

A Study on the Effect of the Use of Mobile Office Systems on Work-Life Balance

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Abstract

Human being does work to live out and they have their private life because human has sociality. Both work and life are important to live out but they are on the trade-off relationship. Because keeping the balance between work and life is too hard, it has been interested by academic and practical areas. Definition of Work-life balance here is that balance or imbalance arising between work and life has no negative impact on their daily life. Above all, Work-life balance is important because it is strongly related to identity.

Recently, the introduction of the mobile office system has emerged as a way to solve the problem of work-life balance. It is based on the teleworking which was formerly generated. Teleworking is to perform the work in the employee's home or office space set aside without going into the workplace. Concept of the mobile office system here is not only using portable devices during work for convenience but also the system which is designed for the performance. Thanks to the diffusion of smart devices (smart phone, tablet pc), mobile office system has been spread.

Although the importance of mobile office systems is emerging, there are few researches about it. Even they mostly focus on the standpoint of performance of mobile office system. However, Quality of life is as important as the performance. As a part of Quality of Life field, Work-life balance is the closest to employee's quality of life. So this study aims to examine the effect of the use of mobile office systems on work-life balance. To do so, we try to find factors effecting Work-life balance from existing studies and then set a research model.

We set the use of mobile office systems as independent variables which are divided by use of function, use by location and use by situation. There are four dependent variables - sense of self command, sense of balance, solving work problem, solving life problem. We collected data from employees who are using mobile office systems on their job. 215 people were participated in the survey and we used multiple regression analysis to verify our research model.

Results show that every independent variable has no impact on solving work problem while they have slight impact on the other dependent variables. Especially use on the business trip has significant effect on dependent variables. It means that there is a possibility use of mobile office system could control the employee's quality of life and system should be evolved until it covers even critical tasks. Also, support for mobile office system -education, encouragement-should be provided. By mobile office system is maturing, future research would be done.

Keywords : Mobile Office, Quality of Life, Work-Life Balance

1. Introduction

Every human being does economic activity to live out and economic activity means earning money. On the other hand, they have their life time which is represented by their family, social activities, hobbies while they are not working. Both work and life are important to live out but they are on the trade-off relationship. Because keeping the balance between work and life is too hard, it has been interested by academic and practical areas. They found factors effecting on work-life balance are work hours, work intensity and tried to solve that problems. In spite of their effort, work-life balance was not improved.

Recently, the introduction of the mobile office system has emerged as a way to solve the problem of work-life balance. It is based on the teleworking which was formerly generated. Teleworking is to perform the work in the employee's home or office space set aside without going into the workplace. Thanks to the diffusion of smart devices (smart phone, tablet pc), mobile office system has been spread.

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2. Theoretical Background

2.1 Work-Life Balance

Further Work-Life Balance (below WLB) and Quality of Working Life has been the subject

of interest in the field of Quality Of Life. WLB is the condition required by the individual's career and life in balance. It plays a very important role in the lives of human beings to seek the economic stability and personal privacy. Clark [2000] referred to WLB as a satisfaction which is get from role conflict between work and family. Guest [2002] defined WLB as enough time to put in the work and family and he classified WLB by subject and object.

There are three representative research areas related to WLB-Quality of Life (QOL), Quality of Working Life (QWL), Work-Family Balance (WFB). QOL is most comprehensive concept among them and it includes the remaining two areas. QOL and QWL are too comprehensive and abstract to be measured and WFB does not applicable for workers without family. For these reasons, we choose WLB for our research subject.

2.2 Mobile Office Systems

Mobile office system is a descendant of the teleworking which was formerly generated. Teleworking is to perform the work in the employee's home or office space set aside without going into the workplace. It appeared that has positive impact on individual and organizational performance.

For employees mobile office system is a real-time office which is portable and convenient to carry without the constraints of time and place to perform the task [Lee, 2010]. Mobile office systems consist of devices, networks, platforms, and applications. These four elements are needed for enterprise to take advantage of mobile office systems. Concept of the mobile office systems here is not only using portable devices

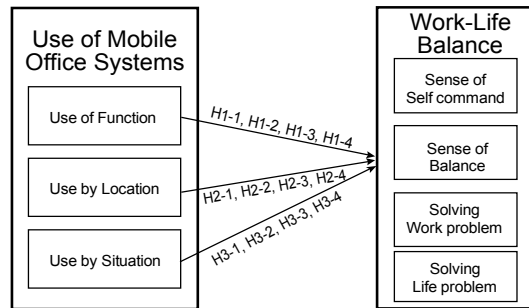
during work for convenience but also the system which is designed for the performance.

Lee and Ok [2004] studied for mobile office systems success factors based on Information Systems Success theory. Koo et al. [2012] also studied for the effect of mobile office systems quality on user satisfaction based on IS Success model. Kang et al. [2006] studied on the impact of mobility to take advantage of mobile office systems.

3. Research Method

This study attempts to examine the effect of using mobile systems on employee’s work-life balance. Based on the prior research, a set hypotheses is formulated. <Figure 1> shows the research model of this study.

- H1-1 : Use of function has a positive effect on the sense of self-command.
- H1-2 : Use of function has a positive effect on the sense of balance.
- H1-3 : Use of function has a positive effect on solving work problem.
- H1-4 : Use of function has a positive effect on solving life problem.
- H2-1 : Use by location has a positive effect on the sense of self-command.



<Figure 1> Research Model

- H2-2 : Use by location has a positive effect on the sense of balance.
- H2-3 : Use by location has a positive effect on solving work problem.
- H2-4 : Use by location has a positive effect on solving life problem.
- H3-1 : Use by situation has a positive effect on the sense of self-command.
- H3-2 : Use by situation has a positive effect on the sense of balance.
- H3-3 : Use by situation has a positive effect on solving work problem.
- H3-4 : Use by situation has a positive effect on solving life problem.

Operationalization of variables has been performed based on the existing research. <Table 1> and <Table 2> shows the operationalization of variables.

<Table 1> Operationalization of Independent Variables

Variable	Definition	Researcher
Use of Function	<ul style="list-style-type: none"> - Use of Reporting and Approval function - Use of Searching function - Use of Scheduling function - Use of Communication function 	<ul style="list-style-type: none"> - Shine and Venkatesh [2004] - Kang et al. [2006] - Choi and Na [2010] - Cho and Kim [2011]
Use by Location	<ul style="list-style-type: none"> - Use in office - Use in site - Use outside the company 	
Use by Situation	<ul style="list-style-type: none"> - Use on business trip - Use on off-hour and weekend 	

<Table 2> Operationalization Of Dependent Variables

Variable	Definition	Researcher
Sense Of Self-Command	<ul style="list-style-type: none"> - Achievement Level Of Work And Life Goal - Level Of Life Command - Level Of Work Commitment - Level Of Life Commitment - Life Doesn'T Suffered From Work - Work Doesn'T Suffered From Life 	<ul style="list-style-type: none"> - Shirley And Sue [2005] - Guest [2002]
Sense Of Balance	<ul style="list-style-type: none"> - Level Of Balance Between Work And Life - Level Of Work Achievement And Self-Improvement - Satisfaction From Work And Like 	
Solving Work Problem	<ul style="list-style-type: none"> - Ability To Solve The Problem When The Exception Occurs - Ability To Solve The Problem When Family Reason Occurs - Ability To Solve The Problem When The Health Problem Occurs 	
Solving Life Problem	<ul style="list-style-type: none"> - Ability To Solve The Problem When Scheduling Change Occurs - Ability To Solve The Problem When Weekend Work Occurs - Time That Can Be Used In The Hobby 	

4. Research Result

4.1 Data Collection and Validation

We collected data from employees who are using mobile office systems on their job. 215 people are participated in the survey. A majority of respondents were males (80.5 percent). Collected

data were analyzed by SPSS 18.0.

Validity Analysis: Factor analysis identifies four factors consistent to the design of the research: sense of self-command, sense of balance, solving work problem, solving life problem. <Table 3> shows results of factor analysis.

Reliability Analysis: We used reliability

<Table 3> Results of Factor Analysis

Question	Factor 1	Factor 2	Factor 3	Factor 4
	Sense of Self-command	Sense of Balance	Solving Work problem	Solving Life problem
WLB3	.782	.247	.223	.090
WLB4	.715	.101	.128	.352
WLB9	.697	.072	.256	.067
WLB2	.659	.375	.178	.014
WLB1	.611	.504	.098	.017
WLB8	.527	.294	-.103	.525
WLB18	.233	.821	.234	.181
WLB19	.345	.788	.222	.167
WLB17	.322	.717	.143	.279
WLB11	.157	.162	.813	.187
WLB10	.195	.175	.792	.208
WLB12	.220	.124	.765	.091
WLB16	.193	-.127	.242	.719
WLB14	.031	.451	.307	.670
WLB13	.048	.342	.312	.652
WLB15	.106	.500	-.018	.632

analysis to measure of Cronbach's α value of each construct. <Table 4> shows all of construct's value of Cronbach's α is higher than 0.6. It means that the reliability of variables is acceptable for further analysis.

<Table 4> Results of Reliability Analysis

Variable	Number of Item	Cronbach' α
Sense of Self-command	6	.845
Sense of Balance	3	.903
Solving Work problem	3	.809
Solving Life problem	4	.784

4.2 Results of Hypothesis Tests

We examined hypothesizes of our research

model using multiple regression analysis. <Table 5> shows the result of the multiple regression analysis on H1-1, H2-1, H3-1. As can be seen from the table, Hypothesis 1-1(a-d) was not supported. For three items of use by location, only H2-1c was supported ($p < 0.05$). For two items of use by situation, H3-1a was supported ($p < 0.05$).

<Table 6> shows the result of the multiple regression analysis on H1-2, H2-2, H3-2. Among four items of use of function, H1-2a ($p < 0.05$) and H1-2b ($p < 0.01$) were supported and the lest were not supported. For three items of use by location, only H2-2a was supported ($p < 0.05$). For two items of use by situation, H3-2a was supported ($p < 0.01$).

<Table 5> Results of Regression

Dependent variable	Independent variable		Beta	T	Sig.	H	Support
Sense of Self-command	Use of Function	Reporting and Approval	.059	.762	.447	1-1a	Rejected
		Searching	.196	1.454	.147	1-1b	Rejected
		Scheduling	.020	.163	.871	1-1c	Rejected
		Communication	.229	1.802	.073	1-1d	Rejected
	Use by Location	In office	.110	1.183	.238	2-1a	Rejected
		In site	.055	.424	.672	2-1b	Rejected
		Outside company	.280	2.471	.014	2-1c	Supported
	Use by Situation	On business trip	.226	2.256	.025	3-1a	Supported
		Off hour and Weekend	.173	1.731	.085	3-1b	Rejected

<Table 6> Results of Regression

Dependent variable	Independent variable		Beta	T	Sig.	H	Support
Sense of Balance	Use of Function	Reporting and Approval	.139	2.132	.034	1-2a	Supported
		Searching	.471	4.100	.000	1-2b	Supported
		Scheduling	.000	.003	.998	1-2c	Rejected
		Communication	.107	.986	.325	1-2d	Rejected
	Use by Location	In office	.285	3.418	.001	2-2a	Supported
		In site	.226	1.940	.054	2-2b	Rejected
		Outside company	.125	1.236	.218	2-2c	Rejected
	Use by Situation	On business trip	.362	3.764	.000	3-2a	Supported
		Off hour and Weekend	.112	1.168	.244	3-2b	Rejected

<Table 7> Results of Regression

Dependent variable	Independent variable		Beta	T	Sig.	H	Support
Solving Work problem	Use of Function	Reporting and Approval	.028	.349	.727	1-3a	Rejected
		Searching	.231	1.619	.107	1-3b	Rejected
		Scheduling	.040	.315	.753	1-3c	Rejected
		Communication	.073	.541	.589	1-3d	Rejected
	Use by Location	In office	.189	1.957	.052	2-3a	Rejected
		In site	-.044	-.326	.745	2-3b	Rejected
		Outside company	.215	1.831	.069	2-3c	Rejected
	Use by Situation	On business trip	.202	1.946	.053	3-3a	Rejected
Off hour and Weekend		.084	.807	.421	3-3b	Rejected	

<Table 8> Results of Regression

Dependent variable	Independent variable		Beta	T	Sig.	H	Support
Solving Life problem	Use of Function	Reporting and Approval	.051	.660	.510	1-4a	Rejected
		Searching	.258	1.884	.061	1-4b	Rejected
		Scheduling	-.050	-.410	.682	1-4c	Rejected
		Communication	.205	1.590	.113	1-4d	Rejected
	Use by Location	In office	.117	1.244	.215	2-4a	Rejected
		In site	.298	2.260	.025	2-4b	Supported
		Outside company	-.016	-.138	.890	2-4c	Rejected
	Use by Situation	On business trip	.267	2.584	.010	3-4a	Supported
Off hour and Weekend		.023	.218	.828	3-4b	Rejected	

<Table 7> shows the result of the multiple regression analysis on H1-3, H2-3, H3-3. As can be seen from the table, Hypothesis 1-3(a-d) was not supported. For use by location and use by situation were not supported.

<Table 8> shows the result of the multiple regression analysis on H1-4, H2-4, H3-4. As can be seen from the table, Hypothesis 1-4(a-d) was not supported. For three items of use by location, only H2-4b was supported ($p < 0.05$). For two items of use by situation, H3-4a was supported ($p < 0.05$).

5. Conclusion

There are two limitations of this study. First,

mobile office usage level is not high enough to be analyzed meaningfully. Because mobile office system is situated on the early stage of life cycle, it is guessed that there is a lack of systematical process to use them actively. Second, limits of the usage measurement method. We calculated usage by multiply usage frequency by usage time. It means total usage is used time itself but total usage time has some limitations. Even the total usage is same, result could be changed by other factors for example level of user's dexterity, importance of task, amount of sent information and so on. So, more elaborate measurement should be developed.

This research has some contributions to academic and practical fields. For the academic field,

this study focuses on the employee's quality of life as a result of using mobile office systems rather than focus on the performance or satisfaction by adopting them. For the practical field, according to results of this study use on business trip has positive impact to employee's WBL. It means two things to be thought. First, there is a possibility that use of mobile office system could control the employee's quality of life. Second, system should be evolved until it covers even critical tasks. Also, support (education, encouragement) for mobile office system should be provided. By mobile office system is maturing, future research would be done.

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