

ANALYSIS OF FACTORS THAT SHAPE THE USE OF INFORMATION TECHNOLOGY IN ARON GROUP COMPANIES

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Abstract-This study aims to determine the factors that shape the use of information technology in Aron Group companies. In this study, 24 variables are used as factors that are assumed to shape the use of information technology, so that the results can be used by Aron Group to develop a strategy framework to implement and provide better and targeted use of information technology. Researchers use quantitative types of research. In this study, there were as many as 86 people used as samples. The analysis method used in this study is exploratory factor analysis (EFA) with the help of the SPSS application. The results of this study show that the main factors forming the use of information technology are work competence factors and their elements, organizational environmental factors and their elements, task suitability factors and their elements, work motivation factors and their elements.

Keywords: Utilization of Information Technology, Quantitative, Exploratory Factor Analysis, Work Competence, Organizational Environment, Task Suitability, Work Motivation

1. Introduction

The growth in the number of technology and internet users provides the fact that there is a very large business opportunity with a very wide online market potential to reach, but with the condition that every company must be able to adapt and be able to take advantage of this opportunity, as well as Aron Group which must be able to take advantage of this opportunity where Aron Group is the largest retail business group in Alor Regency - NTT which has 5 stores Retail includes office stationery stores, electronics stores, furniture stores, building materials stores and engineering equipment stores. Aron Group has customers from various fields both from corporate, government, organizations, and individual customers. There are two advantages of implementing this new information technology, the first is the advantage for the company and the second is the advantage for the customer. If the application of this new information technology is successful, it will be a new achievement for Aron Group. The main factor that supports this success is employees, where employees the largest and dominant resource greatly affect the level of success. According to the Technology of Performance Chain (TPC) model by Thompson et al., (1991), 6 main factors influence the behavior of employees towards the use of information technology, including social factors, individual feelings factors (Affect), task suitability factors, long-term consequence factors, facilitating condition factors, complexity factors.

2. Literature Review

2.1 Previous Research

Research by Susilo, J. (2016) found that three variables show a significant relationship to employee performance through the use of information technology namely affect, interest in utilization, and complexity. Research by Wulandari, W. S., & Sudarno. (2013) found that social factors, task suitability, long-term consequence influences, affect factors, and complexity factors have a significant effect on the use of information technology. Research by Erdawati, L., & Esha, D. (2018) shows that partially social factors, affect, suitability of tasks, and conditions that facilitate the use of information technology have a significant effect on the use of information technology.

2.2 Theoretical Foundation

2.2.1 TAM (Technology Acceptance Model)

The Technology Acceptance Model (TAM) is a model that can be used to analyze factors that affect whether or not an Information System is accepted. The acceptance model theory of technology is how users come to receive and use technology (Davis, 1989).

2.2.2 Model Technology of Performance Chain (TPC)

The technology of Performance Chain (TPC) by Thompson et al (1991) is a model that explains that technology will play a role in performance at the individual level so that information technology can have a positive impact on performance at the individual and organizational level, therefore information technology must be utilized and must be by the type of work performed. According to the model developed by Thompson et al., (1991), who adopted as a theory proposed by Triandis (1980). The factors that influence the utilization of information technology are as follows:

1. Social Factors

Social factors are defined as the degree to which an individual perceives that others convince him or her that he should use information technology.

2. Affect (individual feelings)

Affect (individual feelings) can be interpreted as whether it is fun or not to do work using information technology.

3. Task Suitability

Thompson et al. (1991) explained that task suitability relates to the extent to which an individual's ability to use information technology to improve individual performance in carrying out tasks.

4. Long-term consequences

According to Thompson et al., (1991), Long-term consequences are measured by whether the output produced has benefits in the future, such as career advancement, increased competitiveness, and increased opportunities to get more important jobs.

5. Facilitating Conditions

According to Triandis (1980) in Siregar and Suryanawa (2008), conditions that facilitate the use of information technology include objectivity factors that exist in the work environment that make it easier for users to do a job.

6. Complexity

Complexity is defined as the perceived level of innovation of something that is relatively difficult to understand and use. According to Jugianto (2008; 56), complexity is defined as the perceived level of innovation of something that is relatively difficult to understand and use. Bagus (2000) two types of complexity affect system development, namely task complexity and system complexity.

3. Research Framework

3.1 Analysis Model



Figure 3.2 Analysis Model
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4. Research Methods

4.1 Types of Research

The type of research used is Quantitative Research. The research was conducted at Aron Group Company, located in Kalabahi City – Alor Regency – NTT. The sample in this study using the Purposive Sampling technique amounted to 86 employees. The technique used in collecting this research data is to use questionnaires (questionnaires) measured using a Likert scale of 1-5.

4.2 Variable Operational Definition

Table 4.1 Operational Definitions of Variables

Factor	Operational Definition	Indicators
Social Factors (X1)	Social factors are defined as the degree to which an individual perceives that others convince him or her that he should use information technology. Social factors are shown by the amount of support from colleagues, superiors, and organizations. Triandis (1980)	<ul style="list-style-type: none"> • Co-worker's influence in utilizing information technology (x1.1) • The role of superiors in utilizing information technology (x1.2) • The role of the company in utilizing information technology (x1.3)
Influence Factor (Individual Feelings) (X2)	Affect (individual feelings) can be interpreted as how individuals feel, whether pleasant or unpleasant in doing work using information technology. Siregar and Suryanawa (2009)	<ul style="list-style-type: none"> • Excitement level in utilizing information technology (x2.1) • Pleasure level in utilizing information technology (x2.2) • Comfort level in utilizing information technology (x2.3)
Task Suitability Factor (X3)	Task suitability factors relate to the extent to which an individual's ability to use information technology to improve individual performance in carrying out tasks. Thompson et al. (1991)	<ul style="list-style-type: none"> • Speed of work in utilizing information technology (x3.1) • Consistency of Work in Utilizing Information Technology (X3.2) • Quality of work produced in utilizing information technology (x3.3) • Ability to complete tasks when utilizing information technology (x3.4) • Level of reliability in utilizing information technology (x3.5)
Long-Term Consequence Factor (X4)	Long-term consequences are measured by whether the output produced has future benefits, such as career advancement and increased opportunities for more important employment. For some individuals, the motivation to use information technology may be related to plans for the future and not just meeting current needs. Siregar and Suryanawa (2008)	<ul style="list-style-type: none"> • Opportunity to get a more important job (x4.1) • Increased competitiveness (x4.2) • Chance of Achievement (x4.3) • Better career opportunities (x4.4)

Factor	Operational Definition	Indicators
Facilitating Conditions Factor (X5)	Facilitating factors have a positive and significant effect on the utilization of increasing the use of information technology if there are conditions for applying the program and the availability of assistance if difficulties are found related to the use of information technology. Darmini and wijana (2009)	<ul style="list-style-type: none"> • Individual's level of ability in the use of information technology (x5.1) • Interest in studying information technology (x5.2) • Effort expended on studying information technology (x5.3) • Motivation to master information technology (x5.4) • Facilities provided by the company (x5.5)
Complexity Factor (X6)	Complexity is defined as the perceived level of innovation of something that is relatively difficult to understand and use. The more complexity the innovation is carried out, the lower the acceptance rate. Jin (2018)	<ul style="list-style-type: none"> • Level of complexity of tasks in the job (x6.1) • Level of complexity of the system used (x6.2) • The influence of age factor in usage complexity (x6.3) • The influence of educational factors in the complexity of use (x6.4)

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4.3 Data Analysis Methods

The analysis method used in this study is exploratory factor analysis (EFA), which is defined by Widardjono (2015) as "an independent technique used to explain the relationship or correlation between various independent indicators observed".

5. Result and Discussion

5.1 Characteristics of Research Respondents

The majority of 79 employees were aged 20-30 years with a percentage of 92%. The majority have a high school education of 58 people with a percentage of 67%. The majority of employees who worked between 2-3 years amounted to 53 employees with a total percentage of 62%.

5.2 Descriptive Analysis of Research Variables

The variable X1 (Social Factor) which explains that the highest mean is owned by X1.1 and X1.2 with the same mean value of 4.488. The variable X2 (Affect Factor) indicator X2.3 has the highest mean of 4.534. The variable X3 (Task Conformity Factor) shows that the indicator X3.5 has the largest mean of 4.488. The variable X4 (Long-Term Consequence Factor) shows that the indicator X4.3 has the highest mean value of 4.023. The variable X5 (Facilitating Condition Factor) shows that the indicator X5.3 has the greatest mean value of 4.327. The variable X6 (Complexity Factor) indicates that the indicator X6.3 has the highest mean value of 4.244.

5.3 Factor Analysis Results

Table 5.1 Factors Forming Information Technology Utilization

Factor	Code	Variable Name	Loading Factor	Variance
Work Competency Factors	X4.1	Mastering IT provides an opportunity to get more important jobs	0,857	29,471%
	X4.2	Mastering IT can increase competitiveness	0,878	
	X4.3	Mastering IT will bring achievements	0,763	
	X4.4	Mastering IT will lead to a better career	0,774	
	X6.1	The effect of task complexity in IT utilization	0,592	
	X6.2	The influence of the complexity of IT systems on work	0,581	
Environmental Factors of the Organization	X1.1	Co-workers' influence in mastering IT	0,682	13,633%
	X1.2	The influence of superiors in mastering IT	0,652	
	X1.3	Corporate Support in mastering IT	0,617	
	X2.1	Level of excitement in using IT	0,782	
	X2.2	The level of pleasure in using IT	0,851	
	X2.3	Comfort level in using IT	0,702	
Factor Task Suitability	X3.1	Speed of working with IT	0,594	10,326%
	X3.2	Work consistency in using IT	0,712	
	X3.3	Quality of work in using IT	0,745	
	X3.4	Timeliness in using IT	0,778	
	X3.5	Work reliability in using IT	0,726	
Factor Work Motivation	X5.2	Amount of interest in learning IT	0,701	9,243%
	X5.3	The magnitude of the effort to learn IT	0,796	
	X5.4	The amount of motivation to learn IT	0,790	
	X5.5	Facilities provided by IT-related companies	0,625	

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5.4 Discussion

5.4.1 Work Competency Factors

The reason for naming work competency factors is that after conducting research, researchers found that work competence is the most relevant factor and best describes the components in it. Good use of information technology in Aron Group can provide better work competencies. With better work competencies, especially in handling more complex tasks and systems, it can provide greater job opportunities in the future. From the characteristics of employees, in the education factor, researchers see that employees in Aron Group who tend to have high work competence are employees with a bachelor's degree, where these employees have better knowledge, expertise, and attitudes.

5.4.2 Environmental Factors of the Organization

The reason researchers use the name of organizational environmental factors is because the components that are combined into a new factor are very dominant with organizational elements, where the influence of the organization and its members is very influential on the feelings of individuals or employees themselves. A good organizational environment greatly determines the success of employees in learning and adapting to their work, the better the support from the organizational environment, the faster the learning process, especially in learning and mastering information technology. In the organizational environment at Aron Group, when viewed from the educational factor, employees who often ask for help in the learning process are employees with high school education, where employees with high school graduates tend to take longer to learn information technology than employees with bachelor's or diploma graduates.

5.4.3 Task Suitability Factor

The task suitability factor has not changed its name and is still used in the new factor, the reason is that the indicators formed are the same and there are no changes, subtractions, or additions. Most of the work done at Aron Group uses and utilizes information technology. Active employees will be seen when they can use information technology well to complete their work. When viewed from the education factor, the average employee who has excellent workability is an employee with a bachelor's degree whereas employees with a bachelor's degree tend to better understand the work given by superiors and are also able to utilize information technology well.

5.4.4 Work Motivation Factors

The reason for naming work motivation factors that were previously named facilitating condition factors is because researchers see the components in this factor are more components about work motivation, so researchers decided that the name of the work motivation factor is very relevant to the new factor. Work motivation will make employees able to learn and master information technology faster. In Aron Group itself, it can be seen that an employee will successfully adapt and succeed in his work if the employee has high work motivation and learning motivation, if the motivation is in the employee, it is not difficult to master information technology quickly. When viewed from the education factor, the majority of employees who have very high motivation tend to be employees with undergraduate education, but this type of employee has motivation that tends to come out of himself and superiors are not too active in motivating these employees. Most employees with a high school education also have a great motivation to learn and adapt, but the difference is that employees with a high school education are more easily given motivation and can receive it well.

6. Conclusion and Suggestion

6.1 Conclusion

Of the 21 variables used, it can be concluded that 4 factors shape the use of information technology: work competency, organizational environmental influence, task suitability, and work motivation.

1. The first factor is the work competency factor which contains the value of how individuals desire to learn and use information technology well because they want to get better competence in their work.
2. The second factor is the influence of the organizational environment which contains values about how the influence of the work environment on the desire of individuals to learn information technology.
3. The third factor is the task suitability factor which contains a value on how the influence and role of information technology on the work done by employees directly affects the suitability of the tasks produced.
4. The fourth factor is the work motivation factor which contains a value about how much an individual is motivated to learn and use information technology for his workf.

6.2 Suggestion

6.2.1 Advice for future researchers

Researchers can then conduct research by adjusting research with the latest information technology. Recent research can use not just a sample of one company but many. Researchers can then use the results of current research, namely employee competence factors, organizational environment factors, task suitability factors, and work motivation factors to develop further research.

6.2.2 Advice for Aron Group

Aron Group can create an employee competency assessment system that has not been owned so far to know the level of competence of employees so that Aron Group can find out employees who have more competence and can place them in more suitable positions. Aron Group can create an application or information technology-based communication system that can be used by each employee to communicate with each other employees and leaders who are general and flexible in one organizational environment. Aron Group can create an independent training system using online multimedia facilities for every employee who is new to learning or who wants to learn again to improve their abilities and performance, this self-training system can be accessed at any time so that it has a high flexibility value. Employees who have high work motivation strongly support the success of the learning process and mastery of information technology at Aron Group, so the company must focus on helping these employees and measuring the level of success so that it can be used as a higher quality learning standard.

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