Original Article

The Moderation Role of Personal & Family Well-Being in the Effect of Environmental Constraints and Resource Constraints on Work From Home Effectiveness

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Abstract - Working from home (WFH) has been implemented at almost all government and private institutions since the Covid-19 virus entered Indonesia. An organization expects an effective WFH which supports employee performance to boost its performance. This research aims to obtain empirical evidence on variables affecting WFH's effectiveness. Variables predicted to be able to impact the effectiveness are environmental constraints and resource constraints moderated by personal and family well-being. This research uses a quantitative approach to associative models. The population of this research is companies in the technology sector implementing WFH policy for more than 60% of their employees. The data consists of 60 samples collected by sharing the questionnaire online containing questions that had passed the validity and reliability test. The data analysis technique used in this research is Moderated Regression Analysis (MRA) using SPSS software 25th version as the tool. The result of this research shows that personal and family well-being has a quasi-moderator role in environmental constraint and resource constraint impact on WFH effectiveness. Environmental constraint significantly impacts WFH effectiveness, while resource constraint does not significantly impact WFH effectiveness. However, after being reinforced by personal and family well-being as moderators, the resource constraint can significantly impact WFH effectiveness. This research can be an empirical evidence for future research and enrich the human resource management study related to the role theory and work-family balance, especially WFH effectiveness, environmental constraint, resource constraint, and personal and family well-being. The management of an organization will be able to consider the strategy based on this research to improve the employee's effectiveness during WFH to help the management achieve the organization's goals.

Keywords - WFH effectiveness, Personal & family well-being, Role theory, Work-family balance.

1. Introduction

Work from home, often also known as work from home (WFH), has been carried out by almost all government and private agencies since Covid-19 entered Indonesia. WFH helps increase employee productivity, increase employee retention, and increase employee commitment and performance (Martin & MacDonnell, 2012). WFH provides

many benefits for both employees and organizations, but based on research conducted in Hong Kong, there are employees who feel reduced effectiveness when implementing WFH (Wong et al., 2021). This study's results reveal that WFH not only provides employee benefits but can also raise new problems, namely the effectiveness of WFH itself.

Vertical Division	Number of Permanent Employees	Number of WFH Employee Hybrid and Full	Number of WFH Employee	Percentage of WFH Employee
Food	152	92	32	61%
Transportation	111	68	19	61%
Delivery	115	79	20	69%
Total	378	239	71	63%

Table 1. Percentage of WFH Employee PT G

Source: Internal Data of PT G (2022)

	The time it takes to complete the job	Number of jobs that can be completed	Concentration levels
Employee 1	Longer	Less	Decrease
Employee 2	Faster	More	Increase
Employee 3	Longer	Less	Decrease
Employee 4	Faster	More	Increase
Employee 5	Faster	More	Increase

Table 2. Pre-research Interview Results Regarding WFH Effectiveness

Source: Primary data processed (2022)

The effectiveness of WFH in Indonesia needs to be researched because, in Indonesia, companies have implemented WFH for their employees, one of which is PT G. PT G is a company engaged in the field of information technology and has operating offices in almost all regions in Indonesia with Jakarta as its head office. As seen in Table 1 above, more than 60% of PT G's employees work as WFH. The 239 employees working at WFH are spread from all operational areas and also vertical divisions. This number is quite high and can significantly impact the company if problems related to WFH effectiveness arise and are not addressed.

Based on pre-research interviews with PT G employees summarized in Table 2, two out of five employees feel that their work effectiveness has decreased since WFH. They mentioned that since WFH, they were able to complete less work, and the time spent on meetings was longer than before WFH was enforced. The problem of effectiveness is important to analyze because if employee effectiveness is allowed to continue to decline, it is feared that it can cause a decrease in overall organizational productivity (Martin & MacDonnell, 2012). Based on this, research on the effectiveness of WFH in Indonesia, especially at PT G, needs to be carried out to analyze problems and obtain solutions to problems related to WFH effectiveness.

Factors influencing high or low effectiveness can be studied using role theory (Grzywacz & Carlson, 2007) and work-family balance theory (Carlson et al., 2009). An individual with the role of an employee who also plays a role as a family member can have a new source of stress when WFH when conditions at home, such as homework or family conditions, require an individual to act as an employee and family member at the same time (Baruch, 2000). Employee expectations of the company's role in providing facilities and infrastructure to carry out WFH work that is not achieved will cause stress for employees when doing WFH, which will then affect the effectiveness of WFH (Robbins & Judge, 2017).

Work-family balance is defined as "the achievement of role-related expectations that are negotiated and shared between individuals and partners regarding their roles in the work and family domains (Grzywacz & Carlson, 2007). Good work-family balance, such as having more time with the family and increasing work-life balance during WFH, significantly positively contribute to the personal & family well-being of an employee doing WFH (Halpern, 2005).

Environmental constraints are one of the factors that can influence the effectiveness of WFH besides well-being (Wong et al., 2021). Aspects of environmental constraints such as clear job descriptions, clear communication, and feedback from superiors and colleagues contribute to the effectiveness of WFH (Sardeshmuk et al., 2012). Research related to environmental constraints conducted in Germany revealed that communication and information problems that occur when WFH can become work stressors for employees, ultimately affecting fatigue levels and reducing employee intentions to continue WFH (Weinert et al., 2015).

The next factor that can affect the effectiveness of WFH is resource constraints, with aspects such as the benefits of information and communication technology felt by employees (Wong et al., 2021). These aspects significantly contribute to the effectiveness of WFH (Chen & McDonald, 2014). Research conducted by Valmohammadi stated that obstacles and difficulties, such as poor technology and information infrastructure, caused research respondents to dislike WFH (Valmohammadi, 2012). This resource constraint is one of the reasons for the decrease or increase in the effectiveness of WFH.

The role theory and work-family balance explain that personal and family well-being factors are important in the effectiveness of an employee's WFH (Grzywacz & Carlson, 2007). Research conducted by Baruch and Yuen in Hong Kong and the UK revealed that one indicator of personal & family well-being, i.e., flexible working hours, affects the effectiveness of WFH (Baruch & Yuen, 2000). WFH allows employees to have less contact with other employees. Research conducted by Fonner and Roloff (2010) revealed that employees who do WFH are more satisfied with their jobs compared to employees are protected from excessive information flows, meetings, interruptions, and power plays, unfair practices can interfere with employees in carrying out their work.

Research on WFH effectiveness conducted in Hong Kong revealed that there are three things that can affect employee effectiveness when working with WFH, namely: environmental constraints, resource constraints, and personal & family well-being (Wong et al., 2021). The research was conducted on full-time workers in Hong Kong who had WFH experience during the Covid-19 pandemic. The results of this study found that the effectiveness of WFH was directly influenced by environmental, resource constraints, and personal & family well-being, but research conducted in Japan found that personal & family well-being interacted with the relationship between the lack of a workplace for WFH in houses and lack of facilities and infrastructure related to information technology for the benefit of WFH on WFH effectiveness (Okubo et al., 2021). Other studies also reveal that aspects of personal & family well-being, namely changing working hours in WFH practices, weaken the effect of environmental constraints and information technology resources on WFH effectiveness (Chesley, 2010). Based on the explanation above and also research related to WFH effectiveness in Indonesia which has not yet been found, this research will replicate and modify research that has been conducted by Wong et al. (2021) in Hong Kong previously.

2. Research Hypothesis and Conceptual Framework

2.1 Research Hypothesis

Research conducted in Hong Kong explains that the greater the environmental constraints faced by employees who engage in WFH, the smaller the employee's WFH effectiveness will be (Wong et al., 2021). Regular and clear communication with colleagues, an aspect of environmental constraints, impacts WFH effectiveness for USA employees (Sardeshmuk et al., 2012). Aspects of environmental constraints such as clear job descriptions, clear communication, and feedback from superiors and colleagues contribute to the effectiveness of WFH (Sardeshmuk et al., 2012). Research on environmental constraints conducted in Germany revealed that communication and information problems that occur when WFH can become work stressors for employees, ultimately affecting fatigue levels and reducing employee effectiveness in carrying out WFH (Weinert et al., 2015).

The absence of a special room that separates work from family and household matters is also the reason for the decline in WFH effectiveness in research conducted in England (Aguilera et al., 2016). Other research has also revealed the importance of spaces specifically designed for work to support effectiveness in the process of working from home (Lif et al., 2001).

Not all research on WFH Effectiveness shows a significant relationship with environmental constraints. Research conducted in the USA shows that workspace

availability is not significantly related to WFH effectiveness (Bailey & Kurland, 2002). Research in the Netherlands also shows that communication problems that occur when WFH do not significantly affect WFH effectiveness (Graaff & Rietveld, 2007). Based on the research evidence and research gaps above, this study aims to test whether environmental constraints have a significant effect on WFH effectiveness. H₁: Environmental constraints have a significant effect on WFH effectiveness

Large resource constraints will reduce WFH effectiveness for employees (Wong et al., 2021). Research conducted in Iran explains that poor technology and information infrastructure will affect an employee's WFH effectiveness (Valmohammadi, 2012). The added advantage of information and communication technology in the form of up-to-date software also supports WFH effectiveness for employees in the USA (Chen & McDonald, 2014). Inadequate communication equipment due to lack of provision from the company can cause employees to feel less effective in implementing WFH (Aguilera et al., 2016).

The effectiveness of WFH can also be reduced when organizations do not support their employees with software and hardware that supports WFH. This is shown from research which reveals that a lack of organizational support for software and hardware for their employees who do WFH will reduce effectiveness (Wong et al. al., 2021).

Not all studies regarding the relationship between WFH effectiveness and resource constraints show a significant effect. Research conducted in the Netherlands shows that the availability of information technology facilities and infrastructure does not have a significant effect on WFH effectiveness (Graaff & Rietveld, 2007). Other research reveals that software constraints for implementing WFH have no significant effect on WFH effectiveness as long as employees can still use the telephone to connect with their work team (Allen et al., 2003). Based on the research evidence and research gaps above, this study aims to test whether resource constraints significantly affect WFH effectiveness.

 H_2 : Resource constraints have a significant effect on WFH effectiveness

Research conducted in Japan found that there is a contribution of work stress to the influence the lack of a workplace at home and the effectiveness of employees working from home (Okubo et al., 2021). Similar findings were also found from research related to personal & family well-being contributions, such as work stress and workload, on the effect of an employee's sense of isolation from his work colleagues on the effectiveness of the employee's WFH (Charalampous et al., 2019). The emotional condition of employees also contributes to the influence of the lack of

communication with colleagues due to WFH on WFH effectiveness (Ruiz, 2021). Research conducted in the EU also reveals that the work-life balance possessed by employees contributes to the relationship between environmental constraints and WFH effectiveness (Rodriguez-Modrono & Lopez-Igual, 2021). Other research reveals that employees' sense of difficulty in balancing work and relationships with family members contributes to the relationship between environmental constraints and WFH effectiveness (Curzi et al., 2021).

Other research reveals that personal & family well-being does not contribute or interact significantly with the relationship between environmental constraints and WFH effectiveness. Research conducted in Japan revealed that the balance between work and family did not interact in the relationship between lack of communication with work colleagues on WFH effectiveness (Maruyama et al., 2009). Other studies have found that difficulties in finding a balance between work and family have a more direct effect on WFH effectiveness and do not interact significantly with environmental constraints (Marsh & Musson, 2008). Based on the research and research gaps described, this study aims to examine the moderating role of personal & family wellbeing on the effect of environmental constraints on WFH effectiveness.

H₃: Personal & family well-being moderates the effect of environmental constraints on WFH effectiveness

Personal & family well-being significantly contributes to the relationship between using information technology resources in WFH practices and WFH effectiveness (Berkowsky, 2013). Aspects related to personal & family well-being, such as changing working hours in WFH practices, contribute to the influence of information technology resources on WFH effectiveness (Chesley, 2010). The emotional condition of employees also contributes to the influence of the use of information and communication system facilities and infrastructure on the effectiveness of working from home (Ruiz, 2021).

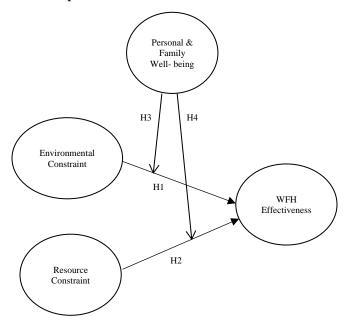
Research related to WFH conducted in Japan found that there was a contribution from the level of work stress, which is an indicator of personal & family well-being, on the influence of the lack of communication and information technology skills during WFH on the work effectiveness of employees who carry out WFH (Okubo et al., 2021). Personal & family well-being also contributes to the influence of infrastructure readiness, such as internet structures and adequate software for companies in dealing with work situations outside the office on the effectiveness of employees' work done outside the office (Torkachuk et al., 2021).

Not all studies show the same results regarding personal & family interaction well-being on the relationship between

resource constraints and WFH effectiveness. The research results on WFH show that personal & family well-being does not significantly interact with the relationship between lack of adequate information and technology equipment and WFH effectiveness. Other studies have found that the lack of adequate information and technology equipment has a more direct effect on WFH effectiveness with an insignificant contribution to personal and family well-being (Madsen, 2003). The research results showing no moderating role for personal & family well-being raises a research gap that will be re-examined in this study. Based on the previous research evidence above, this study aims to examine the moderating role of personal & family well-being in the effect of resource constraints on WFH effectiveness.

H₄: Personal & family well-being moderates the effect of resource constraints on WFH effectiveness

2.2. Conceptual Framework



3. Research Methodology

This type of research is associative causality research (relationship) with quantitative analysis methods (data in the form of numbers). Associative research aims to determine the relationship between two or more variables (Sugiyono, 2018). This research was conducted at PT G, which is a technology company in Indonesia, in 2022. PT G was chosen because it has a large number of employees who carry out WFH, which consists of 910 permanent employees. The percentage of employees implementing WFH at PT G is also high by 62% compared to the total number of employees, so more than half of the employees working at PT G experience working WFH. The research was carried out in line with the increasing number of WFH policies implemented in Indonesia due to the co-19 pandemic. The sampling method used in this study is probability sampling. The sample

criteria in this study are PT G company employees who work from home (WFH) in full by 71 people.

The sample size in this study was determined using the Slovin formula. The formula is as follows:

$$n = \frac{N}{1 + Ne^2}$$
$$n = \frac{71}{1 + 71(0.05^2)} = 60$$

Information: n = number of samples N = Total population e = The specified degree of error is 0.05

Based on this formula, the sample size calculation in this study is 60 employees with a sample distribution, as shown in Table 3 below.

This study's instrument was a questionnaire distributed online using Google Forms to employees who were doing WFH. The questionnaire in this study used a Likert scale with 1 = "strongly disagree" to 5 = "strongly agree." Statistical tests to be carried out in this study used Confirmatory Factor Analysis (CFA), regression analysis, and Moderated Regression Analysis (MRA) with the help of SPSS version 25 software.

Table 3. Distribution of Research Sample					
Division	Number of Respondents	%			
Delivery	18	30			
Food	27	44			
Transport	15	25			
Total	60	100			

Source: Internal Data of PT G (2022)

3. Results and Discussion

3.1. Distribution of Research Questionnaires

The number of respondents in this study amounted to 60 people. Respondents in this study can be described in general based on characteristics seen from gender, age, marital status, and origin of the division. In detail, the characteristics of the respondents are presented in Table 4 below.

No.	Characteristics	Classification	Number of Respondents	%
1	Gender	Male	28	47
		Female	32	53
		Total	60	100
2	Age	20-25 years old	9	15
		26-30 years old	17	28
		31-35 years old	6	10
		Over 36 years old	28	47
		Total	60	100
3	Divison	Transport	18	30
		Food	27	44
		Delivery	15	25
		Total	60	100
4	Marital Status	Not married yet	20	33
		Married	40	67
		Total	60	100

Table 4. Respondent Characteristics

Source: Primary data processed (2022)

Table 4 shows that there were 28 male respondents, with a percentage of 47%, and 32 female respondents, with a percentage of 53%. The age of the respondents in this study was dominated by respondents aged over 36 years, totaling 28 people with a percentage of 47%, followed by respondents aged 26-30 years, totaling 17 people with a percentage of 28%. The least age of respondents in this study was respondents aged 31-35 years, totaling 6 people with a percentage of 47%, and finally, respondents aged 20-25 years amounted to 9 people with a percentage of 15%.

The distribution of respondents by division was quite even, with respondents from the transport division totaling 19 people with a percentage of 32%, the food division totaling 22 people with a percentage of 37%, and the delivery division totaling 19 people with a percentage of 32%. Most of the respondents in this study were married, namely as many as 40 people, with a percentage of 67%. The number of married respondents is quite different compared to unmarried respondents, namely 20 people, with a percentage of 33%.

3.2. Confirmatory Factor Analysis (CFA)

Before testing the hypothesis, CFA needs to be done to test whether the indicators used in the research are able to measure variables. The following CFA explanation is the second attempt because one indicator (M6) did not meet the CFA criteria, so it had to be reduced.

1) Kaiser Meyer Oikin Measure of Sampling Adequacy (KMO MSA)

If the KMO MSA value in the study is > 0.50, then further factor analysis can be carried out. The KMO MSA value in this study was 0.804 with a significance level of 0.000, as seen in Table 5 below.

	Table 5. KNO MSA	1
KMO-MSA		0,792
Bartlett's	Approx. Chi-Square	600,060
Test of	df	105
Sphericity	Sig.	0,000

Source: Primary data processed (2022)

2) Anti-Image Correlation

The anti-image correlation values for all factors in this study after data reduction were each greater than 0.5, so it can be concluded that the assumption of Measure of Sampling Adequacy (MSA) has been fulfilled.

3) Communalities

Based on the values in the communalities table in this study, after being reduced, it can be seen that all indicators are greater than 0.50, so CFA can be continued.

4) Total Variance Explained

The eigenvalues that can be seen in the total variance explained table in this study show that all have a value of 1 with an evenly distributed percentage of values per variant, so it can be concluded that all indicators can equally explain the variables.

5) Component Matrix & Rotated Component Matrix The loading factor value in a study with a sample of 60 must be more than 0.70 and grouped. The loading factor values for all indicators in the component matrix and rotated component matrix tables in this study are greater than 0.70 and are also grouped into four factors, so it can be concluded that all indicators can be used to measure their respective variables and then entered into regression analysis.

	Table 6. Indicator of Variables		
Variable	Indicator	Source	
	Better concentration	W. (2021)	
WEU Effectiveness (V)	More work and tasks can be done	Wong et al (2021), Torkachuk et al (2021),	
WFH Effectiveness (Y)	Have more than enough time to finish work and tasks	and Baruch (2000)	
	Lack of dedicated Workspace at home		
Environmental Constraint (V1)	Lack of regular communication with a colleague	Wong et al (2021), Ruiz	
Environmental Constraint (X1)	Disturbance from family when doing WFH	(2021)	
	distracted by house chores when doing WFH		
	Lack of adequate hardware provided by the		
	company	Wong et al. (2021),	
Resource Constraint (X2)	Lack of adequate software provided by the		
Resource constraint (72)	company	Torkachuk et al. (2021), Shareena & Shahid (2020)	
	More fatigue when staring at the screen when doing WFH		
	Less work stress when doing WFH		
	More time to rest when doing WFH		
Personal & Family Well-being (M)	More time to do physical exercises when doing WFH	Wong et al (2021),	
	Increasing Work-life Balance when doing WFH	Weinert et al (2015)	
	increasing quality of life when doing WFH	1	
	Better family relationship when doing WFH*]	
*This indicator had been removed from	further analysis due to Confirmator Factor Analysis		

Source: Primary data processed (2022)

3.3. Multiple Linear Regression Analysis

Multiple linear regression analysis was used to test the effect of the independent variables (X1 and X2) on the

dependent variable (Y). The results of the regression equation in this study can be seen in Table 6 below.

Coefficients							
Model	T	dardized icients	Standardized Coefficients				
	В	Std. Error	Beta	t	Sig.		
(Constant)	17,933	0,842		21,299	0,000		
Environmental Constraint	0,602	0,078	0,748	7,696	0,000		
Resource Constraint	-0,019	0,113	-0,017	-0,173	0,863		
Dependent Variable: WFH Effectiveness							

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Table 7. The	Results of	i Multiple	Linear	Regression .	Analysis

Source: Primary data processed (2022)

The results of the multiple linear regression analysis test in Table 7 show that the environmental constraint variable (X1) has a significance value of 0.000 < 0.05. Based on this, the environmental constraints have a significant effect on WFH effectiveness, so it can be concluded that H01 is accepted. The significant value of the resource constraint variable (X2) is 0.863 > 0.05. Based on this, the resource constraint has no significant effect on WFH effectiveness, so it can be concluded that Ha2 is accepted.

Moderated Regression Analysis (MRA)

Moderated regression analysis is used to determine the moderating role of variable M in the relationship between X1 and X2 to Y. This study uses two MRA models, the first model is the relationship between X1 and Y moderated by M, and the second model is the relationship between X2 and Y. moderated by M.

Coefficients					
	Unstandardized Coefficients		Standardized Coefficients		
	В	Std. Error	Beta	t	Sig.
(Constant)	-5,620	3,172		-1,772	0,082
Environmental Constraint (X1)	1,098	0,232	1,366	4,732	0,000
Personal & Family Well-being (M)	5,66	0,13	1,031	3,321	0,002
Environmental Constraint X Personal & Family Well-being (X1*M)	-0,031	0,012	-1,260	-2,609	0,012
Dependent Variable: WFH Effectiveness					

Table 8. Moderated Regression Analysis Model 1

Source: Primary data processed (2022)

In Table 8 above, it can be seen that the relationship between the moderator variable personal & family wellbeing (M) and the dependent variable WFH effectiveness (Y) has a significance value of 0.002 < 0.05, whereas in the interaction between the environmental constraint independent variable and the moderator variable personal & family well-being (X1*M) on the dependent variable WFH effectiveness (Y) has a significance of 0.012 < 0.05. Based on this, the role of personal & family well-being in model 1 is a quasi-moderator. It can be concluded that personal & family well-being significantly moderates the relationship between environmental constraints and WFH effectiveness so that H03 can be accepted.

Coefficients								
	Unstandardized Coefficients		Standardized Coefficients					
	В	Std. Error	Beta	t	Sig.			
(Constant)	-4,005	3,894		-1,028	0,308			
Resource Constraint (X2)	1,110	0,367	0,959	3,020	0,004			
Personal & Family Well-being (M)	0,795	0,211	1,448	3,767	0,000			
Resource Constraint X Personal & Family Well-being (X2*M)	-0,052	0,019	-1,148	-2,717	0,009			
Dependent Variable: WFH Effectiveness								

Source: Primary data processed (2022)

In Table 9 above, it can be seen that the relationship between the moderator variable personal & family wellbeing (M) and the dependent variable WFH effectiveness (Y) has a significance value of 0.000 < 0.05, whereas in the interaction between the independent variable resource constraint and the variable moderator of personal & family well-being (X2*M) on the dependent variable WFH effectiveness (Y) has a significance of 0.009 < 0.05. Based on this, the role of personal & family well-being in model 2 is a quasi-moderator. It can be concluded that personal & family well-being significantly moderates the relationship between resource constraints on WFH effectiveness, so H04 can be accepted.

The Effect of Environmental Constraints on WFH Effectiveness

The results of data analysis in this study reveal that environmental constraints have a significant effect on WFH effectiveness. Good and supportive environmental conditions and situations around employees when implementing WFH will significantly increase the effectiveness of the employee's WFH. These good environmental conditions and situations can be carried out by minimizing the environmental constraints that exist around where employees carry out WFH.

The results in this study are consistent with role theory (Robbins & Judge, 2017) and the results of research conducted by Wong et al. (2021), Sardeshmuk et al. (2012), Weinert et al. (2015), Aguilera et al. (2016), and Lif et al. (2001), who suggested that the presence of environmental barriers around employees would reduce employee

effectiveness when working WFH. For employees who experience many environmental constraints when doing WFH, the effectiveness of the employee WFH will be smaller (Wong et al., 2021). Unclear and not real-time communication with colleagues when working WFH can reduce WFH effectiveness among employees in the USA (Sardeshmuk et al., 2012). Research in Germany revealed that communication and information problems that occur when WFH can become work stressors for employees, ultimately affecting fatigue levels and reducing employee effectiveness in carrying out WFH (Weinert et al., 2015). The absence of a special room that separates work from family and household matters is also the reason for the decline in WFH effectiveness in research conducted in England (Aguilera et al., 2016). Other research has also revealed the importance of spaces specifically designed for work to support effectiveness in the process of working from home (Lif et al., 2001).

The Effect of Resource Constraints on WFH Effectiveness

The study results reveal that resource constraints do not significantly affect WFH effectiveness. Resource constraints can significantly affect WFH effectiveness when moderated by personal & family well-being. Research conducted by Wong et al. (2021) explains that resource constraints such as a lack of computers or unsupported software have a negative effect on WFH effectiveness. However, the results of this study did not find a direct effect between these resource constraints and WFH effectiveness. Based on the results of this study, adequate information technology equipment must be strengthened by good quality of life, better working hours, and more time to rest to increase employee effectiveness in implementing WFH. The results of post-research interviews with PT G employees revealed they did not experience significant resource constraints because the company provided many alternative teleconferencing and longdistance communication software. The company also provided up-to-date laptop facilities to support the work of its employees. This can cause the effect of resource constraints on WFH effectiveness to be insignificant because employees so far have not had significant resource constraint problems and have many alternatives if there are constraints on their software or hardware (Allen et al., 2015).

WFH working conditions mean that employees can meet their families more often. Employees who experience obstacles to their information technology devices do not reduce their effectiveness during WFH as long as the employee still has sufficient time to meet with their family (Allen, 2012). Technology and information barriers cannot have a direct effect on WFH effectiveness. Slow hardware can have a negative effect on the effectiveness of work carried out in WFH if it is reinforced by role conflicts between employees and their families, increased working hours when WFH takes place, and lack of time to complete work (Baker et al., 2007).

The Moderation Role of Personal & Family Well-being on the Effect of Environmental Constraints on WFH Effectiveness

Based on the research results, personal & family wellbeing significantly affects WFH effectiveness and significantly moderates the influence of environmental constraints, so it can be concluded that the moderating role of personal & family well-being in this study is as a quasimoderator. Since WFH was implemented, aspects of employees' personal & family well-being, such as reduced work stress and having more time to rest, can help increase their WFH effectiveness. Post-research interviews with PT G employees revealed that they felt that the increased aspects of personal & family well-being could improve their mood at work, thereby helping to increase WFH effectiveness. This is in line with the theory of work-family balance, which explains that good personal & family well-being will increase the effectiveness of WFH for employees (Carlson et al., 2009).

The results of this study align with research findings in Japan that there is a moderation of work stress on the effect of a lack of a workplace at home and the effectiveness of employees working from home (Okubo et al., 2021). Aspects of personal & family well-being, such as work stress and workload, also strengthen the effect of an employee's sense of isolation from his work colleagues on the effectiveness of the employee's WFH (Charalampous et al., 2019). The emotional condition of employees also contributes to the influence of the lack of communication with colleagues due to WFH on WFH effectiveness (Ruiz, 2021). Research in the EU also explains that improving the work-life balance of employees after doing WFH will strengthen the effect of environmental constraints on WFH effectiveness (Rodriguez-Modrono & Lopez-Igual, 2021). Other research reveals that employees' sense of difficulty in balancing work and relationships with family members strengthens the negative relationship between environmental constraints and WFH effectiveness (Curzi et al., 2021).

The Moderation Role of Personal and Family Wellbeing on the Effect of Resource Constraints on WFH Effectiveness

Based on the research results, personal & family wellbeing significantly affects WFH effectiveness and significantly moderates the effect between resource constraints, so it can be concluded that the moderating role of personal & family well-being in this study is as a quasimoderator. The direct effect of resource constraints on WFH effectiveness is insignificant, but after being moderated by personal & family well-being, the effect becomes significant. This means that if the technology and information resources owned by employees are adequate and strengthened by increased personal & family well-being, it will help significantly increase employee WFH effectiveness.

The results of the post-research interviews revealed that PT G employees felt that increased personal & family well-being during WFH made them in a better mood at work. The lack of resource constraints experienced by PT G employees coupled with an increased work-life balance, increased time with family, and increased quality of life after WFH greatly assisted them in implementing WFH better. The results of this study are in line with research conducted by Berkowsky (2013), Chesley (2010), Ruiz (2021), Okubo et al. (2021), and Torkachuk et al. (2021). Personal & family well-being strengthens the use of information technology resources in WFH practices on WFH effectiveness (Berkowsky, 2013). Better working hours in WFH practices also strengthen the effect of the lack of information technology resources on WFH effectiveness (Chesley, 2010).

3. Conclusion and Suggestion

3.1. Conclusion

Based on the results of the discussion, several conclusions can be drawn as follows:

- 1. Environmental constraints have a significant effect on WFH effectiveness. The results of this study explain that the better the environmental condition experienced by employees when doing WFH, the higher their WFH effectiveness. The better environmental condition can be indicated by the fewer environmental constraint experienced by employees when doing WFH.
- 2. Resource constraints do not have a significant effect on WFH effectiveness, but when moderated by personal &

family well-being, they can have a significant effect on WFH effectiveness. The results of this study explain that the better technology and information resources an employee has when reinforced by good personal & family well-being, will increase the effectiveness of the employee's WFH. Better technological and information resources can be indicated by the fewer resource constraint experienced by employees when doing WFH.

- 3. Personal & family well-being significantly strengthens the influence of environmental constraints on WFH effectiveness. Personal & family well-being acts as a quasi-moderator. This study's results explain that the employee's better personal & family well-being will strengthen the effect of environmental constraints on WFH effectiveness.
- 4. Personal & family well-being significantly strengthens the effect of resource constraints on WFH effectiveness. Personal & family well-being acts as a quasi-moderator. The results of this study explain that the better personal & family well-being of an employee will strengthen the effect of resource constraints on WFH effectiveness.

3.2. Suggestion

Based on the results of the discussion and conclusions, the suggestions that can be given are as follows:

- 1. Further research can be carried out in companies engaged in different fields and at different times to be able to add empirical evidence regarding role theory and work-family balance, especially the relationship between environmental constraints and resource constraints on WFH effectiveness with personal & family well-being as moderator variables.
- 2. This research has examined personal & family wellbeing as a moderator of the relationship between environmental constraints and resource constraints on

WFH effectiveness, which refers to role theory and work-family balance. Further research is suggested to be able to combine theory or other variables such as motivation or work-family conflict.

- 3. The environmental conditions where employees carry out WFH at PT G are quite good, as indicated by the minimal environmental constraints experienced by PT G employees. This needs to be maintained by the company because, based on research results, the fewer environmental constraints experienced by employees, the higher the effectiveness of the employee WFH.
- 4. The technological and information resources needed by employees for the benefit of WFH at PT G are good, as indicated by the minimal resource constraints experienced by PT G employees. This needs to be maintained by the company because, based on research results, the fewer resource constraints experienced by employees if it is strengthened by better personal & family well-being, the higher the effectiveness of the employee's WFH.
- 5. The average score of personal & family well-being or personal and family well-being of employees in the company where this research was conducted was good. This needs to be improved by companies because, based on research results, the better personal & family wellbeing experienced by employees can strengthen the effect of environmental constraints and resource constraints on WFH effectiveness.
- 6. Companies that implement WFH policies for their employees are advised to remove as much as possible the work environment barriers to implementing WFH at employees' homes and barriers to information technology resources to increase employee effectiveness in working WFH. Companies must also consider employees' personal and family welfare to strengthen the impact of implementing their WFH policy.

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