work/work place. To be able to use creativity and to receive positive attitudes from the management may help employees experience psychological ownership and accordingly these positive feelings may improve their organizational commitment. All the work processes as well as managerial processes should support such positive attitudes of employees as organizational commitment and psychological ownership in the workplace. Future studies are also required to test the relationship between the variables of this research model in either information technology sector or others.

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