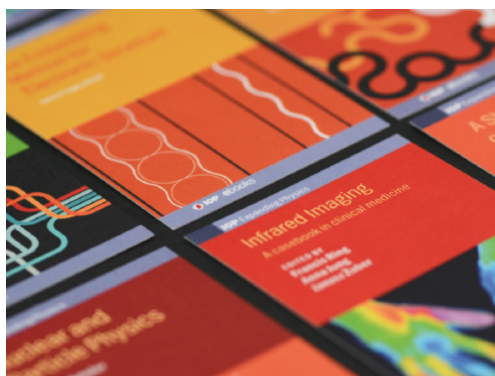


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# Analysis of the AMARI COVID-19 application with the Technology Acceptance Model Method

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**Abstract.** The purpose of this research is to know the influence of the application of AMARI COVID-19 to how well the use of the application is received in the community to prevent the spread of the virus Covid-19. This type of research is explanatory research with a quantitative approach. To this end, their responses to an online questionnaire (n=113) were analyzed using IBM SPSS Statistics 21 as software. The sampling techniques used are simple random sampling. Descriptive analysis is used to analyze the research hypothesis. The test results of the five hypothesis in the study stated that the AMARI COVID-19 application has a significant effect on the prevention of the spread of Covid-19 viruses, meaning it is accepted by the wider community as one of the tools that can help prevent the spread of COVID-19 diseases.

## 1. Introduction

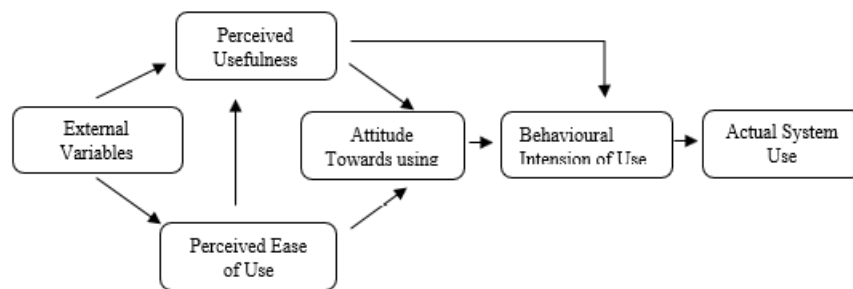
In early December 2019, the numerous phenomena of Pneumonia appeared in the south of the Wuhan fish market, Hubei Province, China [1]. Diseases that because pneumonia are suspected to be caused by viruses originating from the fish market that also sells wild animals. The market was closed on January 1st, 2020, and on January 7, 2020, the Chinese authorities announced a new type of virus. All cases are in the suspect found by being examined with active cases and a retrospective check. About 300 cases in Wuhan are believed to have infected this new virus [2]. Victims of death fell to thousands and patients outside China were also reported more and more. The WHO has set the plague of Corona (COVID-19) as a global pandemic and asks all world communities to work together to end these difficult times. Various research groups around the world are racing to find the Covid-19 vaccine. Vaccines, generally viral or part of a virus that has been weakened, are injected into the body to help the immune system recognize them as attackers and learn against it. Many state and private institutions strive to make breakthroughs to help many people to prevent the spread of the Covid-19 virus from expanding. One of the universities in the province of West Java, Padjadjaran University through the Faculty of Medicine and Task Force control team Covid-19 launches the self-esteem application Covid-19 (AMARI Covid-19) which is accessible to the community as early detection of health amid the corona outbreak [3]. There are 2 main concepts of this simple application as a medium to recognize the health condition of self and media to educate personally, as well as Post AMARI Response System, which is a follow-up response from self-into valuation results. Hopefully, this application can help control the panic that occurs in the community about this



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pandemic outbreak. Each individual can understand a large amount of potential viral infections in each body. Also, this application can be a liaison between an individual/family and a health care system during a Coronavirus outbreak. This application is expected to be utilized by all parties, especially in West Java. Therefore, the Institute of West Java Development (InJabar) Unpad also supports and facilitates the development of this application. The questions posed are related to the condition that a visitor is experiencing when accessing the app. From the answers sent, the app will provide further advice and direction. If users feel the need for remote and educational examination services (telemedicine and tele-education).

One research model Technology Acceptance Model (TAM) consists of several variables, namely intention behavior and use of technology directly or indirectly and has been expanded by variables external, like self-efficacy, subjective norms, and facilitate the conditions of use of technology [4]. TAM is the most famous and most used model for understand the acceptance and adoption of information technology, information systems and innovation [5]. Model acceptance Technology or technology Acceptance Model (TAM) developed by Davis F. D in the year 1986 [6]



**Figure 1.** TAM Conceptual Model.

This research departs from several hypotheses as follows:

- H1: The ease factor (Perceived Ease of Use) has a significant effect on the acceptance of IT applications (Acceptance of IT) AMARI COVID-19.
- H2: Factors usefulness (Perceived usefulness) significantly affects Acceptance (Acceptance of IT) AMARI COVID-19.
- H3: Attitudes towards behavioral factors (Attitude Toward of Use) significantly influence the acceptance (Acceptance of IT) AMARI COVID-19.
- H4: The ease factor (Perceived Ease of Use) significantly affects attitudes towards behavioral factors (Attitude Toward of Use) AMARI COVID-19.
- H5: Factors usefulness (Perceived usefulness) significantly affects attitudes towards behavioral factors (Attitude Toward of Use) AMARI COVID-19.

## 2. Method

It is used in this study to measure the perception of user acceptance of usefulness (Perceived Usefulness) and user perception of ease of use (Perceived Ease of Use) [7]. The level of acceptance of information systems by users can be a benchmark for assessing the acceptance of information technology by users. Technology Acceptance Model (TAM) is a result of the development of the Theory of Reasoned Action (TRA). TRA is derived from the field of social psychology. Social psychologists seek, among other things, to explain how and why attitudes affect behavior, which is equally important in reflecting this research [8].

### 2.1. Design and Procedure

This research uses a quantitative approach to measure relationships between variables that are measurable and can be analyzed statistically. In collecting data, researchers use questionnaires divided into respondent's demographic data and research data based on variables examined. Questionnaires were created using Google forms, empirical research is based on survey analysis, with questions related to TAM elements and cultural character factors and others based on each respondent's individual [9]. Questionnaire refers to the 5-point Likert scale [1] 1: Very Disagree 2: Disagree 3: Neutral 4: Agree 5: Very agreed In conducting a research hypothesized test, researchers use IBM SPSS Statistics 21 as software.

### 2.2. Respondents Demographic

Here is the demographic data of respondents of this study mapped from location, age and education. The sample of respondents is taken by simple random sampling method where each respondent is chosen randomly with the same opportunity.

**Table 1.** Responden Demographics

Demographics	Result
Location	
- DKI Jakarta	41,9%
- Banten	11,1%
- Jawa Barat	30,8%
- Other	16,2%
Age	
- 12 - 25	25,6%
- 26 - 45	70,9%
- Other	3,5%
Educational Level	
- Senior High School	19,7%
- Bachelor	63,2%
- Master	12,8%
- Other	4,3%

Based on the demographic data, from 113 respondents consisting of people residing in various provinces in Indonesia, most of the respondents came from West Java as much as 40%, with average male gender and age between 26 – 45 years old.

## 3. Result and Discussion

### 3.1. Measurement Model Evaluation

All Related Variables :

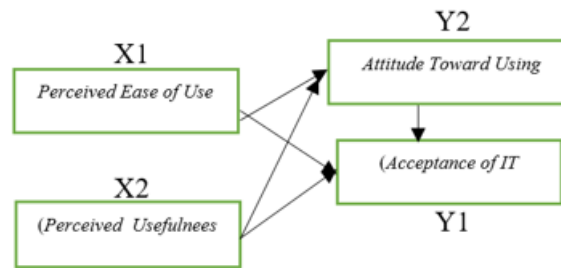
Variable X1: Percieved Ease of Use (PEOU)

Variable X2: Perceived Usefulness (PU)

Variable Y2: Attitude Toward Using (ATU)

Variable Y1: Acceptance of IT (AOIT)

The following is an illustrated relationship between research variables:



**Figure 2.** Model & Research Scheme.

Testing is intended to test how valid the research instrument is being used. The validity and reliability value of an instrument is influenced by the measured subject, the instrument user, and the instrument itself. validity is an instrument that refers to the extent of interpretation from the test results. This depends on the proposed test and, reliability of providing information on the stability, consistency and reproducibility of measurements [11]. Seen from the results of testing with SPSS Statistics 21 software it is known that the results of the validity of the X1,X2,Y2,Y1 variable data are very valid because of the value of R-statistic greater than R-table.

**Table 2.** Test the validity of X1 variable (Perceived Ease of Use)

Variabel Item	Pearson Correlation	R-table	N	Description
X1p1	0.895	0.1848	113	Valid
X1p2	0.870	0.1848	113	Valid
X1p3	0.849	0.1848	113	Valid
X1p4	0.879	0.1848	113	Valid
X1p5	0.747	0.1848	113	Valid
X1p6	0.897	0.1848	113	Valid
X1p7	0.873	0.1848	113	Valid

**Table 3.** Test the validity of X2 variable (Perceived Usefulness)

Variabel Item	Pearson Correlation	R-table	N	Description
X2p1	0.844	0.1848	113	Valid
X2p2	0.809	0.1848	113	Valid
X2p3	0.754	0.1848	113	Valid
X2p4	0.819	0.1848	113	Valid
X2p5	0.904	0.1848	113	Valid

**Table 4.** Test the validity of Y2 variable (Attitude Toward of Use)

Variabel Item	Pearson Correlation	R-table	N	Description
Y2p1	0.886	0.1848	113	Valid
Y2p2	0.892	0.1848	113	Valid
Y2p3	0.879	0.1848	113	Valid
Y2p4	0.875	0.1848	113	Valid

**Table 5.** Test the validity of Y1 variable (Acceptance of IT)

Variabel Item	Pearson Correlation	R-table	N	Description
Y1p1	0.864	0.1848	113	Valid
Y1p2	0.847	0.1848	113	Valid
Y1p3	0.879	0.1848	113	Valid
Y1p4	0.911	0.1848	113	Valid

**Table 6.** Test the reliability All Variable

Variabel Item	Cronbach Alpha	N of Item	Description
X1	0.936	7	Reliable
X2	0.913	5	Reliable
Y2	0.905	4	Reliable
Y1	0.896	4	Reliable

### 3.2. Hypothesis Evaluation

**Table 7.** The following are the exposure to the T-Table test results

Hypothesis	Path	T-value	T-table	Significance	Description
H1	PEOU $\rightarrow$ AOIT	1.948	0.67675	0.054	Accepted
H2	PU $\rightarrow$ AOIT	5.208	0.67675	0.000	Accepted
H3	ATU $\rightarrow$ AOIT	5.163	0.67675	0.000	Accepted
H4	PEOU $\rightarrow$ ATU	12.839	0.67675	0.011	Accepted
H5	PU $\rightarrow$ ATU	13.463	0.67675	0.000	Accepted

### 3.3. Discussion

The result of the first hypothesis test (H1) states the ease of the X1 (Perceived Ease of Use) variable has a significant effect on the Y1 reception variable (Acceptance of IT) with the result of T-count value  $1.948 > T\text{-table value } 0.676$ . In the hypothesis of the second (H2) variable of usefulness (Perceived Usefulness), It has a significant effect on the Y1 (Acceptance of IT) variable with the result of the T-count value  $5.208 > T\text{-table value } 0.676$ . On the third hypothesis (H3) attitudes towards Y2 behavior (Attitude Toward of Use) have a significant effect on the Y1 (Acceptance of IT) variable with the result of T-count value  $5.163 > T\text{-table value } 0.676$ . On the fourth hypothesis (H4) the X1 (Perceived Ease of Use) facility has a significant effect on

the attitude towards Y2 (Attitude Toward of Use) with a result of T-count value  $12.839 >$  T-table value  $0.676$ . On the fifth hypothesis (H5) The usefulness of X2 (Perceived Usefulness) has a significant effect on the attitude towards Y2 (Attitude Toward of Use) with a result of a T-count value of  $13.463 >$  T-table value  $0.676$ .

#### 4. Conclusion

Based on research that has been conducted based on data from respondents amounting to 113 people in Indonesia, the conclusion that the test results of the five hypotheses in the study stated that the AMARI COVID-19 application has a significant effect on the prevention of the spread of Covid-19 virus, which means it is accepted by the wider community as one of the tools that can help prevent the spread of Covid-19. The result of the first hypothesis test (H1) states the ease of the X1 (Perceived Ease of Use) variable has a significant effect on the Y1 reception variable (Acceptance of IT) with the result of T-count value  $1.948 >$  T-table value  $0.676$ . In the hypothesis of the second (H2) variable of usefulness (Perceived Usefulness), It has a significant effect on the Y1 (Acceptance of IT) variable with the result of the T-count value  $5.208 >$  T-table value  $0.676$ . On the third hypothesis (H3) attitudes towards Y2 behavior (Attitude Toward of Use) have a significant effect on the Y1 (Acceptance of IT) variable with the result of T-count value  $5.163 >$  T-table value  $0.676$ . On the fourth hypothesis (H4) the X1 (Perceived Ease of Use) facility has a significant effect on the attitude towards Y2 (Attitude Toward of Use) with a result of T-count value  $12.839 >$  T-table value  $0.676$ . On the fifth hypothesis (H5) The usefulness of X2 (Perceived Usefulness) has a significant effect on the attitude towards Y2 (Attitude Toward of Use) with a result of a T-count value of  $13.463 >$  T-table value  $0.676$ .

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