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합리적 모바일 업무 지시 및 모바일 정보 공유가 구성원의 직무 만족에 미치는 영향에 관한 연구: 자기 효능감의 조절 효과

A Study on the Influence of Reasonable Mobile Task Instruction and Mobile Information Sharing on Employee Job Satisfaction: The Moderating Effect of Self-Efficacy

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요약 최근 대부분 기업에서 정보기술을 활용하고 있으며 그 중요성이 날로 강조되고 있다. 또한 기술이 빠르게 변화하는 환경에서 조직은 올바른 정보기술을 활용하는데 초점을 맞추고 있다. 그러나 우수한 인적자원을 보유하고 그들의 이직을 감소시키는 것은 모든 조직이 직면한 문제이다. 이와 같은 부정적인 요소를 줄일 수 있는 요소가 직무만족이라고 볼 수 있을 것이다. 그래서 본 연구는 직무만족의 향상시킬 수 있는 요소를 탐색한다. 이와 관련하여 이 연구는 한국 중소기업에 근무하는 근로자를 대상으로 구성원들의 직무만족을 향상시키는 요소로 합리적인 모바일 업무지시와 모바일 정보공유에 초점을 두고 각각의 영향력을 밝히기 위해 실증분석을 실시하였다. 또한 모바일 업무지시와 모바일 정보공유가 직무만족에 미치는 영향력 증대 방안으로 구성원들의 자기 효능감의 조절효과를 검증하였다. 분석 결과를 통해 이 연구는 한국 중소기업에서 구성원들의 직무만족을 향상시킬 수 있는 방안을 제시함으로써 기업에서 우수한 인적자원을 보유하고 직무만족을 높여주는데 기여하였다. 또한 실무적 시사점을 제시함과 동시에 향후 연구방향에 대해 논의하였다.

Abstract Recently, most companies are using information technology and its importance is emphasized daily. In an environment where technology is changing rapidly, organizations focus on making good use of reasonable information technology. However, having excellent human resources and reducing turnover is a problem for most organizations. Accordingly, job satisfaction is a factor that can reduce negative factors and enhance positive factors. Therefore, this study explored the factors that can improve job satisfaction. In this regard, this study conducted an empirical analysis on employees who work in small and medium-sized Korean enterprises. We focused on mobile instruction and mobile information sharing as reasonable factors that improve employee job satisfaction. In addition, we examined the effects of employee self-efficacy to increase the influence of reasonable mobile task instruction and mobile information sharing on job satisfaction. Through the results, this research suggests ways to improve employee job satisfaction in the field of small and medium-sized Korean enterprises. It also provides practical implications and discusses future research directions.

Key Words : Mobile Task Instruction, Mobile Information Sharing, Job Satisfaction, Self-Efficacy, Mobile

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I. Introduction

Due to the development of computers and the internet, today's modern society is turning into an information-based one, which the IT industry is representative of Jee(2009)^[1], and the environment of the IT industry is rapidly changing with intense competition^[2]. However, IT companies are confronted with high employee turnover and therefore it is important to have and hold employees through engagement^[3]. If such a phenomenon continues, it will lead to huge negative consequences for IT companies. In this regard, it may be important for IT companies to have excellent human resources and reduce turnover to successfully adapt to these environments and improve organizational performance. We consider that job satisfaction is a factor playing a key role in reducing turnover and retaining members. Job satisfaction is positively related to various positive variables and it can reduce negative variables in organizations. For examples, job satisfaction decreases turnover^[4], improves productivity^[5], organizational commitment^[6], and organizational effectiveness^[7], retains organizational members and increases their intrinsic compensation^[8-10]. Therefore, we focus on enhancing the employee's job satisfaction in the IT industry in Korea. We also focus on reasonable mobile task instruction and mobile information sharing as a key element for improving employee job satisfaction. To enhance the effects of reasonable mobile task instruction and mobile information sharing on job satisfaction, we expect that high level of employee self-efficacy can play a moderating role. In order to verify this, we tested the influence of mobile task instruction and information sharing on job satisfaction and investigated the role of each of these two variables. In addition, we examined the moderating effects of self-efficacy on enhancing the influence of mobile task instruction and mobile information sharing on job satisfaction. Based on the results of the empirical analysis, we provide practical implications about

employee job satisfaction in Korean IT industries. We also provide various ways to improve employee job satisfaction and discuss future research directions for employee performance in the Korea IT industry.

II. Literature Review

1. Mobile information sharing

Information sharing is defined as "the degree to which each party discloses information that may facilitate the other party's activities"^[11, p. 275]. Information sharing refers to written or oral discussion of information among group members^[12]. They introduced two dimensions of conceptualizing information sharing: breadth of interpretation and depth of interpretation. Breadth of interpretation is the number of discussions among group members; and depth of interpretation is the extensiveness of group members' replies to the initiated discussions^[12]. Information sharing may play a key role in organizations. The reason is that information sharing can help firms acquire, accumulate, integrate, understand, and assemble knowledge from outside of networks, and it can increase organizational learning^[13-15]. In this regard, we define reasonable mobile information sharing as making good use of mobile devices to share knowledge and information related to work among group members. If members are to constructively share the necessary information or knowledge related to their work by mobile devices, it is expected that employees can share their knowledge, skills, and information about their work anywhere and at any time, and that this process may improve communication. We also expect that such behaviors are likely to lead to new and more useful ways of working.

2. Mobile task instruction

The highly technical literature of human and computer interaction is comprised of a stream on mobile connection and is widely focused on how mobile

phones support diverse work practices and how they are used socially in diverse settings^[16]. In such an environment, the development of mobile devices naturally reinforces the teleworking of members^[17–18]. However, we emphasize that the use of mobile devices may lead to negative behavior. For example, when an employee receives a message related to work during non-work time, his or her break time is interrupted and also reduced, which then leads to a new task^[19]. The author also suggested that if supervisors or coworkers used a mobile device to send messages related to work during non-work times, the employee who received such message may be stressed. In this regard, supervisors or organizations should try to make reasonable use of mobile devices. Thus, we define reasonable mobile task instruction as a simpler and quicker way to perform tasks using a mobile device and instruct tasks during work time. We expect that reasonable mobile task instruction may reduce employee stress and make them feel more amenable and prepared to perform tasks, and ultimately increase personal and organizational performance.

3. Self-efficacy

The concept of self-efficacy originates from Bandura(1977)^[20]. Self-efficacy is defined as “an individual’s beliefs in one’s capabilities to organize and execute the course of action required to produce given attainments”^[21, p. 3]. It refers to the belief of individuals in their abilities to organize, which are necessary for producing given attainments^[22]. Employee self-efficacy is seen as a key element of them. For example, it is positively related to job satisfaction^[23–24], and negatively related to perceived work stress^[24], and job performance^[23]. Individuals with a high level of self-efficacy beliefs put in more effort, are tenacious longer on a difficult task, and set higher goals^{[25],[21]}. Moreover, a high level of self-efficacy exerts considerable effort on coping with situations that may demand higher performance levels or new behavior patterns^[25] and leads to more engagement, more

learning, and better achievement^[27]. According to this, employees with higher self-efficacy may challenge themselves on more difficult tasks requiring higher levels of performance. We consider that such behavior may lead to a higher level of personal or organizational performance.

4. Job satisfaction

Job satisfaction is a key factor on individual well-being and organizational functioning^[28]. It is one of the most commonly studied variables in organizational research. Job satisfaction is defined as “one’s affective attachment to a job viewed either in its entirety (global satisfaction) or with regard to particular aspects (facet satisfaction; e.g., supervision)”^[29, p. 261]. More specifically, it refers to a sense of gratification, fulfillment, and satisfaction from a job^[30–31] and the degree to which people feel their job-related needs are being met^{[30], [32]}. Job satisfaction is positively associated with organizational commitment^[33], organizational citizenship behavior^[34], organizational trust^[35], and negatively associated with turnover intention^[33]. According to this, if employees have a high level of job satisfaction, the level of organizational performance will be increased and employee turnover intention will be decreased. Thus, job satisfaction is considered to be a key variable to retain human resources.

5. The relationship between mobile information sharing, reasonable mobile task instruction and job satisfaction

Information sharing is a type of collaborative communication that supports business growth and trust^[36]. Positive experiences of knowledge sharing may increase mutual trust among team members and decrease perceived risk^[37]. In addition, trust is positively related to job satisfaction^[38]. According to such processes, Tong, Tak & Wong(2015)^[39] suggest that job satisfaction may be positively related to knowledge sharing. In this regard, sharing information

using mobile devices is more convenient for organization members and is available any time or anywhere. Therefore, mobile information sharing allows organization members to acquire information easily. This function of sharing is expected to lead to organizational job satisfaction.

Mobile communication can allow organization members to exchange multiple types of information^[19]. The author suggested that this way of information exchange in real time can clearly play a significant role in enhancing business performance. However, communicating information exchange using mobile devices has negative aspects as well. For example, in certain hierarchical cultures, if the power gap between subordinates and supervisors is high, supervisors may give certain unfair job instructions to subordinates^[19]^[40]. In this situation, the subordinates may have to be obedient to their supervisors' instructions^[19]. Furthermore, the author suggested that if subordinates receive such work instructions during non-work times, they will experience excess burden and a high level of stress. This high level of work stress is a key factor of job dissatisfaction^[41]. Thus, such abnormal or unreasonable task instruction using mobile devices may be positively related to employee job dissatisfaction. On the other hand, we found that task instruction using mobile devices during employee work time may increase job satisfaction. The reason for this is that employees may recognize such task instruction using mobile devices as reasonable and also perceive that their break time is not being disturbed. Thus, stress may be reduced and this is expected to increase job satisfaction. In this regard, reasonable mobile task instruction may increase job satisfaction. Based on this, the hypotheses are set as follows:

H1: Mobile information sharing will have a positive influence on job satisfaction.

H2: Reasonable mobile task instruction will have a positive influence on job satisfaction.

6. The moderating effect of self-efficacy

Self-efficacy is a core mechanism in the social cognitive theory that postulates that achievement depends on interactions between personal factors, behaviors, and environmental conditions^[42]. In the workplace, employees with higher levels of confidence and who regard their ability to lead to a difference at work recognize their work environment as more satisfying^[43]. As well, the authors suggest that such employees can create the conditions that may arouse their own satisfaction and happiness at work. Therefore, employees who have high levels of self-efficacy may become more satisfied at work, which is the reason that such employees may be more effective^[44]. Thus, self-efficacy may have a positive influence on job satisfaction.

In organizations, we consider that if coworkers or supervisors share their information or knowledge related to tasks using mobile devices, they will receive and collect more information and knowledge. Moreover, knowledge has a positive influence on self-efficacy^[45]. It is expected that higher levels of mobile information sharing may lead to higher levels of self-efficacy. Self-efficacy is the core element to satisfaction at work^[43]. According to this, when higher levels of mobile information sharing behavior and higher levels of self-efficacy interact with each other, job satisfaction may be higher.

The use of mobile devices to deal with tasks disregarding the boundaries of time and place of work is a stress factor that results in mental and physical strain in terms of job overload, role ambiguity, and job instability^[18]. Furthermore, negative emotional and physiological states such as pain and stress reduce self-efficacy. On the contrary, positive physiological states such as feeling relaxed and fit promote self-efficacy^[46]. Thus, unreasonable mobile task instruction is expected to reduce employee self-efficacy. Ultimately, low levels of self-efficacy may lead to low levels of job satisfaction. On the other hand, using mobile devices to instruct during employee

work time reduces their worries and burdens, provides convenience and reduces the burden of work. This process expects that employee self-efficacy may be improved. Due to these theories, interactions with a higher level of reasonable mobile task instruction and a higher level of self-efficacy may increase an employee's job satisfaction. The hypotheses are set as follows:

H3: Self-efficacy will have a positive influence on job satisfaction.

H4: Self-efficacy will positively moderate the relationship between mobile information sharing and job satisfaction.

H5: Self-efficacy will positively moderate the relationship between reasonable mobile task instruction and job satisfaction.

III. Methodology

1. Sample and procedures

For verifying the hypotheses of this study, we collected the data from employees in Korea. The data was collected from September 2018 to October 2018. A total of 290 participants participated in this survey and all of the questionnaires were used in this research. The results of the demographic analysis showed the following characteristics of the sample: 158 males (54.4%) and 132 females (45.5%) participated in this survey. In terms of age, 66 (22.8%) were in their 20s, 75 (25.9%) were in their 30s, 87 (30.0%) were in their 40s, and 62 (21.3%) were 50 or older. In regards to participants' company service, 21 (7.2%) participants had worked for less than 1 year at their current workplace, 84 (29.0%) had worked for 1~5 years, 55 (19.0%) had worked for 6~10 years, 32 (11.0%) had worked for 11~15 years, 47 (16.2%) had worked for 16~20 years, and 51 (17.6%) had worked more than 20

years.

2. Measures

We defined mobile information sharing as making good use of mobile devices to share knowledge and information related to work among group members. Mobile information sharing was measured by five items. The measurement of information sharing was developed by Golden & Raghuram(2010)^[47]. Based on their measurement, we added the contents related to mobile devices and created the measurement of mobile information sharing. Sample items included, "We use mobile devices to discuss work-related problems or solutions."

We defined reasonable mobile task instruction as a simpler and quicker way to instruct and perform tasks using a mobile device during work time. It was measured by four items. We created the measurement based on Hahm(2018)^[19]. Sample items included, "Our team members do not feel uncomfortable with mobile communication."

Self-efficacy was defined as the belief of individuals in their abilities to organize and their confidence in producing given attainments[22]. It was measured by four items from Wright(2004)^[48]. Sample items included, "I am confident that I can successfully perform any tasks assigned to me on my current job."

Job satisfaction is defined as an individual's affective attachment to his or her job[29]. It was measured by four items from Mossholder, Settoon & Henagan(2005)^[49]. Sample items included, "All in all, I am satisfied with my job."

For all of the variables presented above, the 7-point Likert scale was used. The range was from 1 (Strongly-Disagree) to 7 (strongly agree).

IV. Results

Table 1 displays the findings of the goodness of fit of the model. We conducted a confirmatory factor

analysis to examine the construct validity using an AMOS18 program. The results of a confirmatory factor analysis were as follows: The absolute fit indexes showed $\chi^2/df = 2.191$, RMSEA = .064. The incremental fit indexes showed TLI =.956, CFI = .961, NFI = .931, IFI = .961. The parsimony adjusted indexes showed PNFI = .820, PGFI = .703. Therefore, these results of fit indexes show an acceptable fit value according to Osman, Purwana, & Saptono(2017)^[50]. Therefore, the absolute fit indexes, incremental fit indexes, and parsimony adjusted indexes can be considered acceptable and valid. Then, we examined the average variance extraction (AVE) and composite reliability (C.R). All of the AVE variables were shown to be higher than .5 (mobile information sharing=.656, reasonable mobile task instruction=.649, self-efficacy=.718, job satisfaction=.780). All of the C.R variables were shown to be higher than .7 (mobile information sharing=.849, reasonable mobile task instruction=.736, self-efficacy=.952, job satisfaction=.899). According to Lee, Cheung & Chen[51], when the value of C.R is higher than .7 and AVE is higher than .5, the values have a significant composite reliability. Therefore, the AVE and C.R of this study have significant composite reliability.

Table 2 displays the results of the descriptive statistics, reliability, and correlation analysis. The results of the reliability analysis showed all of the variables were higher than .7 (mobile information sharing=.914, reasonable mobile task instruction=.868, self-efficacy=.956, job satisfaction=.948). Nunnally had suggested that Cronbach's alpha is acceptable and significant when the value of Cronbach's alpha is more than .7[52] According to this, all values of variables are all above .7 and they can be considered significant and valid.

The results of correlation were shown as follows: Mobile information sharing was positively related to self-efficacy ($r=.471, p<.001$) and job satisfaction ($r=.409, p<.001$). Reasonable mobile task instruction was also positively related to self-efficacy ($r=.305,$

$p<.001$) and job satisfaction ($r=.388, p<.001$). Self-efficacy was positively related to job satisfaction ($r=.532, p<.001$).

표 1. 확인적 요인분석 모델 적합도

Table 1. The results of the goodness of fit of the model

	AVE	C.R
Mobile information sharing	.656	.849
Reasonable mobile task instruction	.649	.736
Self-efficacy	.718	.952
Job satisfaction	.780	.899
Absolute fit indexes	$\chi^2/df=2.191, RMSEA=.064$	
Incremental fit indexes	TLI=.956, CFI=.961, NFI=.931, IFI=.961	
Parsimony adjusted indexes	PNFI=.820, PGFI=.703.	

표 2. 기술통계, 신뢰도, 상관관계 분석 결과

Table 2. The results of the descriptive statistics, reliability, and correlation analysis

	Cronbach's alpha	Mean	Std. Deviation	1	2	3	4
1	.914	5.1428	1.13194	-			
2	.868	4.5586	1.38017	.541***	-		
3	.956	5.2668	.91158	.471***	.305***	-	
4	.948	4.7922	1.28848	.409***	.388***	.532***	-

1=Mobile information sharing, 2=Reasonable mobile task instruction, 3=Self-efficacy, 4=Job satisfaction
 ***: $p<.001$, **: $p<.01$, *: $p<.05$

To verify the hypotheses of this study, regression analysis was performed using the SPSS18 program. First, we examined the influence of mobile information sharing and reasonable mobile task instruction on job satisfaction. The results showed that mobile information sharing ($\beta=.282, p<.001$) and reasonable mobile task instruction ($\beta=.236, p<.001$) had a positive influence on job satisfaction. Thus, H1 and H2 are supported. Table 3 shows the results of the influence of mobile information sharing and reasonable mobile task instruction on job satisfaction.

표 3. 합리적 모바일 업무지시와 모바일 정보공유가 직무만족에 미치는 영향

Table 3. The Influence of Reasonable Mobile Task Instruction and Mobile Information Sharing on Job Satisfaction

	Dependant: Job satisfaction		
	step 1		
	β	t	VIF
Mobile information sharing	.282***	4.507	1.415
Reasonable mobile task instruction	.236***	3.774	1.415
R^2		.207	
ΔR^2		.202	
F		37.468***	

***:p<.001, **:p<.01, *:p<.05

Table 4 showed the influence of self-efficacy on job satisfaction. The results showed that self-efficacy ($\beta = .532, p < .001$) had a positive influence on job satisfaction. Therefore, H3 is supported.

표 4. 자기효능감이 직무만족에 미치는 영향

Table 4. The Influence of self-efficacy on job satisfaction

	Dependant: Job satisfaction		
	step 1		
	β	t	VIF
Self-efficacy	.532***	10.654	1.000
R^2		.283	
ΔR^2		.280	
F		113.505***	

***:p<.001, **:p<.01, *:p<.05

Table 5 shows the moderating effect of self-efficacy on the relationship between mobile information sharing and job satisfaction. Step 1 shows mobile information sharing ($\beta = .409, p < .001$) had a positive influence on job satisfaction. Step 2 shows self-efficacy ($\beta = .435, p < .001$) had a positive influence on job satisfaction. Step 3 shows self-efficacy ($\beta = .139, p < .01$) positively moderated the relationship between mobile information sharing and job satisfaction. Thus, H4 is supported.

표 5. 모바일 정보공유와 직무만족 간의 관계에서 자기효능감의 조절효과

Table 5. The moderating effect of self-efficacy on the relationship between mobile information sharing and job satisfaction

	Dependant: Job satisfaction					
	Step 1		Step 2		Step 3	
	β	t	β	t	β	t
Mobile information sharing	.409***	7.617	.204	3.689	.202***	3.681
Self-efficacy			.435***	7.862	.469***	8.367
Interaction					.139**	2.792
R^2						1.057
(Adj- R^2)	.168(.165)		.315(.310)		.333(.326)	
ΔR^2						
(Adj- R^2)	-		.147(.145)		.018(.016)	
F	58.022***		66.040***		47.669***	

***:p<.001, **:p<.01, *:p<.05

Figure 1 shows the moderating effect of self-efficacy on the relationship between mobile information sharing and job satisfaction. The graph shows that job satisfaction increases when employees experience a high level of mobile information sharing. Furthermore, job satisfaction is higher when employees have higher levels of self-efficacy rather than lower levels of self-efficacy.

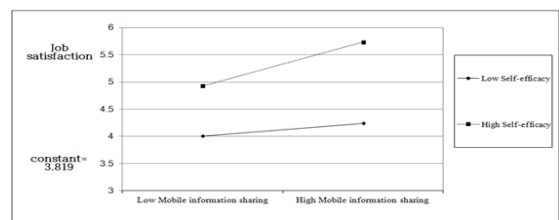


그림 1. 모바일 정보공유와 직무만족 간의 관계에서 자기효능감의 조절효과 그래프

Fig. 1. The graph of moderating effect for self efficacy(between mobile information sharing and job satisfaction)

Table 6 shows the moderating effect of self-efficacy on the relationship between reasonable mobile task instruction and job satisfaction. Step 1 shows reasonable mobile task instruction ($\beta = .388, p < .001$) had a positive influence on job satisfaction. Step 2 shows

self-efficacy ($\beta=.456, p<.001$) had a positive influence on job satisfaction. Step 3 shows self-efficacy ($\beta=.126, p<.05$) positively moderated the relationship between reasonable mobile task instruction and job satisfaction. Thus, H5 is supported.

표 6. 합리적 모바일 업무지시와 직무만족 간의 관계에서 자기효능감의 조절효과

Table 6. The moderating effect of self-efficacy on the relationship between reasonable mobile task instruction and job satisfaction

	Dependent: Job satisfaction						VIF
	Step 1		Step 2		Step 3		
	β	t	β	t	β	t	
Reasonable mobile task instruction	.388***	7.155	.250***	4.952	.231***	4.590	1.125
Self-efficacy			.456***	9.042	.481***	9.461	1.147
Interaction					.126*	2.586	1.047
R^2							
(Adj- R^2)	.151(.148)		.339(.335)		.354(.347)		
ΔR^2							
(Adj- R^2)	-		.188(.187)		.015(.012)		
F	51.191***		73.651***		52.304***		

***: $p<.001$, **: $p<.01$, *: $p<.05$

Figure 2 shows the moderating effect of self-efficacy on the relationship between reasonable mobile task instruction and job satisfaction. The graph shows job satisfaction increased when employees experienced a high level of reasonable mobile task instruction. Furthermore, job satisfaction was higher when employees had a higher level of self-efficacy rather than having lower levels of self-efficacy.

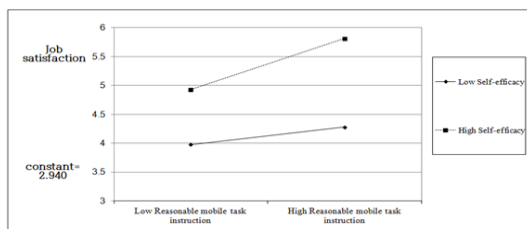


그림 2. 합리적 모바일 업무지시와 직무만족 간의 관계에서 자기효능감의 조절효과 그래프

Fig. 2. The graph of moderating effect for self efficacy(between reasonable mobile task instruction and job satisfaction)

V. Discussion

1. Conclusion and research implications

The purpose of this study is to examine the influence of mobile information sharing and reasonable mobile task instructions on employee job satisfaction and also to examine the moderating effect of self-efficacy. The conclusion and research implications of this study are summarized as follows: First, mobile information sharing can increase employee job satisfaction. This suggests that it is possible to enhance employee job satisfaction by using mobile devices. Employees' knowledge and skills related to work may be increased by using mobile devices, which can provide diverse information and knowledge related to their work. It suggests that it is necessary to activate behavior by sharing information using mobile devices. Second, reasonable mobile task instruction can increase job satisfaction. This suggests that supervisors or organizations should give tasks within a reasonable framework. For example, giving tasks using mobile devices during work hours may save time and facilitate rapid communication. On the other hand, we emphasize that supervisors or organizations should not use mobile devices to give certain tasks during break times or on weekends. It may increase employee job stress, work family conflicts, job burnout, and so on. Third, it is important to increase employee self-efficacy. Self-efficacy may play a key role in promoting self-confidence in performing tasks and achieving higher levels of individual or organizational performance. Also, we emphasize that a higher level of self-efficacy may lead to a higher level of job satisfaction. Organizations, supervisors, or coworkers need to acquire job-related information and knowledge, and experiences such as successful business performance will enhance their self-efficacy. Organizations or supervisors should act to make employees acquire information and knowledge related to work, and successful experiences related performing tasks will enhance their self-efficacy. Fourth, Figure 1

and Figure 2 are graphs of the moderating effects of self-efficacy. The two graphs show that the moderating effect of self-efficacy seems to be similar. This suggests that interaction of mobile information sharing and self - efficacy leads to higher job satisfaction. Also, the interaction of reasonable mobile task instruction and self efficacy leads to higher job satisfaction.

2. Limitations and future directions

The limitations and future directions of this study are summarized as follows. First, there were limitations in selecting samples. Originally, we should have conducted research on employees who work in the Korean internet information industry. However, there were various limitations to conduct such a survey. In future research, researchers should examine the influence of mobile information sharing and reasonable mobile task instruction among employees in the Korean internet information industry. Second, we focused on only one dependent variable, which was employee job satisfaction. We considered that mobile information sharing may increase employee creativity or task-related ability. Nowadays, companies are becoming more and more interested in employee creativity because of competitiveness. According to this, future studies should emphasize the positive aspects of mobile information sharing and investigate various positive performance variables, which can be increased by mobile information sharing. Third, this study focused only on the positive aspects of mobile devices. We recognize that there are negative aspects of using mobile devices in companies. For example, there are political behaviors using personal power through mobile devices, mobile task instruction during non-work time and so on. In this regard, future studies should need to focus on the reasonable use of mobile devices. Furthermore, it is necessary to verify the negative consequences of using mobile devices. Fourth, in the future research direction, it is important to investigate the effect of the Mobile Office System^[53] on

information technology employees' job satisfaction. In addition, in-depth research on mobile commerce^[54] should be conducted.

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