Working from home during pandemic Covid-19: Effects of mobile technology use, supervisor support and job insecurity on employee's role stress and job satisfaction

Edward Rorong[1], Hanifah[2], Pandapotan Siagian[3], Pandi Pakolo[4]

[1,2] Magister Manajemen, Universitas Prasetiya Mulya, Jakarta, Indonesia

Abstract

This study is to examine the relationship among mobile technology use, supervisor support, job insecurity, role stress and job satisfaction during working from home (WFH) in pandemic Covid-19. A descriptive research using questionnaires were distributed to employees in Jakarta areas (Jabodetabek). A total of two hundreds forty four valid questionnaires were collected. Factor analysis and regression analysis were used in this study. Based on the result of analysis, note that mobile technology use, supervisor support and job insecurity each have significant effect on role stress. In testing direct effect on job satisfaction, supervisor support, job insecurity and role stress were statistically significant, while mobile technology not significant. Role stress were mediating supervisor support and job insecurity toward job satisfaction. The findings of this study provide insight for company's policies and strategies in adopting WFH/telecommuting activity as well as providing necessary support for employees knowing that WFH/telecommuting is not a work culture In Indonesia. Few research has been studied the impact of mobile technology use, supervisor support and perception of job insecurity towards to role stress and job satisfaction in the pandemic Covid-19 context.

INTRODUCTION

World Health Organization (WHO) was declared that COVID-19 as a pandemic in the world on 11 March 2020. Many countries have decided to lockdown towns and countries for certain period. The virus is spreading through human to human interactions. Therefore isolation or social distancing of people is one of the solution to stop or minimize the spreading of the virus. Indonesia's Government decided to close borders, postponing social events and shutdown industries and commercial activities for certain period of lockdown. The purpose was keeping people in isolation and minimize the spread of virus, however, has negative effects in the economy and business sectors (Smith, et al., 2020). Many industries were collapse and the urgency to reopen commercial business was considered with strict health protocols. Business organizations have to adapt to new working behaviors during lockdown period

transition to new normal. Working from home (WFH) was one of alternative taken by business organizations to keep business running and on other hand comply with health protocols. The use of mobile technology was an important part to keep employees performing their role during WFH. The mobile technology use reduces employee's role stress and increase job satisfaction (Roman et al., 2018). Social distancing also create gap between coworkers, supervisor and organization itself even though mobile technology also allowed employees to meet with co-worker and supervisors virtually (Andreev, et al 2010; Archibald, et al., 2019). Meanwhile, support from supervisor lessen role stress of employees and increase job performance and job satisfaction (Babin and Boles, 1996). Furthermore, employees may experience uncertainty related to their job continuance in the organizations during pandemic. Job insecurity perception is one of

work stressor and there is positive relationship between job insecurity and role stress (Masia and Pienaar, 2011). This pandemic phenomenon may affect both employees and employers since WFH is not a work culture in many business organizations in Indonesia. For this reason, the study is to examine the relationship between mobile technology use, supervisor support, job insecurity, employee's role stress and job satisfaction in the context of WFH during pandemic COVID-19.

Mobile Technology

Business organizations required to make adjustments in an unexpected condition to support organization's contingency plan (Simpkins, 2009) for example on pandemic Covid-19 condition. The use of mobile technology and its information are relevant to improve existing interaction between organization and its employees either in workplace or from home/virtual office (Golden et al., 2009). The use of mobile technology have positive impact on employees (Yueh et al., 2016; Chung et al., 2015) in their work performance. In the context of WFH due to pandemic COVID-19, the use of mobile technology especially virtual meetings have positive significant impact to productivity of employees in Jakarta (Suhardi et al., 2020). Mobile technology improved communication with co-worker and keep them connected in the team (Grieco, et al., 1995). Based on (Nuskiya, et al., 2018), technology advancement helped employee more effective in completing their work. As the result, technological advancement improved the performance of organizations (Obeng, et al., 2018). During pandemic COVID-19, employees continue to working remotely by using mobile technology (Vargo et al., 2020). Telework by using technology during pandemic increased efficiency (Baert et al., 2020). Roman et al (2018) grounded their study on Job Demand-Control (JD-C) theory (Karasek, 1979) to describe that mobile technology use as a tool by employee to increase job control to deal with their job's demand. It also described by Karasek, that job control may closely related to organization's structure and technology. As the result, it would reduce role stress and improve job satisfaction. Therefore, the hypothesis is the following:

H1. Mobile technology use is negatively related to role stress

Supervisor Support

Based on role dynamics theory, employees learn about their roles in organizations from members of their supervisors and co-workers through information communicated to them (Kahn, et al., 1964). The combination of job's high demands, but lacking of support and low control had higher risks of psychological stress (Karasek & Theorell, 1990). Some studies recommended to reduce role stress according to classic organizational theory, which an employee must be supervised by direct supervisor (Michael, et al., 2009). Supervisor support is reflected by a degree of supervisor offer subordinate support, concern and encouragement (Burke, et al., 1992). Based on (French, et al., 2018), work support which defined as psychological or material resources can mitigate work stress. In the example, role stress which caused by overload can be reduced by supervisors and co-worker's support (Frone et al., 1997). Supervisor support may affect employee's performance and increased degree of supervisor support reduce role stress (Babin and Boles, 1996). In the context pandemic situation, WFH has negative effect on employee's performance due to lack of supervision (Lippe, 2019). Lack of face to face communication with supervisor may impact negatively for employees. It is also challenge for supervisor to coordinate subordinate who are physically in different places (Greer et al., 2014). Degree of employee's commitment may reduce as well as job satisfaction when there is lack of social support from organization (Lynch et al., 1999). However, through mobile technology such as Microsoft Teams, Zoom and others virtual meeting application, an employee may still get guidance and support from supervisor (Vargo et al., 2020) during WFH. Based on those previous studies, we propose the following hypothesis.

H2: Supervisor support is negatively related to role stress

Job Insecurity

Economic instability incurred during pandemic COVID-19 creates uncertainty for business going concern. The downturn may impacted to both employers and employees. Many employers reduce employee's benefits even laid off their employees to survive. This create doubts of job security for employees. Job

insecurity is defined as insecure feeling (psychological condition) felt by employee due to working environmental changes (Smithson & Lewis, 2000). Job insecurity also defines as powerlessness to maintain desired continuity in a threatened job situation (Greenhalgh and Rosenblatt, 1984). Hellgren et al (1999) described job insecurity as subjective, implies uncertainty about the future and doubts of employment continuance. Term quantitative job insecurity is referred to concern about future of current job. Meanwhile, qualitative job insecurity is referred to perceived threats quality of employment relationship such as career progress and increase benefits (Hellgren et al., 1999). The others studies found that job insecurity is significantly and negatively related to organizational attitudes, mental and physical health and performance of employee. This has been identified as main source of job stress (Sverke et al., 2002, Storseth, 2006). Other study identified that job insecurity as major source of job stress which increased perception of overload and role ambiguity as well as reduced commitment and more negative outcomes (Probst and Brubaker, 2001). Job insecurity is positively related to role stress and negatively related job satisfaction (Masia and Pienaar, 2011). According to previous studies, we propose our hypothesis as follow.

H3: Job insecurity is positively related to role stress

Role stress and Job Satisfaction

Employees were experiencing role stress owing to their role in organization (Behrman and Perreault, 1984). An employee is experiencing role stress when he or she tries to fulfill behaviors that are expected to perform assigned role (Delpechitre et al., 2017). Role stress is not only caused by pressure, but also due to employee's perception of the demand and control of resources to deal with (Cox, 1978). There was degree of variance how employee perceive job demand as strain of stressful (Mulki et al., 2008). Therefore, JD-C theory can be considered as highly stressful by some employees and plausible by others, subject to employee's job control and resources. Some researchers represented dimensions of role stress into role overload, role ambiguity and role conflict (Johnson and Sohi, 2014; Mulki et al., 2008; Singh, 1998).

Role conflict occurs when expectation and demands are incompatible (Rizzo, et al., 1970). Role ambiguity refers to lack of information or uncertainty of expectations from role sender (Singh, 1998). Role overload occurs when work demand expectations are not possible to be completed within given time limit (Latack, 1981). Job satisfaction is one of the most commonly studied in Human Resource literature. Job satisfaction is expressed positive feeling of employee as the result of performance appraisal of his/her job (Locke, 1976). Many studies recognized that role conflict and role ambiguity are the role stressor as well as overload perception reduced job satisfaction of employees (Mulki et al., 2008). Roman, et al (2018) confirmed that role stress is negatively related to job satisfaction. Thus, we propose a hypothesis as follow.H4: Role stress is negatively related to job satisfaction

Role Stress as Mediation Variable

Those hypotheses of H1, H2, H3 and H4 are also interpret that independent variables also related to job satisfaction through role stress as mediation variables. Therefore, we propose the hypothesis as follow:

H5: Role stress mediates mobile technology use and job satisfaction

H6: Role stress mediates supervisor supports and job satisfaction

H7: Role stress mediates job insecurity perceptions and job satisfaction

The research model is presented in Figure 1 below.
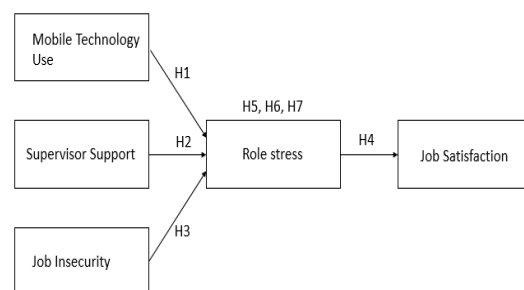
Figure 1 – Research Model

METHODS
Data sources
Quantitative survey was conducted to collect empirical data. Primary data collected through online questionnaires form to respondent in Jakarta Bogor Depok Tangerang and Bekasi (Jabodetabek). Simple random sampling method was used in this research. Researcher set two preliminary filters as the criteria for valid respondents limited to permanent employees and worked from home (WFH) during pandemic Covid-19. Sampling was done in February - March 2021. Total of 298 random respondents accepted and validated for total 244 respondents based on filter criteria. Please see table Appendix 1 for demographic characteristic of respondent's.

Table 1 – Research Model

	Frequency	%	Cumulative %
Gender			
Female	127	52	52
Male	117	48	100
Total	244	100	
Age group			
<= 23 years old	8	3	3
24-30 years old	65	27	30
31-35 years old	53	22	52
36-40 years old	51	21	73
41-45 years old	26	11	83
> 45 years old	41	17	100
Total	244	100	
Education			
Junior high school	1	0	0
Senior high school	9	4	4
Bachelor	189	77	82
Master	45	18	100
Total	244	100	
Income/year			
below 100 million Rupiah	72	30	30
101-300 million Rupiah	96	39	69
301-500 million Rupiah	34	14	83
Above 500 million	42	17	100
Total	244	100	
Number of WFH			
1-2 days	49	20	20
3-4 days	71	29	49
More than 4 days	124	51	100
Total	244	100	

	Frequency	%	Cumulative %
Industries			
Finance institution	43	18	18
Mining	26	11	28
Property and construction	17	7	35
Trading	16	7	42
Consumer goods	15	6	48
Plantation and farm	14	6	54
Infrastructure & Utilities	13	5	59
Chemical industry	7	3	62
E-Commerce	3	1	63
Other industries	90	37	100
Total	244	100	
Work service period			
Less than 2 years	34	14	14
2 - 5 years	73	30	44
6 - 10 years	62	25	69
More than 10 years	75	31	100
Total	244	100	
Position			
Staff	66	27	27
Senior Officer	29	12	39
Supervisor	23	9	48
Asisstant Manager	23	9	58
Manager	74	30	88
General Manager	13	5	93
Direktur	16	7	100
Total	244	100	
Department			
Marketing & Sales	29	12	12
Finance & Treasury	103	42	54
Operasional	32	13	67
HR & IT	21	9	76
Others support function	59	24	100
Total	244	100	
Size of company			
Big	181	74	74
Medium	42	17	91
Small	21	9	100
Total	244	100	
Virtual application use			
MTeams	119	49	49
Zoom	80	33	82
Google Meet	29	12	93
Webex	11	5	98
Bluejeans	3	1	99
Whatsup	2	1	100
Total	244	100	

Data analysis tools and technique
Valid data were processed and analyzed using multiple regression analysis by IBM SPSS 23 version (SPSS). Researcher applied t values at 0.05 significance level to examine direct effect of mobile technology use, supervisor support, and job insecurity to role stress as well as role stress to job satisfaction. The effect of role stress as mediating variable between mobile technology uses, supervisor support, job insecurity and job satisfaction have been examined by using Process Procedure for SPSS version 3.5 in SPSS.

Measuring instruments
Mobile technology use variable was consists of three constructs. Two constructs was adopted from DelVecchio and Anselmi (2006) to measure extent of smartphones and laptop to conduct job activities during WFH. Researcher was added virtual meeting application as additional construct of mobile technology. Seven point Likert questions was applied with ranged from 1 = "I do not use this technology at all in my job when WFH during pandemic Covid-19" and 7 = "I use this technology a great deal in my job when WFH during pandemic Covid-19". The remaining scales were used seven-point Likert questions ranged from 1 = "strongly disagree" to 7 =

"strongly agree". Six items measuring supervisor support were adapted from House and Wells (1978). This scale has been used and reported high validity and reliability (Deeter & Ramsey, 1997). Researchers used six items scale of job insecurity of Hellgren et al. (1999). Role conflict, role ambiguity and role overload were presented dimensions of role stress. Those were measured from shortened version items from Rizzo et al. (1970) and Beehr et al. (1976). Role overload scales have high validity and reliability (Singh, 1998). Meanwhile, Rizzo et al.'s scale have been proved in many studies regarding both reliability and validity (Roman and Iacobucci, 2010). Three items scale of job satisfaction was used in this study based on scale developed by Churchill et al. (1974). The short version was determined positive evidence of reliability and validity (Onyemah, 2009).

RESULTS AND DISCUSSION
Demographic of respondents
From 244 respondents, 52% were female, 78% were bachelor graduates, 48% were in above 35 year age group, 61% were above supervisor level position, 80% of respondents have more than 3 days a week WFH experience during pandemic Covid-19, 70% were in the above Rp100 million/year income group and all respondents were used virtual meeting application during WFH.

Validity and reliability
Researcher was assessed the validity and reliability of 24 statements by performing a confirmatory factor analysis (CFA) and measuring reliability based on Cronbach alpha value. Standard loading for constructs were ranged from 0.565 to 0.911 which meaning that all items were good measures of respective factors (Hair et al., 2010). Scales reliability have been tested and found that all alpha coefficient greater than 0.70 (Nunnally and Bernstein, 1994). Kaiser Meyer Olkin (KMO)'s value were ranged from 0.661 to 0.865 which the minimum above 0.5. The components have Eigen value more than 1 which considered as a factor. Based on the validity and reliability assessment (Table II) of the constructs, a further examination using multiple regression analysis was developed using these factors.

Table 2. Validity and reliability

Factors	Range factor loading	Eigen values	Explained variance	KMO	Cronbach's alpha
Mobile technology use	0.700 - 0.870	1.950	65.001	0.629	0.717
Supervisor support	0.836 - 0.911	4.655	77.585	0.865	0.941
Job insecurity	0.627 - 0.799	3.243	54.050	0.761	0.828
Role stress	0.565 - 0.797	2.988	50.804	0.797	0.787
Job satisfaction	0.761 - 0.896	2.147	71.560	0.661	0.796

Multiple regression analysis
Multiple regression was conducted to examine the relationship between independent variables and dependent variable. Prior to multiple regression analysis, it is used to check data for multicollinearity. Researcher was adopted the tolerance value, as result of multicollinearity statistics, to detect whether any multicollinearity which presented in Table II. Higher tolerance value means potential overlap between variables are low. Tolerance value set by 0.5 or higher for this study to consider that there is no multicollinearity exist. As describe in Table III, the tolerance value is above 0.5, therefore, there is no multicollinearity problem between variables used in this study.

Table 3 – Multicollinearity statistic

Model		Collinearity Statistics Tolerance
1	Mobile technology use	.918
	Supervisor support	.862
	Job insecurity	.910

Multiple regressions was performed to examine the relationships between independent variables and dependent variable. As shown in Table IV and Table V, the relationship between mobile technology use, supervisor support, job insecurity and role stress was significant, F = 173.062, p < 0.001 with adjusted R squared of 0.680. It means those independent variables were explaining around 68% of role stress while remaining 32% was influenced by other variables.

Table IV – ANOVA result

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	114.426	3	38.142	173.062	.000[b]
	Residual	52.895	240	.220		
	Total	167.320	243			

a. Dependent Variable: Role stress

b. Predictors: (Constant), mobile technology use, supervisor support, job insecurity

Table V – Regression model fit summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.827[a]	.684	.680	0.47	1.881

a. Predictors: (Constant), mobile technology use, supervisor support, job insecurity

b. Dependent Variable: Role stress

Further, the relationship between role stress and job satisfaction was statistically significant (Table VI and Table VII), F (328.451, p < 0.001 with adjusted R squared of 0.574. Role stress was influenced the job satisfaction by 57.4% while other variables were not studied in this study were influenced job satisfaction by 42.6%. Both R squared were indicated as adequate goodness of fit (Read, 1998).

Table VI – ANOVA result

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	99.892	1	99.892	328.451	.000[b]
	Residual	73.600	242	.304		
	Total	173.491	243			

a. Dependent Variable: Job satisfaction

b. Predictors: (Constant), Role stress

Table VII – Regression model fit summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.759[a]	.576	.574	0.55	2.092

a. Predictors: (Constant), Role stress

b. Dependent Variable: Job satisfaction

Hypothesis testing and result

As shown in table VIII, the result showed that mobile technology use (β = 0.323, p < 0.001) had positive relationship with roles stress. The positive relationship means increase of frequency mobile technology use would increase role stress. Thus, H1 was not supported.

Table VIII – Multiple regression coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t values	p values
1	(Constant)	1.804	.246		7.329	.000
	Mobile technology use	.239	.028	.323	8.537	.000
	Supervisor support	-.299	.033	-.356	-9.117	.000
	Job insecurity	.531	.033	.604	15.888	.000

a. Dependent Variable: Role stress

Hypothesis 2 predicted a negative relationship between supervisor support and role stress. The standard regression supports H2. Supervisor support (β = -0.356, p < 0.001) negatively significant to role stress which means higher supervisor support would resulted low role stress.

Job insecurity (β = 0.604, p < 0.001) was found had positive relationship with role stress. In other word, increasing in perceived job insecurity would increase the role stress. Therefore, H3 was supported.

The result is also indicated that replication of hypothesis 4 (role stress to job satisfaction) was supported. As shown in table IX, role stress (β = -0.759, p < 0.001) had negative relationship with job satisfaction. This means increases of role stress would decrease employee's job satisfaction.

Table IX – Regression coefficient

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t values	p values
1	(Constant)	7.346	.164		44.760	.000
	Role stress	-.773	.043	-.759	-18.123	.000

a. Dependent Variable: Job satisfaction

Further, researcher tested the direct and indirect relationship among mobile technology use and job satisfaction. The data analysis found that there is no significant direct relationship between mobile technology use and job satisfaction (β = 0.041, p = 0.247). The indirect effect of role stress as mediating variable, is tested by using Hayes's Process Procedure for SPSS. The confidence interval was 95% with number of bootstrap samples are 5,000. The range of BootLLCI and BootULCI is -0.2477 to -0.0973. Since it does not contain zero, therefore there is mediating effect. Further, this was tested by including total direct and indirect effect of mobile technology use on job satisfaction. However, these paths failed to improve fit significantly. Therefore, H5 was not supported.

Based on the regression analysis, supervisor support had significant direct positive relationship with job satisfaction (p< 0.001). Further testing is performed to check whether role stress mediates supervisor support and job satisfaction. The table X shows that role stress mediates the relationship between supervisor support and job satisfaction. There was indirect effect of role stress as mediation variable since range of BootLLCI and BootULCI is 0.1559 to 0.3392 (does not contain zero). Therefore, H6 was supported.

Table X – Mediating effect test (supervisor support – role stress – job satisfaction)

```
Indirect effect(s) of X on Y:
           Effect    BootSE   BootLLCI   BootULCI
Role_st    .2466     .0467     .1559      .3392

Partially standardized indirect effect(s) of X on Y:
           Effect    BootSE   BootLLCI   BootULCI
Role_st    .2918     .0508     .1920      .3899

Completely standardized indirect effect(s) of X on Y:
           Effect    BootSE   BootLLCI   BootULCI
Role_st    .2890     .0536     .1825      .3949
```

Based on the regression analysis, job insecurity had significant direct negative relationship with job satisfaction (p<0.001). This study found that role stress as mediation variable increases the effect of relationship between job insecurity and job satisfaction. Table XI shows that result of Process analysis described ranged of BootLLCI and BootULCI from -0.5081 to -0.3265 (does not contain zero), it means that there is mediating effect. Therefore, H7 was supported.

Table IX – Mediating effect test (job insecurity – role stress – job satisfaction)

```
Indirect effect(s) of X on Y:
           Effect    BootSE   BootLLCI   BootULCI
Role_st   -.4145     .0459    -.5081     -.3265

Partially standardized indirect effect(s) of X on Y:
           Effect    BootSE   BootLLCI   BootULCI
Role_st   -.4905     .0465    -.5844     -.3987

Completely standardized indirect effect(s) of X on Y:
           Effect    BootSE   BootLLCI   BootULCI
Role_st   -.4636     .0449    -.5519     -.3719
```

CONCLUSION

During pandemic Covid-19, employees in Jabodetabek were experiencing WFH. This study provides evidence about relationship between mobile technology use, supervisor support, job insecurity, and role stress and job satisfaction during WFH in pandemic Covid-19.

First, researcher found that mobile technology use is positively related to role stress, which is not consistent with previous study. In previous study, mobile technology use helped sales person achieved sales target during normal working condition (non-pandemic and non-WFH). Those devices helped sales person to increase job control and deal effectively with high job demand. Previous study was also exclusively focus on use of mobile technology during working hours. In this present study, respondents were randomly sampled to employees were experiencing WFH during pandemic. We found 75% of employees were working as support functions such as Finance and Accounting, Human Resource and Information Technology and other support departments. Meanwhile, employees worked on sales and marketing department represented 12% from total respondents. In terms of position level, 39% of respondents are senior staffs and below, 49% are represents supervisor up to managers and 12% are general manager up to directors. As hierarchically, manager is a middle level management position below top management and above first level of supervision (Wooldridge et al., 2008). Thus, manager is a supervisor as well as he/she is being supervised (Dutton & Ashford, 1993). Manager is more susceptible to role stress than others position (Srivastava et al., 1994; Balogun, 2003). Business disruption, turbulent, downsizing of organization, decentralization have impacted role stress of manager (Dopson & Stewart, 1990; Parker, 2005; Harding et al., 2014). One of turbulent facing by organizations recently is pandemic Covid-19. Researcher found that, during WFH in pandemic Covid-19, frequency of using mobile technology increases role stress. Mobile technology use is expanding scope of work. This increase employee's effort on adapting mobile technology (Rangarajan et al., 2005), especially on new virtual meeting application and interface technology between laptop, smartphones and office's server or system. Mobile technologies were associated with role overload since user work harder to understand these technologies and used them remotely (WFH). Skill discrepancy was one of difficulties in learning technology (Tarafdar et al., 2007). Around 74% of respondents are working in big companies. Most of big companies have own integrated systems to support their business. Company's system have to be integrated with employee's laptop and smartphone to keep all employees have connected to main system in office's server. This may require interface system or application. For some companies, this interface is newly adopted during pandemic. Those efforts create role stress by increasing role overload. By using mobile technology, employees are expected to work as faster as in normal conditions at office. Laptop, smartphones and virtual meeting application are enabled employees to do multitasking. This creates feeling of having/solving many tasks/problems at the same time. Excessive multitasking makes someone difficult to focus on one task in certain period of time. As the result, there will be no enough time to complete the tasks/job. It definitely increase

role overload as one of component of role stress. WFH is one of telecommuting practice. Through telecommuting, employees are able to extend working hours at home due to expectation in responding e-mail and completing job timely. Perception of role overload was increased due to mobile technology use since organization, customers, users, clients expecting employee to be available and responsive in dealing with deliverables, meetings and deadline (Duxbury et al., 2014; Vandelannoite, 2017). We found that almost 80% of employees were experiencing at least 3 days a week of WFH during pandemic. Mobile technology (laptop/pc, smartphones and virtual meeting application) make employees plugged in all day during WFH, which caused exhaustion (Ferguson et al., 2016; Vandelannoite, 2017). Job information overload through emails and messages application on laptop and smartphones increased role overload and role ambiguity. Employees didn't know what to do first and prioritize tasks (Tarafdar et al., 2007). Extension of mobile technology through virtual meetings has increased information flow and communication in the organization. Virtual meetings application were emerged and developed during pandemic. Number of individuals participating is becoming larger through virtual meetings (Foster et al., 1984; Huber 1990). Multiple virtual teams can created role conflict when it operate differently (Atanasoff and Venable, 2017). An employee may join two or more teams that simultaneously work. This increases role set of individual which create role conflict and increase role stress (Tarafdar et al., 2007). Suhardi et al., (2020) found that use of virtual meeting technology during WFH in pandemic condition leads to frustration especially in dealing with technical issues and virtual meeting platform. Despite virtual meeting application has positive impact on productivity of employees, it cause exhaustion as well to employees. In this context, employees who using mobile technology to meet his/her job role expectation, experienced exhaustion and increased role stress. Direct relationship between mobile technology use and job satisfaction was not significant as well as total effect of technology use through role stress toward job satisfaction.

Second, this present study proposed that supervisor support has significant negative relation to role stress. The data analysis displayed that the hypothesis is supported. This is consistent with previous study (Babin and Boles, 1996). Furthermore, role stress is mediating the supervisor support and job satisfaction of employees during WFH in pandemic condition. Supervisor support is important to protect employees from role stress during WFH in pandemic condition. This is consistent with Job Demand Control model. WFH during pandemic creates social distance between employee and his/her superior as well as reducing coaching session. A problem may solve in couple of minutes discussion in normal working condition. However, WFH is reducing physical interaction and face to face discussion, as the result, it may create miscommunication and delay in decision making. Isolation from colleagues and friends was one of the disadvantage of WFH (Messenger, 2019). One of challenge of physical distance practice in Indonesia was society communication culture (Rahman, 2020). Indonesian are friendly, used to collaborate each other (gotong royong) and had close relationship called guyub. In cultural sociology of Sundanese, need of face to face communication was very important (Rosidi, 2020). Further, Indonesian believe that physical communication is one of appreciation to others (Hidayat et al., 2018). Further, supervisor's characteristic was involved in communication and interaction. Passive supervisor was increased role stress (Barling and Frone, 2017). Kaushik and Guleria (2020) found that WFH may disengage employee from supervisor. Attention from direct superior was lessening role stress and increase job satisfaction. Most of respondents agreed that supervisor support is very helpful in reducing role stress.

Third, researcher found that perception on job insecurity is positively related to role stress which support previous studies. The data analysis showed there was indirect effect of role stress as mediation variable between job insecurity and job satisfaction. This is support the Job Demand Resource model as job insecurity is one of variable of job demand. Job insecurity was the most frequently examined stressor of role stress involved in recession condition (Hellgren and Sverke, 2001). Other study found that role stress was increased after business recession and downsizing organization (Tombough and White, 1990). Role stressor consistently correlate negatively with job satisfaction (Pozner and Randolph, 1980). Business and industries were slowed down during pandemic which directly impact to business performance. Many commercials laid off their

employees. This condition creates insecure feeling and relates to job loss, physiological strain of powerless position and ambiguity of continuity employment (Yaslioglu et al., 2013). Around 74% of respondents were working in big companies and they're felt that their job are secure in the future despite of economic downturn due to pandemic. Big companies were used to engage in downturn condition and have a business recovery plan. This creates employee's confidence and increase their satisfaction. Finally, confirming other studies, researcher found that role stress has negative relationship with job satisfaction. Failure in preventing role stress creates low job satisfaction perception.

Practical Implications

The research findings showed that during pandemic condition, employees in Jabodetabek are exposed to new working environment applied by businesses and industries. Adoption of WFH were facing challenges in early period of pandemic. WFH is required employees to engage with mobile technology and its applicable application to perform and deliver same result as normal condition (work at office). This present study showed that high frequency of using mobile technology such as laptop/pc, smartphones and virtual meeting application have a positive significant relationship to employee's role stress. WFH policy should be established by employers to facilitate new working behavior and in other hand handling business requirements. Human Resources and Information Technology (HRIT) division have an important role to maintain balance of its policies. Some policies should be rigid, meanwhile others policies could be more flexible. Use of digital technology is a requirement for employees who working from home. Employees should be able to use devices, applications, software, VPN and Internet of Things related to job. HRIT is required to socialize and on line train their employees in using the mobile technology devices, including related software, etc. Employers have to ensure that WFH's employees have full access of hardware, software, internet access, applications and provide on-line technical support for troubleshooting. The information communication technology (ICT) policy is one of the rigid rule to be complied by employees during WFH. Right of use of those properties provided by employers only for job related and company business only. They have to understand and abide ICT policies in order to safeguard company's data, security and confidentiality. Any harm of ICT policies will bear the consequences. This study found that higher frequency of using mobile technology is leading to role stress. Normal working hour policy is suggested to be applied to balance the loading of work. Employees are required to work in normal working hours during WFH except for some employees, who are experiencing of work home conflict, have flexible arrangement of his/her working hours permitted by employers. However, weekly working hours and job responsibilities may not be changed. Employers may support WFH policy with providing employees with ergonomic tools such as move available office chair and desk to home. This would help employees avoid high exhaustion during long hours deal with mobile technology. Those modified policies make employees understand regarding WFH term and condition as well as comfort in using mobile technology to perform their job well.

Supervisor support was found as an important factor that reduce employee's role stress during WFH. Challenges of WFH are lack of communication and interaction between employee and his/her superior/supervisor. Employees felt disengaged with organization and his/her supervisor. As previously said, isolation from social life may be added mental strain. HR division have an important role to keep employees engaged during WFH. Middle level management including supervisor should be trained how communicate effectively and keep control on their subordinates during WFH. HR may provide them with virtual coaching training, webinars and so on. Hybrid WFH policies may be applied during pandemic with tight health protocols. Employees may have roster schedule to work or meeting at office to lessen miscommunication amongst coworkers or supervisors. On the other hand, HR should emphasize employees to comply with health safety protocols at office, provide meeting rule and perform regular office sanitation. HR should create policy for employees who scheduled work from office need to submit online health assessment in application one day before. Honesty is a key here. The health assessment have to be approved first before employees come to office. Any Covid-19 symptoms post working at office to be reported immediately to track close contacts and avoid spreading. Other policy to be considered is on line counselling to sense employee's feeling

and overcome their difficulties in doing WFH during pandemic. Those policies set clear WFH's rules and support from employers may alleviate phycology strain as well as improve supervisor's skill in terms of communication in supporting subordinates to lessen pressure of role stress.

Pandemic Covid-19 was impacted to business going concern especially for small to medium business. Big business or organization can be survived because of their capital structure, experience and business strategy. However, many businesses were closed, downsized and laid off their employees. Perception on job insecurity during pandemic have impacted to employee's role stress and job satisfaction. It should be managed properly since organization need to ensure the business continuity as well as employee's productivity. HR should pay attention on quantitative and qualitative dimension of job insecurity. Quantitative dimension represents concern on current job continuance and qualitative dimension represents concern on loss of job feature for example career promotion, compensation and benefits. Leaders have to engage with employees in uncertain condition to ensure that they are aware of employee's anxiety and ambiguity. Leaders need to open about organization's condition and strategy to cope with uncertainties including postpone salary increase, promotion or even reduce compensations, benefits and bonuses. For example, instead of permanent layoff, HR may offer unpaid leave policy during pandemic. However, the purpose of those policies should deliver to employees clearly which to keep business survive. Those policies may apply flexible in accordance to organization financial condition. Financial assistance policy may be determined to help employees dealing with WFH and pandemic such as reimbursement of certain costs of internet connection, sanitization stuffs, taxi/cab cost for roster employees work at office (to avoid public transport such bus, train and so on) and provided office lunch (to avoid crowd during break). Those policies may be applied by organization to reduce perception on job insecurity as well as lessen role stress and increase job satisfaction.

Finally, WFH practice in Jabodetabek is a new phenomenon due to pandemic Covid-19. WFH during pandemic may be different with flexible working practices applied by few international companies in Indonesia. This phenomenon creates shock in working behavior. Organizations are expected to learn from this phenomenon in order to provide sufficient resources, develop policies and apply appropriate strategies. HRIT may redefine organization policies related to this new working behavior and set whether to apply it rigidly or flexible/elastic in accordance to each organization's condition and aligned with its organization culture.

Limitation and Future Research

This study has several limitations which could be opportunities for future study. This study proposed three factors may affect role stress and job satisfaction during WFH in pandemic condition, which are mobile technology use, supervisor support and perception of job insecurity. Future research should examine other factors that affect role stress and job satisfaction such as organizational support, co-worker support, family work conflict, technostress, autonomy and characteristic of work. This study is focusing on employee's perspective. The future study may focus on exploring from organization's perspective to expand the understanding of factors may affected role stress and job satisfaction. Future research may explore on the qualitative dimension of use mobile technology and psychological consequences. Samples of respondents could be expanded outside Jabodetabek and timing of questionnaire survey may be extended. Future research may include additional outcomes (e.g. job performance or job productivity). Finally, future research may exploring which of HRIT policies to be applied rigidly or flexible. In conclusion, this present study is one of the few attempts in capturing the relation between mobile technology use, supervisor support, job insecurity, and role stress and job satisfaction during WFH in Covid-19 pandemic. This study contributes to companies in terms of HRIT strategies and policies in arranging WFH or telecommuting practices as well as organization behavior.

REFERENCES

Andreev, P., Salomon, I., & Pliskin, N. (2010). Review: State of teleactivities. Transportation Research Part C (pp. 3-20, Rep.).

Archibald, M. M., Ambagtsheer, R. C., Casey, M. G., & Lawless, M. (2019). Using Zoom Videoconferencing for Qualitative Data Collection: Perceptions and Experiences of Researchers and Participants. International

Journal of Qualitative Methods, 18, 160940691987459.

Ashford, S.J., Lee, C., & Bobko, P. (1989). Content, causes, and consequences of job insecurity: A theory-based measure and substantive test. Academy of Management Journal, 4, 803–829.

Atanasoff L & Venable Melissa A. (2017). Technostress: Implications for Adults in the Workforce. National Career Development Association.

Babin S Barry J. and Boles S James S. (1996). "The Effects of Perceived Co-worker Involvement and Supervisor Support on Service Provider Role Stress, Performance and Job Satisfaction". Journal of Retailing, 72 (1), 57–75.

Baert, S., Lippens, L., Moens, E., Sterkens, P & Weytjens, J 2020, "The COVID-19 Crisis and Telework: A Research Survey on Experiences, Expectations and Hopes", IZA – Institute of Labor Economics, Germany.

Balogun, J. (2003). From blaming the middle to harnessing its potential: Creating change i ntermediaries. British Journal of Management, 14(1), 69-83.

Barling J & Frone Michael R. (2017). "If only my leader would just do something! Passive leadership undermines employee well-being through role stressors and psychological resource depletion". Stress Health. 2017; 33(3): 211–222. doi:10.1002/smi.2697

Behrman, D.N. and Perreault, W.D. Jr (1984), "A role stress model of the performance and satisfaction of industrial salespersons", Journal of Marketing, Vol. 48 No. 4, pp. 9-21.

Beehr, T.A., Walsh, J. and Taber, T. (1976), "Relationship of stress to individually and organizationally valued states: higher order needs as moderators", Journal of Applied Psychology, Vol. 61 No. 1, pp. 41-47.

Burke, Michael J., Chester C. Borucki and Amy E. Hurley. (1992). "Reconceptualizing Psychological Climate in a Retail Service Environment: A Multiple-Stakeholder Perspective," Journal of Applied Psychology 77(5): 717-729.

Chung, S., Young, L.K. and Choi, J. (2015), "Exploring digital creativity in the workspace: the role of enterprise mobile applications on perceived job performance and creativity", Computers in Human Behavior, Vol. 42, pp. 93-109.

Churchill, G.A. Jr, Ford, N.M. and Walker, O.C. Jr (1974), "Measuring the job satisfaction of industrial salesmen", Journal of Marketing Research, Vol. 11 No. 3, pp. 254-260.

Cox, T. (1978), Stress, Macmillan, London.

Deeter-Schmelz, D.R.; Ramsey, R.P. Considering sources and types of social support: A psychometric evaluation of the House and Wells (1978) instrument. J. Pers. Sell. Sales Management. 1997, 17, 49–61.

Delpechitre D & Baker David S. (2017). "Cross-Cultural Selling: Examining the Importance of Cultural Intelligence in Sales Education. Journal of Marketing Education.

DelVecchio, S. and Anselmi, K. (2006), "Sales force automation tools for small businesses", Journal of Small Business Strategy, Vol. 16 No. 2, pp. 15-27.

Dopson, S., Stewart, R. (1990). What is Happening to Middle Management. British Journal of Management. 1, 3-16.

Dutton, J. E., & Ashford, S. J. (1993). Selling issues to top management. Academy of management review, 18(3), 397-428.

Duxbury, L., Higgins, C., Smart, R. and Stevenson, M. (2014), "Mobile technology and boundary permeability", British Journal of Management, Vol. 25 No. 3, pp. 570-588.

Ferguson, M., Carlson, D., Boswell, W., Whitten, D., Butts, M.M. and Kacmar, K.M. (2016), "Tethered to work: a family systems approach linking mobile device use to turnover intention", Journal of Applied Psychology, Vol. 101 No. 4, pp. 520-534.

F.M. Sandi, Analisis Pengaruh Kompensasi Dan Job insecurity Terhadap Turnover Intention Pada Studi Pada Guru SDIT Asy-Syaamil Bontang. Semarang: Fakultas Ekonomika dan Bisnis, Universitas Diponegoro Semarang, 2014.

Foster, L.W., and Flynn, D.M. Management information technology: Its effects on organizational form and function. MIS Quarterly, 8, 4 (1984), 229-236.

French, K.A.; Dumani, S.; Allen, T.D.; Shockley, K.M. A meta-analysis of work–family conflict and social support. Psychol. Bull. 2018, 144, 284.

Frone, M.R.; Russell, M.; Cooper, M.L. Relation of work–family conflict to health outcomes: A four-year longitudinal study of employed

parents. J. Occup. Organ. Psychol. 1997, 70, 325–335.

Golden Timothy D., Veiga John F & Simsek Zeki (2006). Telecommuting's Differential Impact on Work–Family Conflict: Is There No Place Like Home?. Journal of Applied Phycology Vol 91.

Greenhalgh, L., & Rosenblatt, Z. (1984). Job insecurity: Toward conceptual clarity. Academy of nManagement Review, 3, 438–448.

Greer Tomika W & Payne Stephanie C .(2017), "Overcoming Telework Challenges: Outcomes of Successful Telework Strategies". The Psychologist-Manager Journal Vol 17, No 2, 87-111.

Grieco, Mary Elizabeth, "The Impact of videoconferencing on the corporate travel industry" (1995). Thesis. Rochester Institute of Technology.

Harding, N., Lee, H., & Ford, J. (2014). Who is 'the middle manager'?. Human Relations, 67(10), 1213- 1237.

Hartley, J., Jacobson, D., Klandermans, B., & van Vuuren, T. (1991). Job insecurity: Coping with jobs at risk. London: Sage.

Hellgren, J., Sverke, M., & Isaksson, K. (1999), A two-dimensional approach to job insecurity: Consequences for employee attitudes and well-being. European Journal of Work and Organizational Psychology, 8, 179–195.

Hellgren, J., & Sverke, M. (2001). Unionized employees' perceptions of role stress and fairness during organizational downsizing: Consequences for job satisfaction, union satisfaction and well-being. Economic and Industrial Democracy, 22, 543-567.

Hidayat, D., Kuswarno, E., Zubair, F., & Hafiar, H. (2018). Public Relations Communication Behavior Through a Local-Wisdom Approach : The Findings of Public Relations Components Via Ethnography as Methodology. Malaysian Journal of Communication, 34(3), 56–72.

House, J. S., and J. A. Wells 1978 "Occupational stress, social support and health." Pp. 8-29 in Alan McLean, Gilbert Black, and Michael Colligan (eds.), Re- ducing Occupational Stress: Proceedings of a Conference. U.S. Department of Health, Education and Welfare, HEW (NIOSH) Publication No. 78-140.

Huber, G.R A theory of the effects of advanced information technologies on organi- zational design, intelligence, and decision making. Academy of Management Review, 15, 1 (1990), 47-71

J. Smithson and S. Lewis, "Is job insecurity changing the psychological contract?." Personnel Review, vol. 29, pp. 680-702, 2000.

Johnson, J.S. and Sohi, R.S. (2014), "The curvilinear and conditional effects of product line breadth on salesperson performance, role stress, and job satisfaction", Journal of the Academy of Marketing Science, Vol. 42 No. 1, pp. 71-89.

Kahn, R., Wolfe, D., Quinn, R., Snoek, J., and Rosenthal, R. (1964). Organizational stress: Studies in role conflict and role ambiguity. New York: Wiley.

Karasek, R.A. Jr (1979), "Job demands, job decision latitude and mental strain: Implications for job redesign", Administrative Science Quarterly, Vol. 24 No. 2, pp. 285-308.

Karasek, R.A. Jr and Theorell, T. (1990), Healthy Work: Stress, Productivity, and the Reconstruction of Working Life. Basic Books, New York.

Kaushik M & Guleria N. (2020). "The Impact of Pandemic COVID -19 in Workplace". European Journal of Business and Management Vol.12, No.15, 2020.

Latack, J.C. (1981), "Person/role conflict: Holland's model extended to role-stress research, stress management, and career development", Academy of Management Review, Vol. 6 No. 1, pp. 89-103.

Lippe Tanja Van Der & Lippenyi Zoltan. (2019), "Co-workers Working From Home and Individual and Team Performance. New Technology, Work and Employment. Brian Towers and John Wiley & Sons Ltd.

Locke, E. A. 1976. "Job satisfaction and job performance: A theoretical analysis". Organizational Behavior and Human Decision Processes, 5, 484-500.

Nunnally, J.C. and Bernstein, I.H. (1994), Psychometric Theory, 3rd ed., McGraw-Hill, New York.

Lynch, P., Eisenberger, R. and Armeli, R. (1999), "Perceived organizational support: inferior versus superior performance by wary

employees", Journal of Applied Psychology, Vol. 84 No. 4, pp. 467-483.

Masia U & Pienaar J. (2011). "Unravelling safety compliance in the mining industry: examining the role of work stress, job insecurity, satisfaction and commitment as antecedents. SA Journal of Industrial Psychology/SA.

Jon C. Messenger (ed.), Telework in the 21st Century, an Evolutionary Perspective, ILO Future of Work series (Edward Elgar and ILO, 2019) p. 303.

Michael Orly., Court Deborah., Petal Pnina (2009). "Job stress and organizational commitment among mentoring coordinators". International Journal of Educational Management Vol 23 No 3, 2009.

Mulki, J.P., Lassk, F.G. and Jaramillo, F. (2008), "The effect of self-efficacy on salesperson work overload and pay satisfaction", Journal of Personal Selling & Sales Management, Vol. 28 No. 3, pp. 285-297.

Nuskiya, A. F. (2018). The Effect of Information Technology on Employees' Performance in the Banking Industry in Sri Lanka. Empirical Study Based on the Banks in Ampara District. European Journal of Business and Management, 10(16). Retrieved March 19, 2020, from https://www.iiste.org/Journals/index.php/EJBM/article/view/43160/44457.

Obeng, A. Y., & Boachie, E. (2018). The impact of IT-technological innovation on the productivity of a bank's employee. Cogent Business & Management, 5(1).

Onyemah, V. (2009), "The effects of coaching on salespeople's attitudes and behaviors: a contingency approach", European Journal of Marketing, Vol. 43 Nos 7/8, pp. 938-960.

Parker, B. (2005). Introduction to globalization and business: relationships and responsibilities. Sage.

Pozner, B. Z., Randolph, W. A. (1980). Moderators of role stress among hospital personnel. The Journal of Psychology, 105, 215-224.

Probst, T & Brubaker, T.L. (2001). "The Effect of Job Insecurity on Employee Safety Outcomes: Cross-Sectional and Longitudinal Explanations". Journal of Occupational Health Psychology, 6:139-159.

Rahman, La Ode Arwah. D. I. K. I. P. (2020). OPINI; Physical Distancing dan Budaya Komunikasi.

Rangarajan, D., Jones, E. and Chin, W. (2005), "Impact of sales force automation on technology-related stress, effort, and technology usage among salespeople", Industrial Marketing Management, Vol. 34 No. 4, pp. 345-354.

Read (1998), "Linear Regression", University of Leicester". Available at: http://www.le.ac.uk/bl/gat/virtualfc/Stats/regression/regr1.html.

Richter, A. (2011). Job Insecurity and Its Consequences Investigating Moderators, Mediators and Gender. Department of Psychology, Stockholm University

Rizzo, J.R., House, R.J. and Lirtzman, S.I. (1970), "Role conflict and ambiguity in complex organizations", Administrative Science Quarterly, Vol. 15 No. 2, pp. 150-163.

Robert A. Simpkins, (2009),"How great leaders avoid disaster: the value of contingency planning", Business Strategy Series, Vol. 10 Iss 2 pp. 104-108 http://dx.doi.org/10.1108/17515630910942241.

Román, S. & Iacobucci, D. (2010), "Antecedents and consequences of adaptive selling confidence and behavior: a dyadic analysis of salespeople and their customers", Journal of the Academy of Marketing Science, Vol. 38 No. 3, pp. 363-382.

Roman S., Rodriquez R & Jaramillo J. F (2018). "Are mobile devices a blessing or a curse? Effect of mobile technology use on salesperson role stress and job satisfaction". Journal of Business & Industrial Marketing 33/5 651-664.

Rosidi, A. (2000). Ensiklopedi Sunda: Alam, Manusia, dan Budaya. Termasuk Budaya Cirebon dan Betawi. Pustaka Jaya.

Roskies, E., & Louis-Guerin, C. (1990). Job insecurity in managers: Antecedents and consequences. Journal of Organizational Behavior, 11, 345–359.

Singh, J. (1998), "Striking a balance in boundary-spanning positions: an investigation of some unconventional influences of role stressors and job characteristics on job outcomes of salespeople", Journal of Marketing, Vol. 62 No. 3, pp. 69-86.

Smith, G. D., Ng, F., & Ho Cheung Li, W.(2020). COVID-19: Emerging compassion, courage and resilience in the face of misinformation and

adversity. Journal of Clinical Nursing, 29, 1425– 1428.

Srivastava, S., Hagtvet, K. A., & Sen, A. K. (1994). A study of role stress and job anxiety among three groups of employees in a private sector organization. Social Science International.

Suhardi Hardi., Simon Iman Ulung., Tamara Dewi & Furinto Asnan (2020), "Virtual Meeting Technology Adoption for Business Management in Small and Medium-Sized Enterprises", Int. J Sup. Chain. Mgt, Vol 9, No 5, October 2020.

Storseth, F. (2006). "Changes at Work and Employee Reactions: Organizational Elements, Job Insecurity, and Short Term Stress as Predictors for Employee Health and Safety". Scandinavian Journal of Psychology, 47:541-550.

Sverke, M., Hellgren J & Naeswall, K. (2002), "No Security: A Meta-Analysis and Review of Job Insecurity and its Consequences". Journal of Occupational Health Psychology, 7: 2424-264.

Tarafdar, M., Bolman, E. and Ragu-Nathan, T.S. (2014), "Examining impacts of technostress on the professional salesperson's behavioural performance", Journal of Personal Selling and Sales Management, Vol. 34 No. 1, pp. 51-69.

Tombaugh, J. R., & White, L. P. (1990). Downsizing: An empirical assessment of survivors' perceptions in a post-layoff environment. Organization Development Journal, 8(2), 32–43.

Vandelannoitte, A. (2017), "An ethical perspective on emerging forms of ubiquitous IT-based control", Journal of Business Ethics, Vol. 142 No. 1, pp. 139-154.

Vargo D, Zhu L, Benwell B, Yan Z (2020). "Digital technology use during COVID-19 pandemic: A Rapid Review. Human Behav & Emerg Tech".

Wooldridge, B., Schmid, T., & Floyd, S. W. (2008). The middle management perspective on strategy process: Contributions, synthesis, and future research. Journal of management, 34(6), 1190-1221.

Yaslioglu M., Karagulle A & Baran M. (2013). "An Empirical Research on the Relationship between Job Insecurity, Job Related Stress and Job Satisfaction in Logistics Industry". Procedia Social and Behavioral Sciences 99, 332-338.

Yueh, H.P., Lu, M.H. and Lin, W. (2016), "Employees' acceptance of mobile technology in a workplace: an empirical study using SEM and fsQCA", Journal of Business Research, Vol. 69 No. 6, pp. 2318-2324.