

# THE EFFECT OF PHYSICAL WORK ENVIRONMENT TO EMPLOYEES' PERFORMANCE DURING WORK FROM HOME PROGRAM

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#### ABSTRACT.

As a result of the deadly Corona virus pandemic at the end of 2019, many companies have had to comply with government decisions regarding the implementation of the Work from Home (WFH) program for businesses around the world to suppress the spread of COVID-19. This decision has an impact on companies and employees in the city of Semarang who must make the transition to working from home by teleworking. With the high index of technological development in Indonesia showing a drastic increase from the previous year regarding the use of internet and technology create a supportive conditions for the implementation of the work from home program for employees in the city of Semarang, The theory of stimulus-response is used in this study to investigate the influence of employee's physical work environment conditions during the transition to changes in the work from home program to employees performance. Data obtained from 150 respondents in Semarang City were analyzed using a structural equation model (SEM) using the partial least squares (PLS) method in the SmartPLS application. Open questions were also used in this research as additional information to show the background conditions of the work environment experienced by respondents during the work-from-home program.

The results from the report's findings show that workspace design or layout, ambiance conditions, and work equipment all have a positive and significant impact on employee performance. Consequently, in this research, all hypotheses were accepted. The management implications of this study are intended to provide suggestions for increasing employees work performance during the work from home program by making regulatory schemes and recommendations regarding things that employees must do regarding the workspace design or layout, implementing disciplinary reports, and considering the background of prospective employees with the space availability and workspace comfort that employees have at home during the recruiting program.

Keywords: Physical Work Environment, Teleworking Employee Performance, Working from Home (WFH), Stimulus Response Theory (SR), Generation Y and X

#### PENDAHULUAN

Working during this pandemic certainly delivers changes in work environment and culture that make workers need to adjust. Before the WFH pandemic era, most of the work is held with face-to-face interactions, including when collaborate and work with teams. In the other hand, work and home life is a separate thing. Because work takes time and a special atmosphere, especially when meeting with professional colleagues (Singh & Jena, 2021).

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With the implementation of work from home at the beginning of the pandemic and at the end of the endemic, this made the implementation of the WFH and teleworking programs go hand in hand with the development of the use of information technology in Indonesia which is in accordance with the data obtained by the Indonesian state statistics agency from the last five years (Badan Pusat Statistik, 2021).

The rapid advancement of Information and Communication Technology (ICT), notably the telecommunications sector during the past few years, is one of the indicators of Indonesia's transition to a digital society. Fixed-line telephone usage has changed in favor of mobile and cellular phone usage, particularly with the increased use of the internet on mobile and cellular phones. Additionally, thanks to Indonesia's rapid advancement in telecommunications, both urban and rural areas are now familiar with the term "Digital Economy." (Boediono, 2021). Due to that, Start-up and Micro, Small and Medium Enterprises (MSME) take their role in work from home and Teleworking program as the accordance with the development of utilization of technology in Indonesia.

As a type of company that is accustomed to implementing remote working schemes, startups in various business lines do not encounter many obstacles when the work-at-home rules and PSBB (large-scale social restrictions) are imposed by the government. The dynamics and routines of working at home run seamlessly, supported by tools that have been commonly used so far. After almost 3 months of the work at home rule being implemented, a few changes and new policies were taken. For example, abroad, Twitter became the first technology company to then give employees the choice around the world, where Twitter operates, to work from home forever (Bindley, 2021).

Based on an interview with one of the employees who work from home the employee stated that while working from home he experienced pressure from two sides where the employee was part of the company that had to work well to be able to meet the company's targets, especially during this pandemic. but on the other hand, employees in their capacity as fathers, mothers, children need to complete the work at home (Ma'rifah, 2021). Working from home conditions create conflicts experienced by employees in their families. Based on an interview with one of the employees who work from home, income is not disturbed, and communication can be through technology, but when there is a meeting, suddenly their child cries bagging to be accompanied for sleeping or eating, there is a handyman who fixes the ceiling and there are incidents that happen makes employees not more relaxed when working from home but increasingly distracted which makes employees feel unproductive doing work from home.

However, previous studies have different results where there is research which states that work from home can increase work efficiency, but the results of other studies state that work from home makes employees unproductive. Furthermore, Over the last few decades, there has been a rising dynamic between generations in the workplace. The displacement of older generations in organizations by Millennials (Generation Y) and the now-joining Generation Z into the workforce created a new challenge for organization in how to develop human resources systems in response to the changes in workforce demographics.

The findings from previous research were still inconsistent which made this research fascinating to be re-evaluated to further understand the variables. Furthermore, the phenomena can be reduced by understanding the variables further.

#### THEORETICAL FRAMEWORK AND HYPOTHESIS

# Space design or layout impact on employee performance in connection with the work from home policy

Layout in the workplace is one of the components that is needed in building the character of a company and can also support the performance of employees so that they can work optimally and comfortably in doing all the work in their working area, so that every



given job can be completed properly and on time, and in determining a good office layout and improving employee performance (Miskiyah & Farouk, 2021). Convenience layout helped employees to concentrate on her journey (Parilla, Abadilla, Villanueva, & Tarrazona, 2022). The existence of a more spacious room will make employees feel more comfortable and can do work more effectively and improve performance (Rorong, 2016). These results are in accordance with the results of Rorong (2016) and Miskiyah & Farouk (2021) research which states that space design or layout have a positive and significant effect on employee performance.

**H1:** Space design or layout has a positive and significant effect on employee performance in connection with the work from home policy.

# Ambient condition impact on employee performance in connection with the work from home policy

Ambient conditions are characteristics of the service environment related to the five senses. Without realizing it, ambient conditions can affect a person's emotions, perceptions and behavior (Samani, Eskandari, Zadeh, & Samani, 2018). Kifor, Săvescu, & Dănuţ (2022) said that the surrounding conditions will also produce and cause the mood of a consumer to what he feels. The existence of environmental characteristics such as room color, adequate lighting, comfortable air temperature and a pleasant aroma from the workplace will make it easier for employees to concentrate on their work so that they can improve their performance (Yildizel, Kaplan, Arslan, Yildirim, & Ozturk, 2015). These results are in accordance with the results of Yildizel, Kaplan, Arslan, Yildirim, & Ozturk (2015) and Samani, Eskandari, Zadeh, & Samani (2018) research which states that ambient conditions have a positive and significant effect on employee performance.

**H2:** Ambient conditions have a positive and significant effect on employee performance in connection with the work from home policy.

# Work equipment impact on employee performance in connection with the work from home policy

Work facilities in the form of office equipment and equipment provided by the office are facilities and infrastructure to facilitate the work of employees. Adequate work facilities with conditions that are suitable for use and well maintained will help smooth work processes within an organization (Ismail, 2016). Providing complete facilities is also used. Chua, Ali, & Lim (2016) stated that when employees have adequate equipment and work equipment to facilitate the work of employees, their performance will increase. These results are in accordance with the results of Ismail (2016) and Thomas, Rorong, & Tampongangoy (2018) research which states that work equipment has a positive and significant effect on employee performance.

**H3:** Work equipment has a positive and significant effect on employee performance in connection with the work from home policy.

#### **Theoretical Framework**

Based on the explanation of the direction of influence between variables which is strengthened by the results of previous studies which justify the development of hypotheses, the research model can be developed as shown below;





Research Model Source: Developed model for this research, 2023

# METODE PENELITIAN Population and Sample

The population in this study were all employees from startup and MSME companies in technology sector who were affected by the work from home policy in the city of Semarang. The criteria used are employees who are Male/and female within the age range of Generation Y and Z, still actively working in Start-up Companies or MSMEs that utilize technology, experiencing Work from Home during the Covid-19 Pandemic and Endemic or Have done/is still doing Teleworking, domiciled in Semarang City and Live in a household (not living alone). To get samples with criteria that match what the researcher wants, the survey sheet has a filtering system so that only certain samples can continue to answer survey questions if their criteria match what the researcher wants. Another criteria The number of samples used in accordance with Hair, Black, Babin, & Andreson (2014) is a minimum of 100-200 respondents. The sample taken for the research is 150 respondents.

Development of Research variable indicators				
Variables	Source	Indicator	Variable	
Space design	(Mustafa &	1. Space needed to work at	Independent	
or layout	Gold, 2013)	home		
		2. Work layout creation at		
		home		
		3. Workspace comfortness at		
		home		
		4. Simple work layout that		
		meets the needs at home		
Ambient	(Mustafa &	1. Availability of natural light	Independent	
condition	Gold, 2013)	2. Airflow comfortness at	_	
		home		
		3. Ambient comfortness at		
		home		

 Table 3.1

 Development of Research Variable Indicators



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Work	(Mustafa &	1 Availability of work	Indonandant
	`	1. Availability of work	Independent
Equipment	Gold, 2013)	equipment to support job	
		2. Ease of access the required	
		work equipment	
		3. Ease of obtaining work	
		equipment	
Employee	(Al-Sada, Al-	1. Quality of Work	Dependent
performance	Esmael, &	Finished the same job quality	
	Faisal, 2017)	as work from office.	
		2. Job Quantity	
		Finished the same job quantity	
		as work from office.	
		3.Punctuality	
		Complete work at the same	
		finish time as working from the	
		office.	
		4. Conformity with Job	
		Description	
		Conform with job description	
		while work at home	

Source: Adopted and Developed from Previous Studies, 2023

# HASIL PENELITIAN DAN PEMBAHASAN

Validity test

# Table 4.1

	Convergent Validity Test Results				
	Average Variance Extracted (AVE)				
AC	0.845				
EP	0.861				
SR	0.698				
WE	0.874				

Source: Processed primary data (2023)

Information:

SR: Space design or layout

AC: Ambient conditions

WE: Work equipment

EP: Employee performance

The results showed that all AVE constructs > 0.5, so it can be concluded that all variables are convergently valid.

	Table 4.2					
Con	vergent	Validity	Test Re	sults		
AC EP SR WE						
AC1	0.932					
AC2	0.881					
AC3	0.943					
EP1		0.942				
EP2		0.925				
EP3		0.937				



EP4	0.908		
SR1		0.902	
SR2		0.720	
SR3		0.902	
SR4		0.802	
WE1			0.954
WE2			0.924
WE3			0.927

Source: Processed primary data (2023)

Information:

SR: Space design or layout

AC: Ambient conditions

WE: Work equipment

EP: Employee performance

Based on the value of the outer loading factor, it can be seen that all indicators have a value greater than 0.7 so that it can be stated that convergent validity has been met or all indicators are valid.

Discriminant Validity Test Results				
	AC	EP	SR	WE
AC	0.919			
EP	0.792	0.928		
SR	0.781	0.819	0.835	
WE	0.749	0.750	0.711	0.935
a	р	1 .	1 / /	(2022)

Table 4.3

Source: Processed primary data (2023)

Information:

SR: Space design or layout

AC: Ambient conditions

WE: Work equipment

EP: Employee performance

Based on the results of discriminant validity, it can be seen that the AVE root value seen in the numbers on the diagonal line is greater than the correlation between latent variables, so it can be concluded that all of these variables are valid.

F	ІТМТ І	Discrimi	nant Vali	idity Tes	t Result
		AC	EP	SR	WE
	AC				
	EP	0.834			
	SR	0.844	0.814		
	WE	0.815	0.799	0.792	

Table 4.4 S

Source: Processed primary data (2023)

Based on table 4.4 it can be seen that each variable has a composite reliability value and Cronbach's alpha exceeds the standard value of 0.7. With these values, it can be concluded that the results of the reliability test on all these variables are reliable.



# **Reliability Test**

	Table	4.5
	Reliability Te	est Results
	Cronbach's	Composite
	Alpha	Reliability
AC	0.908	0.942
EP	0.946	0.961
SR	0.855	0.901
WE	0.928	0.954

Table 15

Source: Processed primary data (2023)

Information:

SR: space design or layout AC: Ambient conditions WE: Work equipment EP: Employee performance

Based on table 4.5 it can be seen that each variable has a composite reliability value and Cronbach's alpha exceeds the standard value of 0.7. With these values, it can be concluded that the results of the reliability test on all these variables are reliable.

# **Hypothesis Testing**



Figure 4.1 Structural Testing Model Source: Processed primary data (2023)

SR2

SR3

Information:

- **SR** : Space design or layout
- **SR1** : Space Availability
- SR4 : Work Layout Availability A
- : Ability to Create Work Layout
- : Workspace comfort
- AC : Ambient conditions



AC1	: Enough Light	AC2	: Airflow Condition
AC3	: Ambient Comfort	WE	: Work equipment
WE1	: Equipment Availability	WE3	: Ease of Procuring Equipment
WE2	: Equipment Position	EP	: Employee performance
EP1	: Quality of Work	EP2	: Job Quantity
EP3	: Punctuality	EP4	: Conformity with Job Description
	-		· · ·

	Hypothesis Test Results				
hypot hesis	Variable Relations	Path coefficients	t- statistic s	P- value s	Conclusion
H1	Space design or layout->employee performance	0.437	6,497	0.000	Accepted
H2	ambient conditions->employee performance	0.277	3,539	0.000	Accepted
H3	Work equipment->employee performance	0.232	3.153	0.002	Accepted

Table 4.6

Source: Processed primary data, 2023

Based on table 4.6, it is known that hypotheses 1, 2 and 3 are accepted. Indication of acceptable value can be seen from critical value (CR) of > 1.96 ( $\alpha$ =5%) and p-value < 0.05. Hypothesis 1 states that space design or layout positively and significantly affects employee performance in connection with the work-from-home policy. Hypothesis 1 has a critical value of 6.497 and a p-value of 0.000. Thus, it can be concluded that hypothesis 1 is accepted. Hypothesis 2 states that the ambient condition is positive and significantly affects employee performance in connection with the work-from-home policy. Hypothesis 2 has a critical value of 3.539 and a p-value of 0.001. Thus, it can be concluded that hypothesis 2 is accepted. Hypothesis 3 states that work equipment positively and significantly affects employee performance in connection with the work from home policy. Hypothesis 3 has a critical value of 3.153 and a p-value of 0.000. Thus, it can be concluded that hypothesis 3 is accepted.

Table 4.7
Structural Model Evaluation

Information	Mark	Evaluation	
R-Square	0.751	Strong	
	1 SR: 0.272	1 Big	
Effect size F Square	2 AC: 0.097	2 Small	
	3 WE: 0.086	3 Small	
Q2 predictive relevance	0.640	Has strong predictive relevance	

Source: Processed primary data (2023)

Information: SR: Space design or layout AC: Ambient conditions

WE: Work equipment

EP: Employee performance

From table 4.7 it can be seen that this research model has an R Square value of 0.751 which indicates that there is a strong influence of predictors in influencing employee

performance. Based on the results of F Square, it can be seen that variable space design or layout have a large effect size on employee performance, while the ambient condition and work equipment have a small effect size on employee performance. In the Predictive Relevance also shows the value of the observations in the study where this study used the blindfolding method on SmartPLS. The predictive relevance value must be greater than 0 so that it can be said to be precise. Based on the data above, it can be seen that the  $Q^2$  value has a value of 0.640, which means the model has strong predictive relevance.

	indicator i o war us	variable Evaluation		_	
	Indicator toward variable	Indicator toward variable Mark		Evaluation	
	Space Design or Layout	Key Word	Value	Rank	Rank (All)
SR1	I don't have all the space I need during work from home	Space Availability	0.902	1st	6th
SR2	I can't make my own work layout at home	Ability to Create Work Layout	0.720	4th	10th
SR3	I like the space I got at home	Work space comfort	0.902	2nd	7th
SR4	I have simple layout that suffice my needs	Work Layout Availability	0.802	3rd	9th
	Ambiance Condition				
AC1	I got a sufficient sunlight at home	Enough Light	0.932	2nd	3rd
AC2	I have little airflow at home	Airflow Condition	0.881	3rd	8th
AC3	I like the ambient I got from working at home	Ambient Comfort	0.943	1st	2nd
	Work Equipment				
WE1	I have complete equipment that support my job	Equipment Availability	0.954	1st	1st
WE2	It's not easy to reach my equipment when I need it	Equipment Position	0.924	3nd	5th
WE3	It's easy to buy equipment when I need it	Ease of Procuring Equipment	0.927	2rd	4th

Table 4.8				
<b>Indicator Towards Variable Evaluation</b>				

Source: Processed primary data (2023)

Based on the value of the outer loading factor from table 4.33, table 4.45 will explain how big the effect of the contribution indicator variable is on the independent variable. Based on the independent variable Space design or layout, the Space Availability (SR1) is in the first place because it has the largest contribution effect (0.902) which can be explained the availability of adequate working space at home is prioritized by employees who take part in the work from home program, while in The second position is the Work Space Comfortness (SR3) which has a contribution effect of (0.902) where the comfortness in the workspace is also an influential contributor to the variable space design or layout variable during work from home program. In third place is Work Layout Availability (SR4) with the number of effect contributions (0.802) because work layout availability will create comfortness in the employees works space therefore work layout availability comes after Workspace Comfortness (SR3) and followed by Ability to Create Work layout (SR2) in fourth position with the number of effect contributions (0.720) within the scope of the Space Design or Layout Variable.

In the Ambiance Condition Variable, Ambiance Comfortness (AC3) has the largest number (0.943) where this makes the comfortable ambiance at work one of the factors that gives a highest effect in the Ambiance Condition Variable. This is also proportional to comfort in the workspace where both are in the comfort category and the numbers are also in the high category for each variable. While in the second position there is Enough Light (AC1) with a number (0.932) where the lighting conditions in the work area at home also have a considerable influence with the Ambiance Condition variable this is also reinforced by the results of an open question study regarding light conditions affecting respondents while working (7.0AC) where there were 88 respondents (or 59%) out of 150 who agreed that the lighting of their work area affected their concentration at work. In the last position



is the Airflow Condition (AC2) with a number (0.802) making the airflow conditions also contribute quite amount of effect to the employees when they are working at home.

Meanwhile for the Work Equipment Variable, The Equipment Availability (WE1) has the highest ranking in the indicator that contributes to the influence of the variable (0.954). this makes the availability of adequate work equipment in the workplace (at home) have a big effect on variable Work Equipment, in which this is in line with the results of an open question regarding the preparation of work equipment needed when working from home (7.0WE) where there were 128 respondents (or 85.3%) consisting of 59 respondents who had been able to prepare and 69 respondents who had not been able to prepare but want to learn to prepare and organize their work equipment at home, this makes 128 respondents (or 85%) agree that the availability of work equipment is an important factor in the Work Equipment's Condition Variable. For the second rank there is Ease of Procuring Equipment (WE3) with a number (0.927), this can be seen running in line with Equipment Availability (WE1) because to create Equipment Availability (WE1) conditions there must be an Ease of Procuring Equipment (WE3). While in the last rank there is Equipment Position (WE2) with a total of (0.924).

# CONCLUSIONS

Based on the research results and processing of data obtained from distributing questionnaires to respondents as many as 150 questionnaires. The conclusions can be described as follows:

- 1. The result of the testing on Physical Work from Home environment dimensions in space design or layout is proven to have positive and significant effects on the employee performance in connection with the work from home policy that the company applied. H1 is accepted in the model.
- 2. The result of the testing on Physical Work from Home environment dimensions in ambient conditions, and work equipment is proven to have positive and significantly effects on the employee performance in connection with the work from home policy that the company applied. H2 is accepted as the model.
- 3. The result of the testing on Physical Work from Home environment dimensions in work equipment positive and significantly affects employee performance in connection with the work from home policy that the company applied. H3 is accepted in the model.
- 4. Based on the results of the testing, the greatest dimension that influences on employee's performance is the space design or layout. And followed by Ambiance Condition and then work equipment.

# Managerial Implication

This research departs from the problem of the effect of physical work environment to employee performance during work from home program and in this research which is caused by Space Design or layout, Ambiance Condition, and Work Equipment. The Managerial implications are prioritized on the Space Design or layout variable which has the largest direct effect coefficient of 0.272 and followed by Ambiance condition with the second largest direct effect coefficient, namely 0.097. and the last with Work Equipment 0.086

To improve employee performance when implementing the work from home program, managerial implications are focused on space design or layout. Based on the results of table 4.52 in chapter 4th, it shows that the results of the indicators that have the greatest influence on variable space design or layout are Space Availability (SR1) and Workspace Comfortness (SR3) with each of 0.902. Based on the results of open question data (5.0SR) regarding the amount of available work space  $(m^2)$  and the indicator variable (SR1)



regarding the workspace availability and Employees Performance (EP), employees who have  $1.5 \text{ m}^2$  space (54 respondents or 36%) and  $<1.5 \text{ m}^2$  (30 respondents or 20%) when they carried out the work from home program, the performance of the employees decreased due to the extensive conditions of their workspace, this can be seen in table 4.5. Not only that, based on an open question (6.OSR) regarding employee work layouts, it shows that 54 respondents (or 36%) work in their rooms and most of them have poor performance.

From these results, the steps that can be taken by the company are to conduct training in the form of counselling regarding standard operating procedures when working at home by making regulatory schemes and recommendations regarding things that employees must do when working at home such as procedures for setting up a layout that in accordance with company standards, restrictions and recommendations for the location of work areas at home that may be used for work, and others. After carrying out this stage, the company can also carry out an assessment of the setup area where employees work and can be categorized as an employee disciplinary report so that employees want to try to provide workspace according to company standards.

And to mitigate a decrease in work performance so that it does not occur when there is transition from work from office to work from home due to unexpected condition, the companies can develop and update standard operating procedures in recruiting employees by taking into account the background of prospective employees regarding the space availability and workspace comfortness that employees have at home. This could mitigate or prevent the risk of declining employee performance in the event of an unexpected pandemic or disaster that could occur in the future because the employee background condition is up to standard to implement a work from home program. With the stable level of employee performance during those difficult times, a company can still have a stable performance when the unexpected pandemic or disaster occurs.

For the second largest direct effect for employee's performance, the managerial implications are focused on Ambiance Condition (AC) which is affected by the ambiance comfortness (AC3) with 0.943 and the level of light inside their room (AC1) with 0.932. This means that the ambiance comfortness of the working space and the brightness level of the room needs to be well managed by the employees so that employees' performance can be improved and maintained during work from home program. This directs the company to conduct training for its employees regarding procedures for preparing the ambiance of work area when the work from home program is carried out (Such training can explain and teach among other things; Cleanliness of the work area, air temperature regulation, light lighting settings, work area noise settings that can be done by the employees themselves while working at home).

This is done so that the company's employees can prepare and adjust the work area that they have at home to be in accordance with the appropriate standard of ambiance conditions that have been set by the company, the Minister of Manpower (Work environment Standards Regulation No. 5 of 2018), Regulation of the Minister of Health (Work environment standard No. 70 and 48 of 2016). if the training has been carried out, the company can also carry out an assessment that is also categorized as an employee disciplinary report during the work from home program in the future.

Work equipment has the third position with 0.086, that is most affected by equipment availability (WE1) with 0.954 and the ease of procuring equipment (WE3) with 0.927. Having the most advanced equipment and tools possible to ensure productivity and high performance has also become important. If the company doesn't provide the right tools, the employees may set their employees up for failure. Ensuring the company's employees have the ability to use the right tools to do their job well can benefit their productivity, but perhaps even more importantly, it may affect their job satisfaction and performance. Things that can be done by companies from the results of the research above regarding the availability of



work equipment when the work at home program is being carried out is to provide work equipment that can be lent to the employees so that they can use it do their job with the same quality and quantity as when the employees work at the office.

Furthermore, companies must also provide guidance and training to employees regarding to the use of software and hardware that will be used when carrying out work from home program activities, this must be done because based on an open-question survey conducted from 150 respondents regarding to work equipment training (8.OWE), there as many as 82 respondents (or 54%) did not receive training on their work equipment (software and hardware) during the work from home program activities. If company can provide their employees with good tools and equipment and provide them with good training, the company can help the employees to harness their highest potential energy, increase their focus and achieve the performance the company desire even during work from home program.

# **Research Limitations**

- 1. The results of this study cannot be generalized for use elsewhere because the respondents of this research are employees who experienced work from home program in Semarang during the Covid-19 pandemic and endemic. Therefore, based on the *accessed data*, the respondents first telework experience might be affected by the pandemic condition.
- 2. Because the number of respondents in the selection procedure varies between cities and even nations in prior research regarding physical work environment on work from home program, this result may not reflect the whole country.
- 3. From the results of filtering the 30 job categories that are suitable for teleworking (Bibby, 2021) & (Herrety at al., 2022) Which consist of; Customer Service, Call Centre, Accountant, Digital Marketing, Data entry clerk, Customer Support Representative Virtual, Assistant Medical Transcriptionist, Graphic Designer, Help Desk Analyst, Translator Virtual Instructor, Web Designer, Social Media Manager ,Copywriter ,Recruiter Public Relations Manager, Direct Sales Representative, Instructional Designer, Marketing Manager, Stock broker, Market Research Analyst, Information Technology Analyst, Web Developer, Computer Programmer, Systems Analyst, User Experience Designer, Help Desk Technician, Network Engineer, Software Engineer. There are several categories that were not covered from a total of 150 respondents who live in Semarang, these categories are; Data entry clerk, Virtual Assistant, Medical Transcriptionist, Web Designer, Copywriter, Recruiter, Instructional Designer, Stockbroker, Market Research Analyst, Information Technology Analyst, Help Desk Technician, Network Engineer, Software Engineer. Stockbroker, Market Research Analyst, Information Technology Analyst, Help Designer, Copywriter, Recruiter, Instructional Designer, Stockbroker, Market Research Analyst, Information Technology Analyst, Help Desk Technician.
- 4. This research is only restricted to generation Y and Z in the city of Semarang

#### **Further Research**

- 1. further research needs to consider using employees who work from home in another city and another job background to increase the amount of generality, a broader range of respondents might be sampled.
- 2. Future research can compare the different age generations in the effect of physical work environment to employee performance on telework program
- 3. Future research also can add more variables regarding employees' work stress level, work life balance, reward, training in the workplace
- 4. Future research can consider the non-physical work environment as an additional variable and use self-determination theory to see the influence of motivation during teleworking towards employee performance.



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