

The Effect of Working from Home During the Covid-19 Pandemic on Human Capital Organizational Effectiveness in an Indonesian Heavy Equipment Company

Edhie Sarwono^{1,2} Gembong Baskoro^{2,*} Sumarsono² Dena Hendriana² Henry Nasution²

¹ *United Tractors. Tbk., Jakarta - Indonesia*

² *Master of Mechanical Engineering, Swiss German University, Tangerang - Indonesia*

*Corresponding author. Email: gembong.baskoro@sgu.ac.id

ABSTRACT

The goal of this study is to determine the impact of Work from Home dimensions on Organizational Effectiveness dimensions, as well as superior and subordinate perceptions during pandemic Covid-19, by employing an inferential statistical method and descriptively empirical corporate data analysis. During the pandemic Covid-19, this study was conducted at Human Capital Organization with a 100% sample approach (70 population) and discovered that Work from Home had a favourable link with Organizational Effectiveness. The findings of this study will be utilized to develop policies that will apply to thousands of employees in organizations with similar organizational culture, management systems, and policies. There are three more characteristics that suggest a favourable correlation: having children at home, having an internet connection at home, and having a mobile device. Further research can be conducted using the concept of local wisdom because each nation with its own culture will react differently to this phenomenal, and the conclusion of this study was useful for the organization in determining the proper policy of working methods during and after the Covid-19 pandemic to achieve organizational effectiveness.

Keywords: *Work from Home, Organizational Effectiveness, Local Wisdom.*

1. INTRODUCTION

Covid-19 pandemic disrupt many aspects of our daily life in short term, medium and also long-term basis. Our behaviors must be adapted with health mandatory requirements as a new normal for several years. Human Capital Organization is one of the very important strategic function within the company to ensure all of the employee (at operational holding company and subsidiary) are ready to well perform at any condition based on characters and competencies requirements (Indonesia Leading Heavy Equipment Company 2019 Annual report). There are five roles of human capital organization describe as follows [1]: (1) Operational Partner, (2) Organization Developer (and Cost Control), (3) Talent Transformer, (4) Agent of Change, and (5) Administration Expert.

Pandemic Covid-19 affecting organization around the world, all of us have to balance humanity and business activities, for example: combined working methods (Work from Home/WFH & Work from Office/WFO) that impacting Organizational

Effectiveness (OE). The results of this research will be used to create policies that correlate to thousands of workers in organization, that have similar organizational culture, management system and policies.

1.1. Research Question

- a. Does Work from Home correlate with Organizational Effectiveness?
- b. Are Employee condition (Having Children at Home, Home Internet Connection, Mobile Device) correlated with Organizational Effectiveness?
- c. Is there any difference perception between Superior and Subordinate toward implementation Work from Home method?
- d. Is there any difference in perception between Superior and Subordinate toward OE?

2. LITERATURE REVIEW

2.1. Organization Effectiveness

There are four dimensions to evaluate the organizational effectiveness [2], that is:

- Purposeful: this consist of three indicators: Efficiency, Productivity, and Stability.
- Adaptable: this is consist of three indicators: Innovation, Growth, and Evaluative.
- Sustainable: this consist of four indicators: Fiscal Health, Output Quality, Information Management, and Conflict and Cohesion.
- Harm minimization: this consist of two indicators: Intra and Extra Organizational.

2.2. Work from Home Methods

Refer to Guspa and Rahmi [3], there are 3 dimension that influence people perception, that is:

- Cognitive: associated with thinking and or conscious mental processes. It represents the individual faith and stereotype of the object (good or bad).
- Affective: associated with the emotions, feeling that related with the object.
- Conative: associated with a wish, intention, or effort to do something (behavior).

2.3. Research Paradigm

A research paradigm is shown in Figure 1.

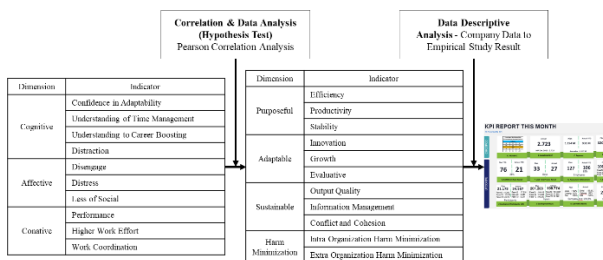


Figure 1 Research paradigm

3. RESEARCH METHOD

There are 2 main variables (Work from Home Perceptions as of Independent Variable and Organizational Effectiveness as of Dependent Variable) and 1 Moderate Variable to be evaluated is shown in Figure 2.

The Primary data was the result of Total Sampling method from the questionnaire distributed online (using Google form tools) to 100% of Human Capital

organization employee (70 employee), from 24 – 25 November 2020. Before start the hypothesis analysis, researcher conduct validity & reliability test for check the items of questionnaire are valid or not.

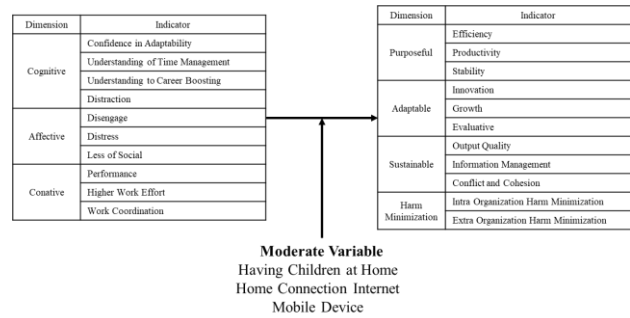


Figure 2 Research variable

3.1. Validity Test

There are 3 types of validity test and all of that validity test had been executed for this research: Content Validity (Professional Judgment and Face) and Construct/statistic validity. Statistics validity in this research are using statistical Pearson correlation method in SPSS (Statistical Product and Service Solution) and the validity test result of variable X (WFH Perceptions) are in 0.308 - 0.711 and variable Y (Organizational Effectiveness) are in 0.436 - 0.855. ($r_{\text{result}} \geq r_{\text{table}}$) where r_{table} is 0.231883 (as minimum reference) which mean all of the items is valid [4].

3.2. Reliability Test

Reliability refers to the extent to which a scale produces consistent results if repeated measurements are made [5]. The result of reliability test is 0.911 for variable X and 0.969 for variable Y which indicates every variable in the questionnaire on this study is highly reliable. For manual calculation, Cronbach Alpha formula is:

$$\alpha = \frac{n}{n-1} \left(\frac{S - \sum S_i}{S} \right) \quad (1)$$

where,

α : Reliability Coefficient / Cronbach Alpha

n : The number of items in the test

S : Overall score of variances

S_i : The variance of each item

3.3. Correlation Analysis

To proof of the hypothesis between Work from Home as independent variable and Organizational Effectiveness as dependent variable, this research use Pearson correlation analysis method. Correlation analysis is used to verify and measure the strength of the

association (linear relationship) between two variables [6].

The correlation coefficient (r) can be calculated as [5]:

$$r = \frac{\sum_{i=1}^n (X_i - \bar{X})(Y_i - \bar{Y})}{\sqrt{\sum_{i=1}^n (X_i - \bar{X})^2 \sum_{i=1}^n (Y_i - \bar{Y})^2}} \quad (2)$$

where,

r : Correlation coefficient

X_i : Values of the x-variable in a sample

\bar{X} : Mean of the values of the x-variable

Y_i : Values of the y-variable in a sample

\bar{Y} : Mean of the values of the y-variable

3.4. Multiple Regression

Another one, in this research will use Multiple Regression because it can predict the value of a dependent variable based on the value of at least one independent variable and explain the impact of changes in an independent variable on the dependent variable. Multiple Regression is a statistical technique that simultaneously develops a mathematical relationship between two or more independent variables/dimension and an interval-scaled dependent variable [5].

The general form of the multiple regression model [5] is as follows:

$$Y_i = \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \dots + \beta_k X_{ki} + \varepsilon_i \quad (3)$$

And which is estimated by the following equation:

$$\hat{Y}_i = b_0 + b_1 X_{i1} + b_2 X_{i2} + \dots + b_k X_{ki} \quad (4)$$

where,

\hat{Y}_i : Estimated Value of Y (Dependent Variable)

b_0 : Estimated Intercept

$b_i X_i$: Estimated Slope Coefficients

4. RESULTS AND DISCUSSIONS

4.1. Results

1. *Data Analysis for 1st Hypothesis:* For the 1st hypothesis obviously had been proven that Work from Home having correlation 65.9% (Strong Correlation) with Organizational Effectiveness.
2. *Data Analysis for 2nd Hypothesis:* Having Children at Home: For 1st Moderate variable summary analysis: Having Children at Home,

support positive correlation between Work from Home and Organizational Effectiveness (R square = 59.9%).

Home Connection Internet: Having Internet Home Connection as 2nd moderate variable, support positive correlation between Work from Home and Organizational Effectiveness (R square = 50.2%).

Mobile Device: The summary analysis as follow: Having Mobile Device as 3rd moderate variable support positive correlation between Work from Home and Organizational Effectiveness (R square = 34.9%).

3. *Data Analysis for 3rd Hypothesis:* Implementation of WFH influenced by perception of employee and employer or subordinate and superior. As a comparative test between these two groups to ensure if there are any significant differences, this research used the Independent-Sample T-Test method. This data analysis result (T Result = 1.005 < T Table = 1.9966) proved that there is no difference perception between Superiors and Subordinate toward implementation of Work from Home.
4. *Data Analysis for 4th Hypothesis:* There is a similarity in variance between groups or which means homogeneous. Regarding to the 4th hypothesis, this data analysis result (T Result = 2.139 > T Table = 1.9966) proved that there was significant difference in perception between Superior and Subordinates toward OE.
5. *Official Data of Organizational Effectiveness Analysis:* To review and strengthen the analysis of correlation between Work from Home and Organizational Effectiveness, this research also conducted description analysis data for Human Capital Organization achievement using Organizational Effectiveness framework.

To Observe and analyse all data at Table 1, clear stated that almost all of the parameter of Human Capital Organization achievement was increased. It was proved that during Work from Home, activities still optimize execute and the performance also still in line with organizational planning. It is very clear and strong in real evidence and indisputable that Work from Home has a positive correlation with all Dimensions in Organizational Effectiveness.

Table 1. Organizational achievement data based on organizational effectiveness framework

Dimension of Organizational Effectiveness	Indicator of Organizational Effectiveness	Definition	OE Parameter	Actual Data	
				2019	2020
Purposeful	Efficient	This factor related in human capital organization with efficiency of human capital program.	Dev Cost/Program.	Rp 111.814.308 (total program= 48 program)	Rp 60.263.934 (total program=66 program)
	Productivity	Employee Cost/Recurring profit for branch/site or company level and also ratio between number of innovations to number of employees.	Dev hours/employee.	25,5 Hours/Employee	30 Hours/Employee
			Recurring Profit/Employee Cost	1.30	0.59
	Stability	Employee health index, turnover ratio, stability of balancing composition between front liner team and back-office team, percentage of job rotation.	Ratio of number employee back-office vs operation.	Back Office: 20% Operation: 80%	Back Office: 15% Operation: 85%
Adaptable	Innovation	The degree to which changes (either temporary or permanent) in process, procedures, or products are intentionally implemented in response to environmental changes.	Number of Policy & procedure socialization program to employee and labour union (benefit & others regulation)	Policy = 20 files Standard Operating Procedure & Working instruction: 3 files Total: 23	Policy = 42 files Standard Operating Procedure & Working instruction: 8 files Total: 50
	Growth	Ability of an organization to import more resources than it consumes in order to maintain itself. Measures may include revenue and profit growth, change in workforce, net change in number of clients served.	Number of Participants	4.129	17.516
	Evaluative	PDCA cycle, number of successful new program, number of company employee	Percentage of Bipartite forum (official coordination	60%	80% (as of Oct 2020)

		participation, and performance management system implementation.	forum between management and Labour Union).		
Sustainable	<u>Output Quality</u>	<u>Customer Satisfaction Index (CSI), Employee Engagement Index (EEI) and percentage of innovation winner.</u>	<u>Number of innovation winner.</u>	<u>1 Team (Corputown) Internal Award</u>	<ul style="list-style-type: none"> • 2 Team (Flexy Benefit & UT One) For Internal Award • 3 Teams for external award (HR Excellence Award) • 1 Leader for external award (HR Future leader award)
	<u>Information Management</u>	<u>Cross level collaboration, accessibility to influence, participative and involvement in decision making, and communications processes inside and external to the organization.</u>	<u>Lead time of Management Documentation Development (Policy, memo, procedure, work instruction, etc.).</u>	<u>7 Days</u>	<u>4 Days</u>
	<u>Conflict & Cohesion</u>	<u>Quantity of cross function coordination, number of conflict.</u>	<u>Number of working team (HC)</u>	<u>7</u>	<u>32</u>
Harm Minimization	<u>Good Governance (Internal)</u>	<u>Ethical and legal items that pertain to matters internal to the organization such as instances of ethical conduct breach, evidence of workforce training, and internal and external audits.</u>	<u>Environment Health & Safety Audit (AGC)</u>	<u>Gold: 24 Green:19 Blue: 0 Red: 1</u>	<u>Gold: 35 Green: 7 Blue: 1 Red: 0</u>
	<u>Good Governance (External)</u>	<u>Ethical and legal items that pertain to matters external to the organization such as compliance with government regulations, ecological footprint, and internal and external audits.</u>	<u>Coordination forum with DISNAKER, East Jakarta</u>	<u>3</u>	<u>6</u>

4.2. Employee Opinion Data

The majority employees (95.8%) agree to continue WFH implementation combine with WFO and 2.8% employees agree to continue Fully WFH implementation (total agree to continue WFH = 98.8%) post Pandemic Covid-19 is shown in Figure 3.

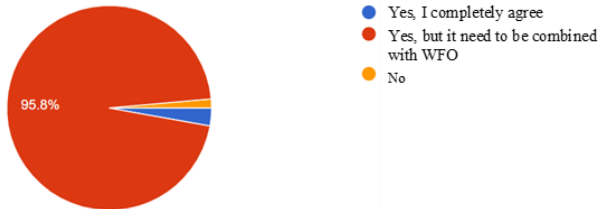


Figure 3 Employee opinion data

4.3. Discussion

1. *1st Research Question: Does WFH correlate with OE?:* It becomes very clear that the Work from Home method in this organization has a strong and positive correlation to Organizational Effectiveness. The dimension of Work from Home that use in this research in line with the Trisakti Soul concept which was eventually developed later into Panca Daya, belongs to one of the Indonesian educational hero, Mr. Ki Hajar Dewantara who acknowledged as Bapak Pendidikan Nasional Indonesia or 1st minister of teaching/education. In Trisakti concept, Mr. Ki Hajar Dewantara stated that for optimizing people potential have to explore and develop: Cipta (Cognitive), Rasa (Affective), Karsa (Conative), Taqwa (Spiritual dimension) and Karya (Works dimension). Refer to the result of 1st hypothesis, it is very clear that The Panca Daya concept of Mr. Ki Hajar Dewantara implemented and demonstrated well in this organization. Table 1 is a strong evidence of the achievement of Karya/Works Dimension while Taqwa/Spiritual Dimension is a mandatory program for organization that have to be manage well as stated at SDSI (Strategic Direction and Strategic Implementation) document.
2. *2nd Research Question: Are Employee condition (Having Children at Home, Home Internet Connection, Mobile Device) correlated with Organizational Effectiveness?:* The fact that it is clear that "Having children at Home" as 1st Moderate variable support positive correlation between Work from Home and Organizational Effectiveness (R Square 59.9%), which is interesting because it is opposite from the research finding of Bloom et al. [7] and Rudnicka et al. [8] the fact that the existence of children at home can interfere Work from Home activity. The finding can be explained that in Indonesia, almost all families have assistants who can help solve household

affairs such as preparing food, bathing children, washing clothes, ironing, etc. Another aspect which states that Indonesian culture tends to be happy to gather together under any circumstances [9].

3. *3rd Research Question: Is there any difference perception between Superior and Subordinate toward implementation Work from Home method?:* During WFH or others teleworking methods, there is classic issue that superior and subordinate having a different perspective to face it. Several reasons are possible to answer that finding. Cultural is one of important aspect that influence the behavior of the employee. There is strong Javanese/society cultural and value that may influence the employee, both superior and subordinate. "Nrima ing pandum, makaryo ing nyoto" (the society expected to accept all the result (that blessed by God) after hard working) is one of the values that influence the mind set and behavior [9].
4. *4th Research Question: Is there any difference in perception between Superior and Subordinate toward Organization Effectiveness (OE)?:* Analysis of perception between Superior and Subordinate toward OE, prove there were evidence: All the activities drive by the leaders who take more responsibility during Work from Home, because they got more leadership development programs.

5. CONCLUSIONS

1. *To answer the 1st research question:* Yes. There is positive correlation between Work from Home and Organizational Effectiveness within the organization.
2. *To answer the 2nd research question:* Yes. There are 3 variable that support positive correlation between Work from Home and Organizational Effectiveness, i.e.: Having Children at Home, Internet Home Connection and Mobile Device.
3. *To answer 3rd research question:* No. There is no significant difference perception between Superior and Subordinate toward implementation of Work from Home.
4. *To answer 4th research question:* Yes. There is significant difference perception between Superior and Subordinate toward Organizational Effectiveness.

6. RECOMMENDATIONS

1. *For Academic Purpose:*
 - a. To enrich the view about this topic in Indonesia because of the limitation of the study of Work from Home & Organizational Effectiveness.

- b. It can be a literature for Work from Home analysis related Organizational Effectiveness.
- c. Basis literature for longitudinal study about WFH correlation with OE.
- d. Further research on the impact of the implementation of WFH during Pandemic Covid-19 on OE can be done using the concept of local wisdom, for example: Panca Daya concept by Ki Hajar Dewantara.

2. *For Practical Contribution:*

- a. To get a complete picture of WFH impact to OE, further research can be carried out at any organization operated in Indonesia.
- b. Further research on the correlation of WFH, OE and Organizational Structure can be carried out to determine resilient organization Program.

AUTHORS' CONTRIBUTIONS

Edhie Sarwono made contributions as first authors. Data was collected and analysed by Edhie Sarwono and Gembong Baskoro. All authors (Sumarsono, Dena Hendriana, and Henry Nasution) made contributions to the design of the study and the writing of the manuscript.

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