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Harnessing Technology Acceptance Model (TAM) on Information System to Safeguard Accelerated Data Collecting and Processing Amid COVID-19 Pandemic

Memanfaatkan Technology Acceptance Model (TAM) pada Sistem Informasi untuk Keamanan Akselerasi Pengumpulan dan Pengolahan Data Selama Pandemi COVID-19

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Abstract – COVID-19 has penetrated every aspect of human civilization. BPS-Statistics Indonesia, a government institute responsible for conducting statistical surveys across the country, also faces challenges in the aftermath. COVID-19 forces social distancing, preventing data collectors from meeting the respondents in person and collecting data offline. The data collecting that uses printed questionnaires and the centralized data processing in BPS Headquarters Office causes delays in the whole process. The issue needs to be resolved using a reliable system that can fasten the entire procedure without printed questionnaires, decreasing person-to-person contact and decentralizing the data processing to users' ends. This research proposes and evaluates SIDUBES, an information system BPS-Statistics of Bengkulu Province, to collect data on large and medium manufacturing surveys by harnessing the Technology Acceptance Model (TAM). The model evaluates users' perception of Perceived Usability (P.U.), Perceived Helpfulness (P.H.), Perceived Assurance (P.A.), Viewpoint of Using (V.U.), and Continuity Intention (CI) in measuring the acceptance level. The results show that SIDUBES have met most of the users' requirements; V.U. and P.H. have a positive effect on CI; P.U. has a positive impact on P.A., and; P.A. has a positive effect on P.H.

Keywords: manufacturing, industry, survey, technology acceptance model, coronavirus disease

Abstrak *– COVID-19 telah masuk ke dalam setiap aspek peradaban manusia. Badan Pusat Statistik (BPS) sebagai institusi pemerintah yang bertugas untuk melaksanakan survei statistik di seluruh negeri, juga menghadapi tantangan pandemi ini. Pandemi COVID-19 menyebabkan social distancing yang membatasi para petugas survei untuk bertemu langsung dengan responden dan mengumpulkan data secara luring. Pengumpulan data yang menggunakan kuesioner tercetak dan pengolahan data yang terpusat di Kantor Pusat BPS menyebabkan keterlambatan dalam keseluruhan proses. Masalah ini perlu diselesaikan dengan menggunakan sistem yang andal yang dapat mempercepat seluruh proses tanpa menggunakan kuesioner tercetak, mengurangi kontak orang-ke-orang, dan mendesentralisasikan pemrosesan data ke pengguna akhir.Penelitian ini mengusulkan dan mengevaluasi SIDUBES, sebuah sistem informasi yang digunakan oleh BPS Provinsi Bengkulu untuk mengumpulkan data survei bulanan industri besar dan sedang menggunakan Technology Acceptance Model (TAM). Model tersebut mengevaluasi persepsi pengguna dalam Perceived Usability (PU), Perceived Helpfulness (PH), Perceived Assurance (PA), Viewpoint of Using (VU), dan Continuity Intention (CI) dalam mengukur tingkat penerimaan sistem. Hasilnya menunjukkan bahwa SIDUBES telah memenuhi sebagian besar kebutuhan pengguna; VU dan PH berpengaruh positif terhadap CI; PU berpengaruh positif terhadap PA; dan PA berpengaruh positif pada PH.*

Kata Kunci: *industri, survei, technology acceptance model, coronavirus disease*

INTRODUCTION

Any data may benefit any interested party if explored as extensively as possible and satisfies the users' needs. To ensure that the results of data dissemination are to be helped as enormously as possible, the data collecting and processing sequence must be as efficient and quick as possible. One of the ways to accelerate the data collecting and processing sequence is using the help of a computer program.

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On the other hand, BPS-Statistics Indonesia (Indonesia's Central Bureau of Statistics) is a non-departmental government institute responsible for conducting statistical surveys and censuses (BPS-Statistics Indonesia, 2020a), which produces valuable data and information for the government people. For example, one of the data produced by BPS is derived from monthly surveys on large and medium manufacturing. Each branch of the BPS Office conducts the data collecting processes in all provinces and regencies in Indonesia. Meanwhile, the data processing is centralized in the Headquarter Office of BPS in Jakarta's capital. The method includes two-way feedback between the headquarters and Regional Offices to provide a preliminary analysis of the raw data.

In 2002, the survey started as BPS's scheduled monthly survey (BPS-Statistics Indonesia, 2016). However, despite being a long-lasting plan, there has been a recurring problem thenceforth its initiation. The two-way feedback is time-consuming as it takes weeks for the BPS Headquarters to issue the report of outliers or inconsistencies in the data BPS Regional Offices across the archipelago. Furthermore, it causes even more delays in justifying or fixing the information because the data-collection phase was already finished weeks prior. These delays in the data processing sequence consequently postpone the dissemination of the final result or potentially causes invalid information. Another issue from this shortcoming is the centralized system in BPS Headquarters, which gives large and medium manufacturing companies no chance to review and comprehend the data series, especially regarding their monthly revenue and added value. Additionally, to ensure that the information used in the data processing sequence is valid, there are occasional requests for explanation/justification to manufacturing companies regarding the inconsistency of lead in their filled-out questionnaire(s). However, the companies will find challenges in providing clarification, for they must check their previous printed documents one by one due to the unavailability of digital records.

Another issue to be resolved is the side effects of COVID-19, the pandemic which started spreading on the whole globe at the beginning of 2020, continues to do so today and does not yet seem to answer when it will come to an end. Therefore, the government of Indonesia has issued various policies. On Mar. 13, 2020, the President signed Presidential Decree No. 7 of 2020 on the Task Force for the Acceleration of COVID-19 Overcoming (Keputusan Presiden Republik Indonesia No. 7 Tahun 2020 Tentang Gugus Tugas Percepatan Penanganan COVID-19, 2020). On Mar. 20, 2020, the President later signed Presidential Decree No. 9 of 2020 (Keputusan Presiden Republik Indonesia No 9. Tahun 2020 Tentang Perubahan Atas Keputusan Presiden No. 7 Tahun 2020 Tentang Gugus Tugas Percepatan Penanganan COVID-19, 2020) on the Amendments to the preceding regulation.

On Mar. 31, 2020, the Government Regulation No. 21 of 2020 was issued regarding Large-Scale Social Restrictions for the necessity of COVID-19 eradication (Peraturan Pemerintah Republik Indonesia No 21 Tahun 2020 Tentang Pembatasan Sosial Berskala Besar Dalam Rangka Penangangan COVID-19, 2020). The first chapter declares that Large-Scale Social Restrictions are restrictions on the people's certain activities in certain areas suspected of being exposed to COVID-19 in such a way as to prevent the possible spread of COVID-19. People must minimize outdoor activities, leaving their houses only for urgent needs. They must keep their distance and dismiss social interactions such as shaking hands, social gatherings, and attending parties.

The whole situation has become a new challenge for BPS in conducting surveys, censuses, and other public events involving meeting the respondents in person. The data collectors must find a strategy to collect data without directly meeting the respondents. Businesses have implemented the same method by innovating e-commerce, e-money, e-tax, e-learning, etc.

Based on the conditions above, technology needs to push further into a more straightforward approach for people to finish tasks without sacrificing unnecessary things, as implied by (Loekmanto, 2012). The BPS Provincial Office for Bengkulu Province, Indonesia, proposed a solution by building and implementing an information system, making the entire process easier and faster. It is named SIDUBES (Information System of Large and Medium Manufacturing). The application has been running since the beginning of 2020, providing features to input, monitor, process, and evaluate the survey data for all eleven BPS regional offices in Bengkulu Province.

Nevertheless, every technology must be evaluated before and after being implemented in the targeted society. Previous works have been performed on several technologies using different types of approaches. For example, research (Widodo et al., 2018) attempted to assess the users' acceptance of a healthcare application that monitors pregnancy and childbirth. The research involved 145 midwives in Central Java, Indonesia, as the samples and used the TAM concept to analyze their opinions on the application. They used two independent variables: Perceived Usability (P.U.) and Perceived Helpfulness (P.H.), along with one dependent variable: Continuity Intention (CI). The study results showed that midwives' continuity intentions to use the application are influenced by their perceived easiness (usability) and helpfulness of the system.

Another research (Rahmawati et al., 2019) aimed to measure the users' attitude toward an application they claimed to be used to input data of knowledge, skill, and perspective in the forms of numbers to produce the final score describing the inputs. The research analyzed data from 44 respondents on the Likert scale using TAM (Technology Acceptance Model), consisting of three variables; Perceived Helpfulness, Perceived Usability, and Acceptance. It was found that Perceived Helpfulness has no impact on the application acceptance, with a score of 0.47. Meanwhile, Perceived Usability impacts application acceptance with a score of 3.47.

The current research also aims to evaluate the technology described to resolve the data collecting and processing sequence issue in BPS with the case study of SIDUBES. We expect to see if the system is proper and right-on-target to fix the problem of slow-paced data collecting and processing of the monthly surveys on large and medium manufacturing. The detailed objectives of this research are:

1. To compare and analyze the current and proposed business processes regarding the data processing of Monthly Surveys on Large and Medium Manufacturing.
2. To assess the current business process's adequacy was conducted utilizing the proposed system (SIDUBES).
3. To evaluate the overall applicability, helpfulness, and influence of the information technology on the branches of BPS offices and the companies involved in the system using a series of analyses.

LITERATURE REVIEW

The Importance of Monthly Surveys on Large and Medium Manufacturing

According to BPS, manufacturing is an economic activity involving processing and transforming materials into products or converting them into goods with potentially higher value. (BPS-Statistics Indonesia, 2020b) A manufacturing establishment is a production unit consisting of at least one person with a plan on conducting economic activity of producing goods or services that can sustain the business. The manufacturing sector is divided into four different categories of establishments:

1. Large industry consisting of 100 people or more
2. The medium sector consists of 20 to 99 people
3. Small enterprise composed of 5 to 19 people
4. The cottage industry consists of 1 to 4 people.

BPS currently has multiple agendas to collect data on each category of the manufacturing establishments. However, the data collecting process on large and medium manufacturing is conducted within the same survey. The survey monthly collects industry details, including the establishment's identification details, period of survey (year and month), production value in rupiahs, production mass, type of commodity, and so forth. Such details are included in printed questionnaires delivered to the sample establishments (companies). The survey results are widely published in BPS's publications, such as the industry's input cost, output cost, added value, share in Gross Domestic Product (GDP), etc. The monthly surveys also produce several other indicators such as people's purchasing power and product usage from the primary sector for the industrial sector's raw materials. Meanwhile, the results of quarterly surveys can indirectly affect fiscal performance.

This survey produces more potential benefits. Even the manufacturing companies, especially those involved in the survey's samples, can earn an advantage by understanding their industry's market based on the resulted information within the publications produced by BPS. From the perspective of BPS, the justification of other types of statistical data may indirectly be better justified with relevant details of large and medium manufacturing industries. On the national scale, the survey regarding the existing economic sectors may be used as one of the bases for policymaking by the Government of Indonesia. The data produced from the survey can even be one analysis approach to fixing the problem of Indonesia's external debt. According to (Breuer et al., n.d.), as much as 26 percent comes from the manufacturing sector. This advantage of manufacturing data may even be expanded to the international level, as Indonesia plays an essential role in the global economy. Therefore, it is sure to assure the government that the data is continuously available, valid, and relevant.

Current Business Process of Data Collecting and Processing Sequence

Figure 1 depicts the current data collecting and processing sequence of large and medium manufacturing in BPS. BPS Regional Offices collects data from sample manufacturing companies across the archipelago monthly. BPS headquarters then inputs the data into a centralized data processing system. During the processing sequence, if there is an anomaly or outlier(s) on the data, the headquarters will clarify the information to the corresponding regional office collecting the data. The process goes on as long as there is a need to explain the information on the samples. The final result is then used in publications of large and medium manufacturing. From data processing to magazines, the whole process takes around two months.

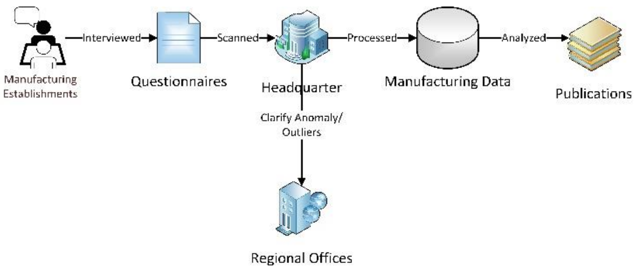

Figure 1 Current Business Process of Data Collecting and Processing of Large and Medium Manufacturing.

RESEARCH METHOD

This research follows this methodology:

1. Analyze how well SIDUBES contributes to collecting data and processing sequences of large and medium manufacturing.
2. Analyze the overall helpfulness and usability of the SIDUBES using the Technology Acceptance Model (TAM).

Proposed Business Process of Data Processing Sequence

Figure 2 depicts the solution for collecting and processing large and medium manufacturing data sequences in BPS. BPS Regional Offices collects data from sample manufacturing companies monthly using an online system (SIDUBES). SIDUBES accelerates the data collecting phase by digitalizing the whole process by converting the printed questionnaires to online forms. Therefore, the headquarters does not have to centralize the time-consuming data processing sequence. In addition, the data's clarification process regarding the anomaly or outlier(s) can also be accelerated. It also helps to reduce paper use by doing everything online. As a result, the process is expected to take at least 50% less time.

The proposed business process allows meetings between data collectors and respondents (manufacturing companies) to be minimized or dismissed. Such scenarios are helpful in emergencies that force limited mobility for data collectors and respondents. COVID-19 has been causing human civilization to practice social distancing, forcing people to stay indoors longer. The data collectors cannot possibly meet the respondents in person because both parties could be infected with COVID-19. The proposed system is one of the resorts to support the government's policy to flatten the curve of the COVID-19 infections rate.

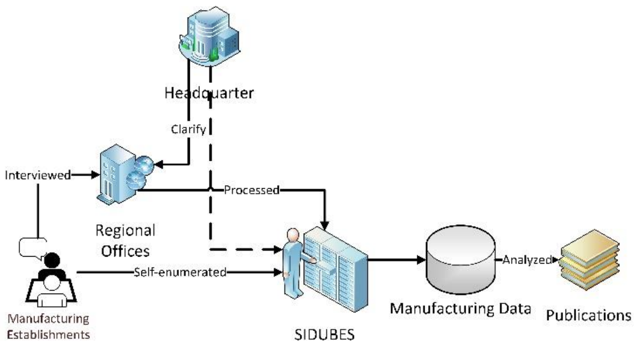

Figure 2 Proposed Business Process of Data Processing of Large and Medium Manufacturing.

SIDUBES

SIDUBES is created to provide a much more efficient way to conduct extensive and medium manufacturing data processing sequences. The system has three major features; data entry (collecting), data monitoring, and data processing. The users from manufacturing establishments can directly input their monthly data on the system or give offline reports to the responsible regional office of BPS to input the information afterward. In addition, all users can get a snapshot of their data on SIDUBES, such as their production value or revenue progress. Figure 3 shows the user interface of SIDUBES's home.

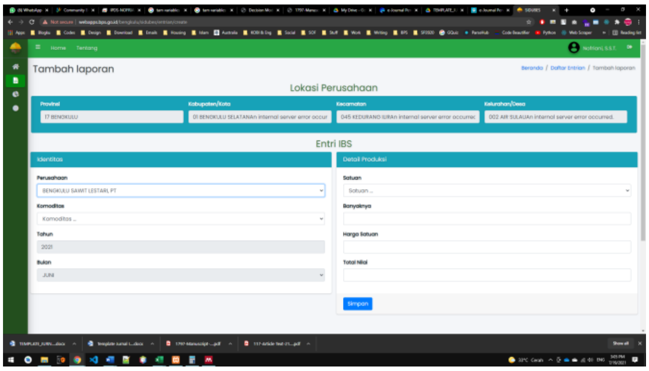

Figure 3 User Interface of SIDUBES.

SIDUBES helps manufacturing companies perform early evaluations by using the recap feature at the monitoring menu, as shown in Figure 4. The recap displays a monthly series of production values and prices of a commodity in every manufacturing company. So that irregularities in inter-month production data of certain entities can be detected as early as possible.

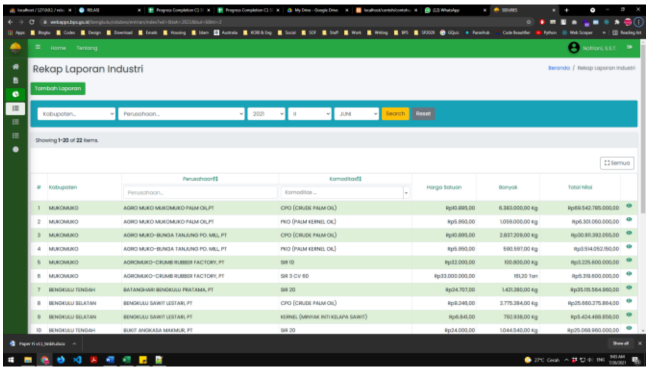

Figure 4 Recap Menu of SIDUBES.

SIDUBES can also increase the companies' participation in statistical activities because it is easier to fill out online forms than printed questionnaires. As a result, it will increase the response rate of the monthly survey, which can improve the quality of the data produced.

SIDUBES guarantees the data confidentiality of manufacturing companies stored on the server. A user's access is limited only within the role and scope of their privilege and does not have access to view other companies' data. Therefore, the data confidentiality of every company is undoubtedly guaranteed.

Technology Acceptance Model (TAM)

The kind of technology influences the users' determination when they choose whether or not to implement a particular technology (Im et al., 2008); thus, such technology must be experimented with and later evaluated. One of the approaches to assess it is harnessing TAM (Technology Acceptance Model). It is defined as users' eagerness to use technology according to the requirements it is supposed to reinforce (Fatmawati, 2015). The model determines the users' frames of reference in welcoming the technology (Syafrizal et al., 2015). It was first introduced by (Davis, 1989), who used it to elaborate on how the users of information technologies are willing to accept and use them. TAM also aims to explain the users' behavior in using the technology (Legi & Saerang, 2020). As mentioned in the introduction, it is one of the most commonly implemented concepts for performing studies on the acceptance level of the latest information technology. It is used in this research because TAM is considered adequate in explaining users' behavior toward a new information technology system (Syahril & Rikumahu, 2019). As depicted in Figure 5, the original TAM model uses four variables; Perceived Usability (P.U.), Perceived Helpfulness (P.H.), Viewpoint of Using (V.U.), and Continuity Intention (CI). All variables must experimentally produce a high determinant, and validity (Chau, 1996) proved using a statistical approach to estimate the representation of users' practices toward the system.

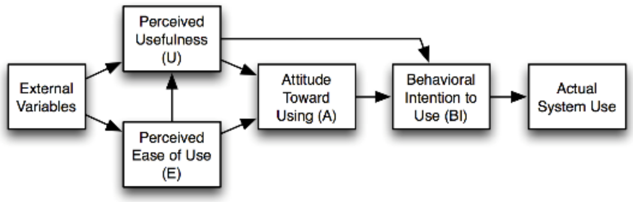

Figure 5 Technology Acceptance Model (TAM)

P.U. is a user's confidence that a particular technology can be used efficiently or without effort (Tirtana & Sari, 2014). P.H. is interpreted as the subjective probability of potential users using a specific application to facilitate their work's performance (Candraditya & Idris, 2013). V.U. is an attitude of liking or disliking a particular product used to predict a person's behavior in using it (Esthiningrum & Sari, 2020). Finally, CI is the users' perceived tendency to use the technology [14] continuously.

For many years TAM has gained popularity for its outstanding performance in explaining users' behavior toward using a technology (Nan et al., 2007). However, it is recently believed that TAM is incomplete in producing comprehensive insights into the details of users' adoption behavior on a proposed system or technology (Mathieson, 1991). Therefore, other variables (Suleman et al., 2019) are needed to determine users' attitudes, namely perceived assurance and risk (P.A.) in using a system. It is an essential factor and predictor in users' decision to use the system. It is an extension of the TAM concept. Users believe implicit contracts with the technology and other users are critical in understanding and consenting to the voluntary exchange of information (Simanjuntak, 2011). Therefore, the extended model of TAM is expected better to predict a user's attitude and acceptance of technology and provide the necessary basic information on the reasons and motivations that drive them (Lee et al., 2003) (Rose & Fogarty, 2006).

This research is a quantitative study in which explanatory research design is used to explain the causal relationships between variables P.U., P.H., PA, V.U., and CI in measuring the acceptance level of SIDUBES users based on their perception. The TAM model used in this research has been modified to meet the criteria of SIDUBES. There are three independent variables; P.U., P.H., and P.A., and two dependent variables; V.U. and CI.

The data was collected using online questionnaires sent to 20 respondents, i.e., manufacturing companies and employees of BPS. They are all registered as users of SIDUBES and have been using the system for quite some time. The data is represented on a Likert scale with answers expanding from 1 (strongly disagree), 2 (disagree), 3 (neutral), 4 (agree), and 5 (strongly agree).

The collected data underwent validity and reliability testing (Konting, 2004). The data is "valid" if all the constructing indicators have a loading factor above 0.5. Additionally, the information is reliable if the value of Cronbach's Alpha is above 0.7. If a model qualifies for validity and reliability tests, the relationship between constructs in the model is then tested utilizing the Partial Least Square-Structural Equation Modeling (PLS-SEM) approach. According to (Gaskin & Lowry, 2014), it is a method used for modeling causal relationships of effects simultaneously—rather than in a piece-by-piece explanation. Research (Sarstedt et al., 2014) also states that using only a few observations, PLS-SEM can adequately predict complex models without imposing the data's distributional assumptions. This research used SmartPLS software version 3.3, student edition. The constructs in this research are P.U., P.H., and P.A. as independent variables that affect the dependent variables V.U. and CI.

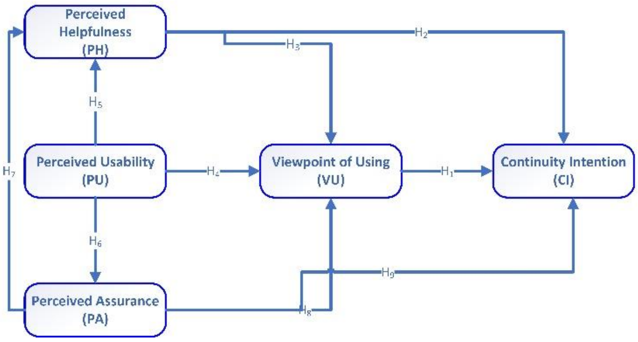

Figure 6 Extended Model Based on TAM.

The following are the hypotheses to be tested throughout this research:

1. H_1: V.U. has a positive effect on CI
2. H_2: P.H. has a positive impact on CI
3. H_3: P.H. has a positive impact on V.U.
4. H_4: P.U. has a positive effect on V.U.
5. H_5: P.U. has a positive effect on P.H.
6. H_6: P.U. has a positive impact on P.A.
7. H_7: P.A. has a positive effect on P.H.
8. H_8: P.A. has a positive effect on V.U., and
9. H_9: P.A. has a positive impact on CI

RESULTS AND ANALYSIS

Descriptive Analysis

This research collected perception data from 20 respondents using an online form. The form contains several items that represent their respective construct. The PU construct is represented by objects of ease in interacting with the system (PU1), ease in understanding the layout of system features (PU2), comfort in using system features (PU3), and ease in accessing the systems (PU4). The P.H. construct is represented by the system's ability to minimize errors (PH1), speed up work (PH2), give better output (PH3), and provide convenient helpfulness (PH4). The PA construct is represented by the users' assurance of the system's safe use (PA1), the system's secure and confidential transactions (PA2), and the system's service for users (PA3). In addition, the V.U. construct is represented by the users' enjoyment of the plan (VU1) and the users' opinion on the system use (VU2). While the CI construct is represented by items of desire to use the system more frequently (CI1), perception of the system's help on previous workflow (CI2), and willingness to recommend the system in completing a complicated task (CI3). The higher the item score, the better the respondent perceives the system. The compilation of perception data is shown in Table 1.

Table 1 Average Score by Construct and Item

Construct	Item	Average Score
PH	PH1	4.30
	PH2	4.20
	PH3	4.10
	PH4	4.05
PU	PU1	4.05
	PU2	3.95
	PU3	3.80
	PU4	4.00
PA	PA1	4.15
	PA2	4.00
	PA3	4.25
VU	VU1	3.90
	VU2	4.10
CI	CI1	3.90
	CI2	4.00
	CI3	3.85

The table above shows that 11 of 16 items have an average score ranging from 4 to 5. It shows that the respondents' perceptions went between agreeing and strongly agreeing. While the other five items have an average score ranging from 3 to 4, which means the respondents' perceptions mostly ranged between being neutral and agreeing.

When viewed according to the construct, the average scores are 4.20 (P.H.), 3.95 (P.U.), 4.13 (P.A.), 4.00 (V.U.), and 3.92 (CI). It shows that respondents agree or do not have a preference on the helpfulness, usability, assurance, viewpoint, and tendency to continue using the system.

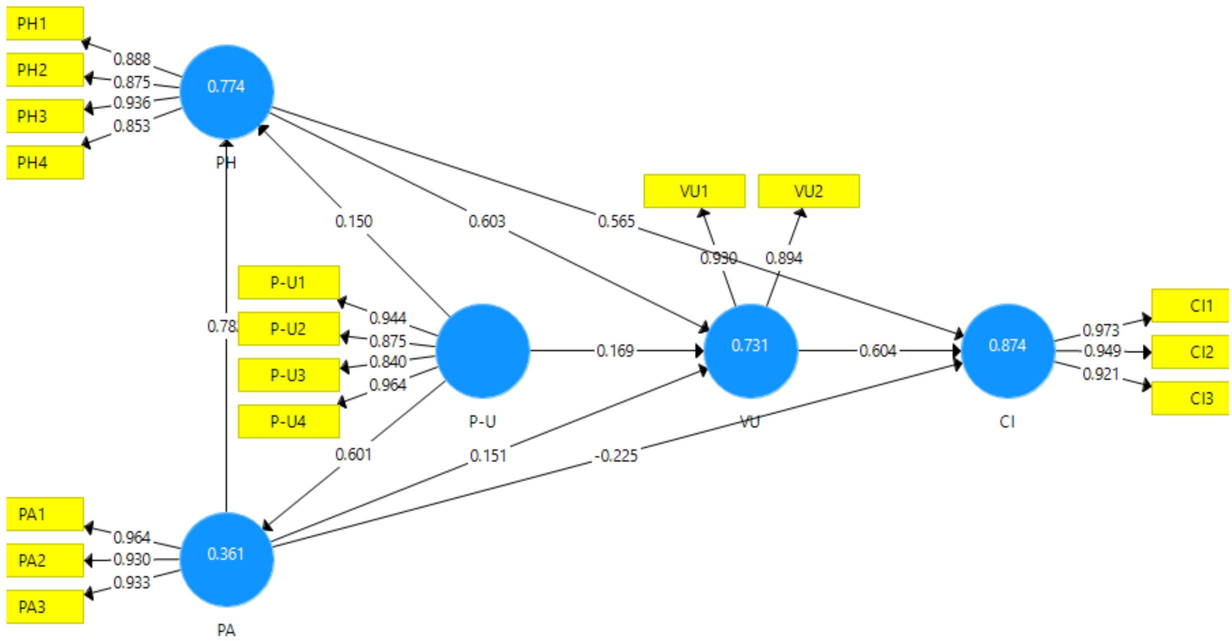

Figure 7 Confirmatory Test on the Model

Tests on Validity, Reliability, and Causal Relationships

Figure 7 shows the test results of every item on their respective construct. The figure consists of the values of the loading factor, Cronbach's Alpha, and path coefficient.

Table 2 Model Validity Test

Construct	Item	Loading Factor	Interpretation
PH	PH1	0.888	Valid
	PH2	0.875	Valid
	PH3	0.936	Valid
	PH4	0.853	Valid
PU	PU1	0.944	Valid
	PU2	0.875	Valid
	PU3	0.840	Valid
	PU4	0.964	Valid
PA	PA1	0.964	Valid
	PA2	0.930	Valid
	PA3	0.933	Valid
VU	VU1	0.930	Valid
	VU2	0.894	Valid
CI	CI1	0.973	Valid
	CI2	0.949	Valid

Construct	Item	Loading Factor	Interpretation
	CI3	0.921	Valid

Table 2 depicts details and elaborations on the validity test results of the model based on the loading factor value. Such value is declared valid if it is more significant than 0.5. The table shows that all items passed the validity test and were declared valid. The next phase assesses the model's reliability based on Cronbach's Alpha value.

Table 4 Model Reliability Test

Variable	Cronbach's Alpha	Interpretation
PH	0.800	Reliable
PU	0.944	Reliable
PA	0.927	Reliable
VU	0.911	Reliable
CI	0.937	Reliable

Table 4 shows the Cronbach's Alpha value and the interpretation of the output. A variable is reliable if the Cronbach's Alpha value is more significant than 0.7. The results in the table reveal that all variables have Cronbach's Alpha values larger than 0.7, concluding that all of them are declared reliable.

Table 5 Causal Relationship Test

Causal Relationship	Path Coefficient	p-value
VU → CI	0.604	0,004
PH → CI	0.565	0.029
PH → VU	0.603	0.233
PU →VU	0.169	0.413
PU → PH	0.150	0.340
PU → PA	0.601	0.000
PA → PH	0.782	0.000
PA → VU	0.151	0.769
PA → CI	-0.225	0.381

Table 5 reveals the results of the causal relationship test between variables in the hypotheses using the PLS-SEM method. A causal relationship is accepted if the path coefficient is more significant than 0 (has a positive value) and the p-value is less than 0.05. Based on the test results shown in the table, it is seen that all the causal relationships have a positive value of path coefficients except P.A. toward CI. Five variables (including the one with a negative path coefficient) have p-values above 0.05. Hence their relationships are not considered significant.

The remaining four have a p-value less than 0.05, namely V.U. toward CI, P.H. toward CI, PU toward P.A., and P.A. toward P.H. This is interpreted as:

1. H_1: V.U. has a positive effect on CI and is accepted.
2. H_2: P.H. has a positive impact on CI and is accepted.
3. H_6: P.U. has a positive effect on P.A., which is accepted. And;
4. H_7: P.A. has a positive impact on P.H., is also taken.

According to the test results on SIDUBES, it is understood that the users' viewpoint and opinion on the system's helpfulness indeed influence their intention to use it. Furthermore, the users' view on the ease of using the system (system's usability) also affects their assurance in the design, which successively influences their opinion on the system's helpfulness. The discoveries found by this research are contradictory to the early development of TAM (Davis, 1989) but following the more recent study by (Greenfield & Rohde, 2009) that found that users' viewpoints should be considered in understanding their technology implementation and acceptance.

CONCLUSION

From the users' point of view, SIDUBES' performance has met the user's wishes regarding the system's usability and helpfulness. However, it is suggested that there should be an increase or improvement in the system's user interface because it has the lowest scores in the constructs Perceived Usability (P.U.) and Continuity Intention (CI). The tendency of users to continue using SIDUBES is influenced by the perceived helpfulness of the system (P.H.) and their viewpoint on using it (V.U.). The user's perceived usability (P.U.) of the system also influences their assurance in the system (P.A.), which in turn affects their opinion of the system's helpfulness (P.H.). The drawback of this research is that the sample size is too small, considering that the system users are only limited to the BPS Regional Offices in Bengkulu Province. In addition, further research is acquired on what causes users to find it easy or challenging to use SIDUBES.

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REFERENCES

BPS-Statistics Indonesia. (2016). *Survey of Large and Medium Manufacturing, 2016*.

BPS-Statistics Indonesia. (2020a). *About BPS*.

BPS-Statistics Indonesia. (2020b). *Large and Medium Manufacturing*.

Breuer, L. E., Guajardo, J., & Kinda, T. (Eds.). (n.d.). *Realizing Indonesia's Economic Potential*. International Monetary Fund.

Candraditya, H., & Idris. (2013). ANALISIS PENGGUNAAN UANG ELEKTRONIK (Studi Kasus Pada Mahasiswa Pengguna Produk Flazz BCA di Fakultas Ekonomika dan Bisnis Universitas Diponegoro). *Diponegoro Journal of Management*.

Chau, P. Y. K. (1996). An Empirical Assessment of a Modified Technology Acceptance Model. *Journal of Management Information Systems*, *13*(2), 185–204. https://doi.org/10.1080/07421222.1996.11518128

Davis, F. D. (1989). Perceived Usefulness, Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly Management Information System*, *13*(3), 319–339. https://doi.org/10.2307/249008

Esthiningrum, A., & Sari, S. P. (2020). Pendekatan Theory Rasoned Action (TRA) dan Technology Acceptance Model (TAM) dalam Minat Transaksi Menggunakan E-Money. *Seminar Nasional Dan Call For Paper: Paradigma Pengembangan Ekonomi Kreatif Di Era 4.0*.

Fatmawati, E. (2015). Technology Acceptance Model (TAM) untuk Menganalisis Penerimaan Terhadap Sistem Informasi Perpustakaan. *Jurnal Iqra'*, *9*(1).

Gaskin, J. E., & Lowry, P. B. (2014). Partial Least Squares (PLS) Structural Equation Modeling (SEM) for Building and Testing Behavioral Causal Theory: When to Choose It and How to Use It. *IEEE Transactions on Professional Communication*.

Greenfield, G., & Rohde, F. (2009). Technology Acceptance: Not All Organisations Or Workers May Be the Same. *International Journal of Accounting Information Systems*.

Im, I., Kim, Y., & Han, H.-J. (2008). The Effects Of Perceived Risk and Technology Type On Users' Acceptance of Technologies. *Elsevier B.V. Information and Management*, *45*(1), 1–9.

Keputusan Presiden Republik Indonesia No. 7 Tahun 2020 Tentang Gugus Tugas Percepatan Penanganan COVID-19, (2020).

Keputusan Presiden Republik Indonesia No 9. Tahun 2020 Tentang Perubahan Atas Keputusan Presiden No. 7 Tahun 2020 Tentang Gugus Tugas Percepatan Penanganan COVID-19, (2020).

Peraturan Pemerintah Republik Indonesia No 21 Tahun 2020 Tentang Pembatasan Sosial Berskala Besar Dalam Rangka Penangangan COVID-19, (2020).

Konting, M. (2004). Kaedah Penyelidikan Pendidikan. In *Dewan Bahasa dan Pustaka*.

Lee, Y., Kozar, K. A., & Larsen, K. R. T. (2003). The Technology Acceptance Model: Past, Present, and Future. *Communications of The Association of Information Systems*, *12*.

Legi, D., & Saerang, R. T. (2020). The Analysis Of Technology Acceptance Model (TAM) On Intention To Use Of E-Money In Manado (Study On: Gopay, Ovo, Dana). *Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi*, *8*(4).

Loekmanto, A. (2012). Implementasi Technology Acceptance Model (TAM) dalam Online Shopping. *Kajian Ilmiah Mahasiswa Manajemen*, *3*(1).

Mathieson, K. (1991). Predicting User Intentions: Comparing the Technology Acceptance Model with the Theory of Planned Behavior. *Information System Research*.

Nan, Z., Xun-hua, G., & Guo-qing, C. (2007). Extended Information Technology Initial Acceptance Model and Its Empirical Test. *Systems Engineering - Theory & Practice*, *27*(9), 123–130.

Rahmawati, A., Pribadi, D., Farlina, Y., Ramdhani, L. S., Yulistria, R., & Marsusanti, E. (2019). Technology Acceptance Model (TAM) for Analyzing E-Report Information System. *The 7th International Conference on Cyber and I.T. Service Management (CITSM 2019)*.

Rose, J., & Fogarty, G. (2006). Determinants of Perceived Usefulness and Perceived Ease of Use in the Technology Acceptance Model: Senior Consumers' Adoption of Self-Service Banking Technologies. *Academy of World Business, Marketing and Management Development*.

Sarstedt, M., Ringle, C. M., Smith, D., Reams, R., & Jr., J. F. H. (2014). Partial least squares structural equation modeling (PLS-SEM): A Useful Tool for Family Business Researchers. *Journal of Family Business Strategy*, 105–115.

Simanjuntak, O. S. (2011). Technology Acceptance Model (TAM) Sebagai Upaya Pemberdayaan Masyarakat Menuju Masyarakat Informasi. *Jurnal Informatika Dan Teknologi Informasi (Telematika)*, *8*(1), 25–32.

Suleman, D., Zuniarti, I., Sabil, Setyaningsih, E. D., Yanti, V. A., Susilowati, I. H., Sari, I., Marwansyah, S., Hadi, S. S., & Lestiningsih, A. S. (2019). Decision Model Based on Technology Acceptance Model (TAM) for Online Shop Consumers in Indonesia. *Academy of Marketing Studies Journal*, *23*(4).

Syafrizal, A., Ernawati, & Dwiandiyanta, B. Y. (2015). Penerapan Model Technology Acceptance Model (TAM) untuk Pemahaman Media Pembelajaran Berbasis Multimedia Interaktif. *Scientific Journal of Informatics*, *2*(1), 9–14.

Syahril, W. N., & Rikumahu, B. (2019). Penggunaan TAM dalam Analisis Minat Perilaku Penggunaan E-Money pada Mahasiswa Universitas Telkom. *Jurnal Mitra Manajemen*, *3*(2), 201–214.

Tirtana, I., & Sari, S. P. (2014). Analisis Pengaruh Persepsi Kebermanfaatan, Persepsi Kemudahan dan Kepercayaan Terhadap Penggunaan Mobile Banking. *Proceeding of Syariah Paper Accounting FEB-UMS*, 671–688.

Widodo, A. P., Agushybana, F., & Jati, S. P. (2018). Pengukuran Penerimaan Sistem Informasi EWSKIA Berdasarkan Persepsi Pengguna dengan Menggunakan Technology Acceptance Model. *Jurnal Sistem Informasi Bisnis*, *8*(2), 166–173.