

A study on how adopting smart phone affects secretaries' work type and organizational effectiveness

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Abstract. This study aims to empirically analyze the relationship between boss's innovativeness and adopting a smart phone on secretaries' work and work type change. Also the relationship between secretaries' work type change and organizational effectiveness was analyzed. Data was collected through questionnaires to the secretaries who are currently working in various organizations. To test the hypotheses, we conducted regression analyses using SPSS 18.0. It was found that secretaries' work types, such as documentation, financial recordkeeping, meeting management, and schedule management, changed more significantly when smart phone was adopted by management than when it was adopted by individual secretaries themselves. The study shows that these changes contribute in improving organizational effectiveness of secretaries such as job satisfaction, organizational commitment and career commitment.

Keywords: smart phone, innovativeness, secretaries' work type, organizational effectiveness, job satisfaction, organizational commitment, career commitment

1. Introduction

Daily increasing trend of adoption of smart phone on work may change the workflow and method of performing office work. It enables us to work over time and space and to get the necessary information easily and rapidly. It is expected to increase the efficiency and productivity of work by changing the management style. (Kim & Im, 2010)

Secretaries perform various work depending on the organizations, boss's style, position, and level. Secretaries' duty is to support their boss so that he can focus on his core work and handle overall work more efficiently and effectively. (Jo & Choi, 2006) Secretaries' work includes documentation and financial recordkeeping, receiving call and visitors, meeting and schedule management, travel planning and information searching and management, and various kinds of work requiring real time communication and coordination, and spontaneous decision making. In this regards, adoption of smart phone on secretaries' work can change the work style so that it can be expected to increase the productivity. It can be imagined that the way of adopting and applying the smart phone on work will be different according to the innovativeness of boss. In this study we empirically investigate the relationship between those factors and how they influence each other and eventually organizational effectiveness such as job satisfaction, organizational commitment, and career commitment. Through this survey we intend to provide theoretical and practical implications.

2. Theoretical Background and Hypothesis

2.1. Innovativeness of Boss

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Innovativeness of a person means one's willingness and intention to try and use new technology. This is a kind of innate personality given as a personal characteristics, which influence the openness on new experience and stimulus and the various personal activities including adoption of new product (Midgley & Dowling, 1978). Previous surveys suggested that personal innovativeness influences the attitude on IT adoption (Venkatesh & Davis, 2000), and moderated the adoption of mobile service (Pagani, 2004). Innovativeness can influence and do the decisive role in adopting and scattering the IT product on work (Park, 2008). Based on these prior works, we propose the following Hypothesis 1.

H 1: Boss's innovativeness will influence the dimension of adopting smart phone on work.

2.2. Adopting Smart Phone and Secretaries' Work Type Change

Smart phone is a mobile phone equipped with internet and other useful software and applications. It enables us to do various functions such as information searching, sending and receiving e-mail, filing, and many other jobs which could be done by computer. Secretaries' work include receiving call and visitor, documentation, financial recordkeeping, meeting & schedule management, travel planning, filing, data management, information searching, personal networking, etc. (Hong, 1994). Almost all the secretaries' work could be supported and covered by smart phone. The adoption and utilization of smart phone on secretaries' work can be expected to change the work type.

In this regard, the dimension of adopting smart phone, that is, who (management or secretary) initiated the adoption, will influence the degree of intension and level of utilization of smart phone on secretaries' work. It will influence the degree of secretaries' work type change. Based on the discussion, we propose hypothesis 2 as follows.

H2: The dimension of adopting smart phone will influence the secretaries work type change.

2.3. Secretaries' work type change and organizational effectiveness

Generally organizational effectiveness can be estimated by workers' job satisfaction, organizational commitment and career commitment, intention to quit, and work life satisfaction. But intention to quit and work life satisfaction are usually related to variables such as job satisfaction and organizational commitment rather than an independent variable (Kim, 1999). Therefore, this study analyzed the relationship between Secretaries' work type change and job satisfaction, organizational commitment (Steel & Ovalle, 1984), and career commitment (Colarelli & Bishop, 1990) as a criteria of organizational effectiveness. By adopting and applying smart phone on secretaries' work, efficiency and productivity of their work process can be improved. Based on these discussions, we propose hypothesis 3 as follows.

H3: Secretaries' work type change by adopting smart phone will influence the organizational effectiveness positively.

H3-1: Secretaries' work type change by adopting smart phone will influence the secretaries' job satisfaction positively. H3-2: Secretaries' work type change by adopting smart phone will influence the secretaries' organizational commitment positively. H3-3: Secretaries' work type change by adopting smart phone will influence the secretaries' career commitment positively.

3. Research Methodology

3.1. Research Model

Research model is shown in Figure 1.

3.2. Samples

Data was collected by survey. We distributed 120 questionnaires to the randomly selected secretaries in corporations, government offices, educational institutions, etc. and 116 replies were received. 96 surveys were filtered from multiple firms, excluding the replies that have the missing answers and biased tendencies. Regression was used in testing the hypotheses using SPSS 18.0.

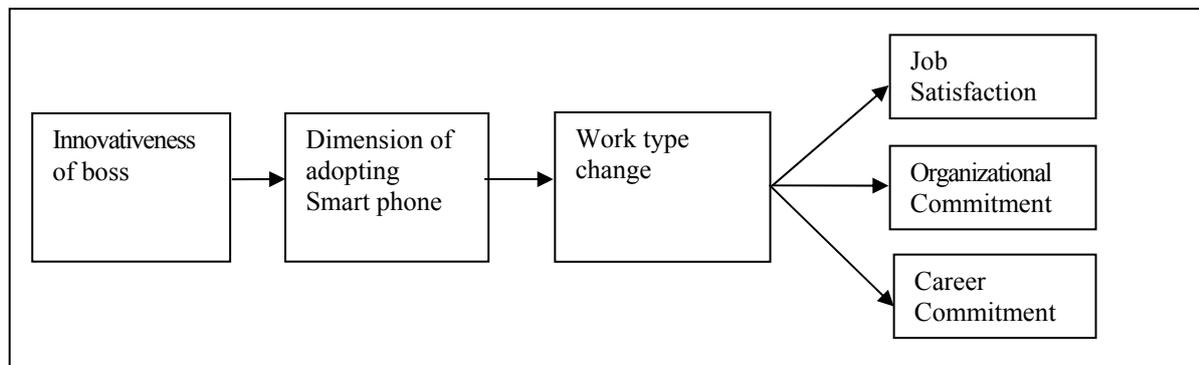


Figure1. Research Model

3.3. Variable

All the measures were scored on a five-point Likert scales. Innovativeness of boss was measured by 4 items from Innovativeness model by Tam (Rogers, 2003; Park, 2004; Yoo et al., 2006). Second, adopting smart phone on work was measured by self developed 2 items. Third, the change of secretaries' work type was measured by 13 items used by Hong (1994). Additionally an item on change in work style has been added. Last, organizational effectiveness was measured by the items used by Hong (2002).

4. Analysis

4.1. Demographic Statistics

As for the demographic profiles, female took up 98.9%. Respondents' major were consisted of secretarial and related subject 51.1%, whereas other subjects 48.9%. 64.9% of the respondents were working in corporations.

4.2. Validity and Reliability Test

We tested the internal consistency of the survey items, and dropped the items that deteriorated the Cronbach's alpha. Items were included only if their reliabilities exceed 0.7. An exploratory factor analysis was done to test the validity. The resultant set of questionnaire items demonstrated relevant validity and reliability showing factor loading 0.602 ~ 0.912 and Cronbach's alpha of 0.770 ~ 0.888.

4.3. Factor Analysis

Principle component analysis was used to extract factors and adopted varimax. Analyzed the items showing above eigen value 1.0 and factor loading 0.40. As a result, all the questionnaire items had been selected and factors extracted into 4 group: 1) documentation and financial recordkeeping, 2) receiving call and visitor and translation, 3) information management, and 4) meeting and schedule management. Explained variance was 66.399%.

4.4. Hypothesis Test and Results

4.4.1 Innovativeness of boss and dimension of adopting smart phone

Regression analysis were performed to address the relationship between Innovativeness of boss and dimension of adopting smart phone (standardized coefficient $\beta = 0.239$, p value=0.02, $R^2=0.057$, $t=2.361$). Adopting smart phone on work had been done by company rather than by person when the level of boss's innovativeness was relatively high. Therefore, the H1 is supported.

4.4.2 Dimension of adopting smart phone and secretaries' work type change

We suggested to investigate the relationship between the dimension of adopting smart phone and secretaries' work type change. We categorized secretaries' work into four groups as a result of factor analysis. Therefore, we analyzed the relation between the dimension of adopting smart phone and those four factors.

The dimension of adopting smart phone on work influenced two factors; 1) documentation and financial recordkeeping (standardized coefficient $\beta=0.218$, p value=0.035, $R^2=0.047$, $t=2.140$) and 4) meeting and

schedule management (standardized coefficient $\beta=0.343$, p value=0.01, $R^2=0.117$, $t=3.497$) significantly. However, it did not influenced the 2) receiving call and visitor and translation work, and 3) information management. These results support H2 partly.

4.4.3 Secretaries' work type change and organizational effectiveness

This study tried to verify the relationship between Secretaries' work type change and organizational effectiveness (H3). As a criteria of organizational effectiveness, we investigated the relationship between job satisfaction (H3-1), organizational commitment(H3-2), and career commitment(H3-3).

The results show that secretaries' work type change by adopting smart phone on work influenced all the factors of job satisfaction positively. They support H3.1.

In the analysis on Secretaries' work type change by adopting smart phone on work and organizational commitment, only two factors, receiving call and visitor and translation work and information management, influenced organizational commitment positively. These results provide partial support for H3.2.

In the analysis on Secretaries' work type change by adopting smart phone on work and career commitment, three factors, receiving call and visitor and translation work, information management, and meeting and schedule management, influenced career commitment positively. These results provide partial support for H3-3.

Table1. Relationship between Work Type Change and Organizational Effectiveness

Work Type Change	Job Satisfaction				Organizational Commitment				Career Commitment			
	β	p	R^2	T	β	p	R^2	T	β	p	R^2	T
documentation & financial recordkeeping	.370	.000**	.137	3.825	.197	.057	.039	1.924	.154	.139	.024	1.492
receiving call & visitor & translation	.298	.004*	.089	2.996	.246	.017*	.060	2.430	.270	.009*	.073	2.689
information management	.502	.000**	.252	5.566	.445	.000**	.198	4.768	.327	.001**	.107	3.320
meeting & schedule management	.215	.035*	.046	2.107	.121	.246	.015	1.168	.242	.019**	.059	2.396

* $p<0.05$, ** $p<0.001$

5. Discussion and Conclusion

5.1. Implications

This research attempts to empirically analyze the relationship between boss's innovativeness and adopting a smart phone on secretaries' work and work type change. Also the relationship between secretaries' work type change and organizational effectiveness was analyzed. Six Hypotheses was suggested and the results of analyses are summarized as below.

First, as expected, when the innovativeness of boss is high, smart phone has been adopted more by company rather than personal basis. Second, when the smart phone have adopted to work by company rather than by personal dimension, secretaries' work type changed much more such as in documentation and financial bookeeping, meeting and schedule management. Third, secretaries' work type change by adopting smart phone improved job satisfaction. Fourth, secretaries' work type change by adopting smart phone improved organizational commitment. Fifth, secretaries' work type change by adopting smart phone improved career commitment.

The important implication of this research is that if adopting smart phone on secretaries' work is initiated in company dimension, it will change secretaries' work type more strategically. It will influence positively in improving the job satisfaction and organizational effectiveness much more. In the meanwhile, boss's innovativeness will motivate the process.

5.2. Limitation and Suggestion

The results of this survey shows that 70% of secretaries replied on the survey adopted the smart phone by themselves rather than company dimension. This means that most of the companies didn't adopted smart phone on work officially yet or we are at the initial stage of utilizing smart phone on work. Therefore, the

results of the survey also have limitation that it cannot represent the wide range of work type and organization. If the survey will be conducted again after the smart phone is widely adopted on work and used actively, the results may show more significant implications.

6. References

- [1] S. M. Colarelli, and R. C. Bishop. Career Commitment: Functions, Correlates, and Management. *Group & Organizational Studies*. 1990, 15. pp 158-176.
- [2] G.S. Jo, and A. K.. Choi. The office procedures and technology. 2006, Daeyoung Co.
- [3] J.M. Yoo, S. H. Kim., Y.J. Yi. Determinants of Perceived Innovativeness and Their Relationship with Intention of Product Adoption: Focusing on Consumers` Perspectives. *Korea Marketing Review*. 2006, 21(2), pp. 27-52.
- [4] K.S. Kim, and H.S. Im. Smart IT and change of work. *KARI CEO Report*. 2010, (13).
- [5] Midgley et al., Innovativeness: The Concept and Its Measurement. *Journal of Consumer Research*. 1978, 4(March), pp. 229-242.
- [6] M. Pagani. Determinants of Adoption of Third Generation Mobile Multimedia Services. *Journal of Interactive Marketing*. 2004, 18(3), pp. 46-59.
- [7] E. M. Rogers. *Diffusion of Innovation*. 4th ed. NY: Free Press. 2003.
- [8] S.B. Park, and N.H. Chung. Hightech Marketing in Asia: The Moderating Effect of Personal Innovativeness on Online Game Acceptance -Using Hedonic Information System- *Korean Marketing Association*. 2008, 9(4), pp. 179-212.
- [9] S.J. Hong. Role of secretary for increasing CEO'S work efficiency. *Journal of Secretarial Science*. 1994.
- [10] S.Y. Hong. Moderating effects of trust in supervisor and justice perception on the relationship between teleworking and organizational effectiveness. Department of Business Administration, The Graduate School of Ewha Womans University. 2002.
- [11] R. P. Steel, and N. K. Ovalle. A Review and Meta-analysis of Research on the Relationship between Behavioral Intentions and Employee Turnover. *Journal of Applied Psychology* . 1984, 69, pp. 673-686.
- [12] S.K., Kim. *Human behavior in organizations*. Myungkyungsa. 1999.
- [13] V. Venkatesh, and F. D. Davis. A theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. *Management Science*. 2000, 46(2), pp. 186-204.