

## Employee Resistance in the Context of Information Systems Implementation : An Organizational Support Perspective

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### Abstract

When implementing a new information system, the success has been infrequent even though implementing a new IS can bring about various benefits to organizations. Employee resistance has been identified as a critical reason for such failure of implementing and operating a new IS. The vital role of organizational support with employee personality traits (e.g., tolerance for ambiguity and openness to experience) to reduce employee resistance has been missing when explaining to the failure of implementing a new IS. The purpose of this study was to test a research model regarding employee resistance, investigating the relationship between organizational support and employee personality traits in that how organizational support influences employee resistance and also how employee personality traits (e.g., tolerance for ambiguity and openness to experience) interact with organizational support to decrease employee resistance the most. The results of this study supported our hypotheses and theoretical and practical implications are discussed.

Keywords : Employee Resistance, IS Implementation, Organizational Support, Tolerance for Ambiguity, Openness to Experience, Resistance Theory

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Received : 2016. 02. 25.    Revised : 2016. 03. 25.    Final Acceptance : 2016. 03. 25.

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## 1. Introduction

Since employee resistance has been recognized as one of the main reasons for preventing success of implementation of a new IS [e.g., Jiang et al., 2000], decreasing employee resistance to change such as implementing a new IS has been of importance to IS researchers and practitioners [Ives and Olson, 1984]. Accordingly, understanding the underline mechanism of employee resistance and managing problems derived from employee resistance need to be more investigated and thus understood better when implementing a new IS. The role of organizational support has recently been mentioned as an effective way to mitigate employee resistance when implementing a new IS [e.g., Kim and Kankanhalli, 2009; Tyre and Orlikowski, 1994]. Thus, the success of implementing a new IS can be recognized as an indicator to evaluate if an organizational supported its employees effectively.

However, despite the importance of organizational support on understanding employee resistance, only few studies [e.g., Kim and Kankanhalli, 2009] have explained to examine the relationship between employee resistance and organizational support as one of the antecedents. In addition, due to rareness of research in organizational support in the context of employee resistance in implementing a new IS, the gap still remains in understanding the mechanism of the relationship between organizational support and employee resistance. Specifically, even when considering the critical role of organizational support on employee resistance, the role of individual employee's personality traits such as toler-

ance for ambiguity and openness to experience has been barely recognized. Therefore, the current study addresses this void by developing an integrative research model that focuses on how organizational support affects employee resistance with employee personality traits.

## 2. Organizational Support

Resistance theory explains that when employee resist with a new IS implementation there may be three reasons for hesitating to adopt the new IS. First, each individual has different internal characteristics, which is explained by people-oriented theory [Gardner et al., 1993]. Some employee may be accepting the new system easily while others may be not. Second, system-oriented theory posits that employees may resist the introduction of a new IS probably due to external factors such as a new design of the system or technology or a new manual to operate it [Shneiderman, 1997]. Last, as a hybrid explanation interaction theory stresses that the combination between an employee and a new system attributes to the resistance to the introduction of a new IS. For example, an employee may think gain or loss before or after the system is implemented [Joshi, 1991; Kendall, 1997]. On the basis of this resistance theory, Jiang et al. [2000] listed the seven most identified and frequent reasons of employee resistance. They are : change in job content, uncertainty, change in decision-making, loss of status, loss of power, interpersonal relationship altered, and job insecurity. Considering overcoming such resistance, Ives and Olson [1984]

argued that participative or directive strategies are considered most effective remedies to reduce and overcome employee resistance. When an employee deals with resistance in most cases, it has been argued that participative remedies are more efficient over directive strategies [Ives and Olson, 1984; Robey and Taggart, 1981] even though the employee perceives resistance and uses strategies differently between decision support systems (DSS) and transaction processing systems [TPS, Jiang et al., 2002]. Participate strategies and remedies are explained by training employees with an involvement with employees, providing change information, communicating openly with employee, praising employees, and/or giving time for employees to adjust a new IS [Aggarwal, 1998; Jager, 1994; Rousseau, 1989].

Such participative remedies/approaches/strategies are the ones frequently used in supportive work relationships between employees and their organization. Perceived organizational support (POS) is a good example, a concept that how an employee in the organization feels about if the organization cares about the employee [Eisenberger et al., 1986]. Participative approaches in implementing a new IS and POS seem to have in common in that both participative approach and POS care about the employees. Supportive work relationships (i.e., POS) can influence employee attitudes such as resistance to change. Therefore, we suggest that as an alternative of participative approaches, POS can mitigate employee resistance.

Organizations need to support their employees in order for their employees to perform

their best in such a working environment. Social exchange theory explains the mechanism of POS, postulating a useful exchange and reciprocity between an organization and its employees [Cropanzano and Mitchell, 2005]. Based on social exchange theory, employees may perceive their organization as a person and such perception influences their belief that they see the organization's support as support from a person [i.e., the personification of the organization, Levinson, 1965]. As a result, employees view their organization as a unit that they share a useful exchange [Rousseau, 1990]. At the same time, employees tend to put their effort to their organization, producing better work performance as a token of appreciation when they feel their organization is supportive for them. Such return can be perceived as a balance between exchanges for the two entities (e.g., the organization and the employee). If employees have higher POS, it can create an idea that the employee tend to remain in the organization for the organization's goals and values [Eisenberger et al., 1986; Porter et al., 1974].

As a reciprocal process, employees make an effort to meet their organizational goals and standards [i.e., higher levels of POS, Eisenberger et al., 1986] and, in turn, employees may be less threatened by organizational change [Rush et al., 1994]. Therefore, we assume that POS can be a remedy for employee resistance as providing positive exchanges. Furthermore, employees can see the change (e.g., implementing a new IS) as a positive sign as a favorable work environment for them to work better in a better work environment [Lau and Woodman, 1995]. Accordin-

gly, we propose that if employees perceive higher POS, their resistance to change (e.g., implementing a new IS) may be reduced. Therefore, we predict that POS will negatively relate to employee resistance. Therefore :

**H1** : POS will negatively relate to employee resistance.

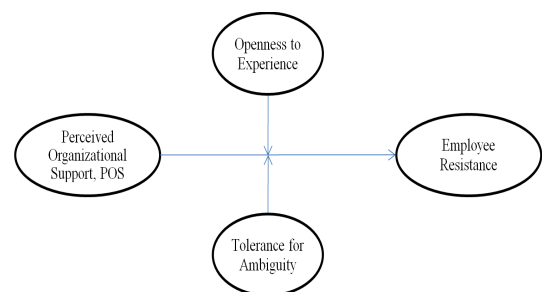
### 3. Employee Resistance and Individual Personality Traits : Tolerance for Ambiguity and Openness to Experience

Accompanied by POS, each individual's personality traits can influence employee resistance to change (e.g., implementing a new IS) as the first resistance theory, people-oriented theory, explains [Gardner et al., 1993] that some employees may be easily accepting the new IS while others not. For instance, if he or she is higher in tolerance for ambiguity and higher in openness to experience, he or she can accept the new situation more easily. The notion of tolerance for ambiguity refers to how an individual perceives information regarding ambiguous situations in unfamiliar clues [Furnham and Ribchester, 1995]. Thus if an individual who is in lower tolerance for ambiguity can easily experience stress with a new environment or change such as implementing a new IS. Thus, based on the characteristic of tolerance for ambiguity [Norton, 1975; Furnham and Ribchester, 1995], employee resistance can be reduced if he or she were tolerant in ambiguity.

According to the Big Five Personality model, individuals in openness to experience easily accept to new situations and change [Goldberg, 1990]. Specifically, openness to experience addresses that how an individual interests with novelty [Robbins and Judge, 2011]. Based on the characteristic of openness to experience of the Big Five Personality model, employee resistance is predicted to be mitigated if an individual is higher in openness to experience. Thus, we can predict that individuals with higher in tolerance for ambiguity and in openness to experience are willing to adopt to change (e.g., implementing a new IS). Accordingly, there will be an interaction effect of POS with tolerance for ambiguity and openness to experience. That is, employee resistance can be lower with the joint effect of higher levels of POS with higher levels of tolerance for ambiguity and openness to experience.

**H2** : Employee resistance can be lower with the join effect of higher levels of POS with higher levels of tolerance for ambiguity.

**H3** : Employee resistance can be lower with the join effect of higher levels of POS with higher levels of openness to experience.



<Figure 1> Hypothesized Research Model

## 4. Methods

A total of 187 employees from various industries participated to test our research hypotheses in this study. The sample was a convenient sample and it does not need to be a specific industry because resistance to change would happen in any industries. Employees from service related industries were the majority of our sample, which composed of more than 65%, and the average age of the total participating employees was 43. Female employees were made up about 62% of the sample. Participating employees filled out the survey questionnaire and the response rate was 69%.

For POS, we used a short version of the Survey of Perceived Organizational Support scale developed by Eisenberger et al. [1986] and the coefficient alpha for SPOS was 0.89. A sample item of POS was : This organization really cares about my well-being. We used the seven-item Tolerance for Ambiguity Scale developed by Lorsch and Morse [1974] and a sample item of TAS was : A really satisfying life is a life of problems. The coefficient alpha for TAS was 0.79. Openness to experience was measured from the openness to experience scale from the International Personality Item Pool [Goldberg, 1999]. A sample item was : I get excited by new ideas,

and the coefficient alpha was 0.83. Finally, employee resistance was measured with the RTC scale developed by Oreg [2008] and the coefficient alpha for the RTC was 0.87. A sample item was : I generally consider changes to be a negative thing.

## 5. Results

In order to test systematic differences among employees' responses from various industries, ANOVA was tested and the result of ANOVA showed no systematic differences. We then conducted factor analysis to examine the construct validity to see if the measures well define each construct [Hair et al., 1998]. The results showed that each factor was loaded as a separate factor. Cronbach's  $\alpha$  was used to examine how the scales were consistent. Each variable was over .89 (see <Table 1>), which indicates that all the reliability were acceptable [Hair et al., 1998]. Exploratory factor analysis was conducted to examine properties of the constructs. The results of EFA indicated that each construct showed up as one factor.

The role of the organization was predicted to be important when it comes to changes. As shown in <Table 1>, POS is negatively and significantly related to employee resistance (ER)

<Table 1> Descriptive Statistics, Cronbach's  $\alpha$  and Correlation of the Constructs

	Mean	SD	POS	ER	OE	TA
POS	4.00	.88	(.89)	-	-	
ER	4.13	.85	-.49**	(.87)	-	
OE	3.78	.72	.47**	-.56**	(.83)	
TA	3.97	.73	.52**	-.53**	.43**	(.79)

Note : Cronbach's  $\alpha$  reliabilities for the scales are shown in parentheses along the diagonal; ER employee resistance, OE openness to experience, TA tolerance for ambiguity; All correlations are significant at the  $p < .01$  level.

and our hypothesis 1 was supported. This result indicated that organizational support may diminish employee resistance to some degree when the organization introduces a new IS. If employees feel that their organization cares about them, their resistance and fear toward changes can be mitigated.

Hierarchical regression analysis was conducted to examine the moderating effects of tolerance for ambiguity and openness to experience on the relationship between POS and employee resistance. The results shown in <Table 2> indicated there is a significant joint effect between POS and employee resistance with tolerance for ambiguity, which supports our hypothesis 2. It implied that the relationship would be stronger for an individual whose tolerance for ambiguity is higher. That is, employee resistance can be lowest for the employees who perceive their organization support them well and who also have higher levels of tolerance for ambiguity.

We ran another set of hierarchical regression analysis to test hypothesis 3, which was also supported as shown in <Table 3>. The result implied that an employee resistance to a new IS will be lowest if the employee, who tends to be open to new experience, feels that his or her organization supports him or her well. Therefore, the results clearly indicated the interaction effect between POS and openness to experience on employee resistance.

## 6. Discussion and Conclusion

By supporting the relationship of employee

<Table 2> Results of Hierarchical Regression Analysis for the Interaction between POS and Tolerance for Ambiguity on Employee Resistance

	Employee Resistance		
	$\beta$	$R^2$	$\Delta R^2$
POS	-.457	.365	.36
POS	-.403	.363	.001
TA	-.037		
POS	-.433		
TA	-.106	.378	.017
POS×TA	.140		

Note : All  $\beta$  coefficients,  $R^2$ , and  $\Delta R^2$  are significant at the  $p < .01$  level. TA Tolerance for Ambiguity.

<Table 3> Results of Hierarchical Regression Analysis for the Interaction between POS and Openness to Experience on Employee Resistance

	Employee Resistance		
	$\beta$	$R^2$	$\Delta R^2$
POS	-.457	.365	.36
POS	-.497	.432	.001
OE	-.045		
POS	-.476	.450	.018
OE	.022		
POS×OE	.146		

Note : All  $\beta$  coefficients,  $R^2$ , and  $\Delta R^2$  are significant at the  $p < .01$  level. OE Openness to Experience.

resistance with organizational support and the moderating effect of individual personality traits such as tolerance for ambiguity and openness to experience, the results of this study could contribute to research and practitioners both on organization and on IS with the following reasons. First, in the field of organizational research, previous work has tended to focus on a separate effect of organization or organizational support on employee resistance [e.g., Kim and Kankanhalli, 2009]. This study, however, tried to tie the association between organizational support and employee resistance. In addi-

tion, practitioners can use the results of this study, recognizing the importance of organizational support, so that they weigh more on such support when they plan to implement a new IS. Second, the mediating role of individual personality traits such as openness to experience and tolerance for ambiguity has been slightly ignored as a reason to influence individual resistance with some exceptions [see Gardner et al., 1993] in the field of IS. Practitioners who have made an effort to find a way for their employees to adopt a new IS easier would understand better why some employees may easily accept changes but others may have a hard time to adopt the same changes.

Even though the results of this study stress the vital role of organizational support on employee resistance, this study did not mention the possible positive effect of leadership that could provide effective communication as an essential part in the success of a new IS implementation [Enns et al., 2003]. Further research needs to work on this important role of leadership in the IS area.

In conclusion, we attempted to investigate an integrated role of organizational support on employee resistance accompanied by the mediating role of individual personality traits. The results of this study supported our research hypotheses and implied the importance of organizational support and each individual's personality traits. Therefore, we argue that employees, who are higher in tolerance for ambiguity and openness to experience with higher in POS, are likely to experience less resistance. Eventually, we hope that this study would shed

light on seeking constructive organizational support and environments that could positively be useful to deal with employee resistance to some degree in successful implementation of a new IS.

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