

Digital Marketing Information System of Plantation Research Company (Case Study: PT XYZ's E-Commerce)

Silva Latisya¹, Siti Jahroh², Iman Yani Harahap³

^{1,2}School of Business, IPB University, Jl. Raya Padjadjaran Bogor, Indonesia

³PT. Nusantara Plantation Research, Indonesia

Corresponding Author: Silva Latisya

DOI: <https://doi.org/10.52403/ijrr.20230796>

ABSTRACT

E-commerce has great potential in supporting the success of a company's digital marketing. However, some problems are thought to have an impact on the low percentage contribution of e-commerce sales transactions to non-e-commerce transactions. This study aims to examine the conditions of PT XYZ's e-commerce success using the success model and to see the effect of the variables in the model on the success of e-commerce. Data were obtained by interviewing techniques and filling out questionnaires that were distributed online. This study adopts the theoretical framework of DeLone and McLean (2003) to assess the success of PT XYZ's e-commerce information system implementation. Research data analysis using SEM-PLS. The results showed that users assessed the measurement of e-commerce success as a whole in the good category. Service quality improvement can be prioritized to increase e-commerce success.

Keywords: DeLone & McLean, e-commerce, information system, plantation

INTRODUCTION

The current era of globalization provides a strong impetus for the development trend of information technology (IT). Along with the trend of increasing population, the accelerated use of digital technology is also caused by the COVID-19 pandemic. Indonesia's digital economy is currently growing rapidly and is the largest in Southeast Asia (Rahman and Ahdiat 2022).

This further encourages digital transformation to be carried out in various fields, including the plantation industry, which is one of the pillars of Indonesia's economic growth. The plantation sub-sector is part of the agricultural sector which is one of the 4 main sectors that dominate (63.8%) Indonesia's GDP (Gross Domestic Product) (Antara 2022). An increase of 2.28% in the plantation sub-sector was contributed by the production of palm oil and cocoa commodities (Antara 2022). This is accompanied by an increase in the rate of population growth so it is projected that the need for food and energy as well as industrial raw materials will continue to experience an increasing trend. However, this opportunity is certainly accompanied by various challenges that must be resolved by various plantation stakeholders.

Responding to these opportunities and challenges, PT XYZ, as a company engaged in plantation research, has a big responsibility in taking advantage of the opportunities and great potential in the plantation industry sector. PT XYZ is a subsidiary of Holding Perkebunan Nusantara PTPN III. Not only conducting research, this company is also obliged to generate income and profits from the business processes carried out to ensure the sustainability of its business by producing various products, services, and technologies that can be commercialized. PT XYZ realizes that adaptability in the plantation business world,

which is increasingly moving towards digital trends, is now important to survive and compete. One of PT XYZ's digitalization strategies is to transform by launching e-commerce in 2021. The forerunners of this website-based e-commerce come from each research center (Puslit) for plantation commodities (palm oil, rubber, sugar, coffee, and cocoa, tea, and quinine) within the scope of PT XYZ. The research center within the scope of PT XYZ has built and launched mobile applications and social media content in marketing its innovative technology. E-commerce, which is used as a means of digital marketing of products and services, was created to accommodate the Research Center's efforts to deliver the latest technology and innovation in a more integrated form.

The development of digital technology, supported by very high internet adaptation, has become a strong driver for e-commerce, which is an internet-based digital transaction facility, to continue to develop and has the potential to have a very large market potential in Indonesia. The rapid development of e-commerce-based businesses has also encouraged the development of various theoretical instruments and models to measure e-commerce success. One such theory is the Information Systems Success Model developed by DeLone and McLean (1992) which was then re-evaluated in 2003. DeLone and McLean (2003) recommended a model for measuring the success of e-commerce systems that can be relevant for the current and future. In this success model, there are 6 (six) factors that influence the success of e-commerce information systems, namely system quality, information quality, service quality, Use, user satisfaction, and net benefits.

In Indonesia, PT XYZ's e-commerce can be said to be a pioneer of e-commerce that focuses on the marketing of plantation research results. Of course, PT XYZ needs to continue to evaluate and develop to encourage e-commerce success. This is also in line with the Digital Leadership

competencies that must be owned by the management of BUMN companies. Digital Leadership as stated in the Regulation of the Minister of BUMN of the Republic of Indonesia PER-11/MBU/07/2021 is the ability to direct, lead and evaluate the company's digital transformation process (BUMN 2021). This is the basis that the company's digital transformation process, including PT XYZ's e-commerce, must be evaluated and its success improved. Therefore, this research is important to do to be able to help company managerial decision-making in evaluating e-commerce. This paper focuses on discussing the topic of the successful implementation of information systems in PT XYZ's e-commerce so that it can provide strategic recommendations to encourage e-commerce success.

PT XYZ has implemented e-commerce which has great potential in supporting its marketing success. In practice, PT XYZ's e-commerce experienced several problems which allegedly resulted in a lower percentage of the contribution of e-commerce sales transactions to PT XYZ's revenue compared to non-e-commerce transactions. The success of e-commerce must be balanced with the existence of a qualified information system. Without a good information system, sales through e-commerce cannot be maximized (Angelina et al. 2019). Based on the background and identification of the problem, the authors formulated the research in several questions, as follows:

1. What are the conditions for successful implementation of e-commerce information systems?
2. What are the factors that influence e-commerce success?
3. What are the recommendations for increasing e-commerce success?

LITERATURE REVIEWS

Information Systems Success Model

DeLone and McLean (1992) conducted a *review* of research published during the period 1981-1987 and developed a theory of

Information System success based on this review. In writing in 1992, DeLone and McLean identified six variables or components of IS success that were interdependent, which included system quality, information quality, use, user satisfaction, individual impact, and organizational impact.

The DeLone and McLean model is based on the communication theory of Shannon and Weaver (1949) which states that the level of communication in an information system is formed on three levels, namely the technical

level, the semantic level, and the level of effectiveness (Delone and McLean 1992) . The technical level describes the accuracy and efficiency of the system that produces information, the semantic level is defined as the success in conveying information and the level of effectiveness is the effect of the information on the recipient. Mason (1978) introduced a theory known as the Information "Influence" Theory. The theory emphasizes the "influence" ("Influence") of information.

Table 1. Category of Information System Success

Shannon and Weavers (1949)	Levels Technical	LevelsSemantics	Levels Effectiveness And Influence			
Masons (1978)	Production	Product	Recipe	Influence on Recipient	Influence on System	
Success Category IS (DeLone and McLean 1992)	Quality System	Quality Information	Use	Satisfaction User	Impact Individual	Impact Organizational

After the publication of the successful model by DeLone and McLean, many Information System researchers have modified the model. Looking at the modifications that have been made to the model and by reviewing *studies* that have been conducted since 1992, the Information System success model was updated in 2003 (Nguyen *et al.* 2015) . Models of DeLone and McLean (2003) is believed to be a model that can measure the success of an information system by measuring several interrelated variables, including System Quality, Information Quality, Service Quality, Use, User Satisfaction, and Net Benefits.

Thinking Framework and Research Hypothesis

This study adopts the model developed by DeLone and McLean (2003) to analyze the success rate of implementing PT XYZ's e-commerce Information System. Furthermore, the results of this analysis are used as a basis for conducting studies on what factors influence success and what are the obstacles and problems that PT XYZ e-commerce has. The results are also used to develop recommendations for improvement strategies success of PT XYZ e-commerce. All of these things are summarized in a research framework depicted in Figure 1.

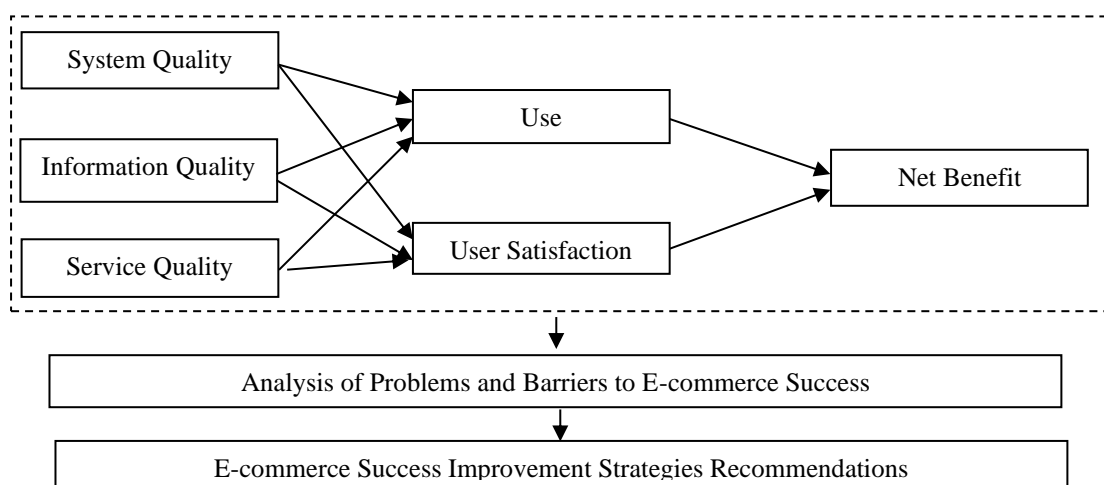


Figure 1. Conceptual framework

Based on the research framework, 8 hypotheses in this study can be derived which follow the success analysis diagram. The analysis framework for e-commerce success can be seen in Figure 2.

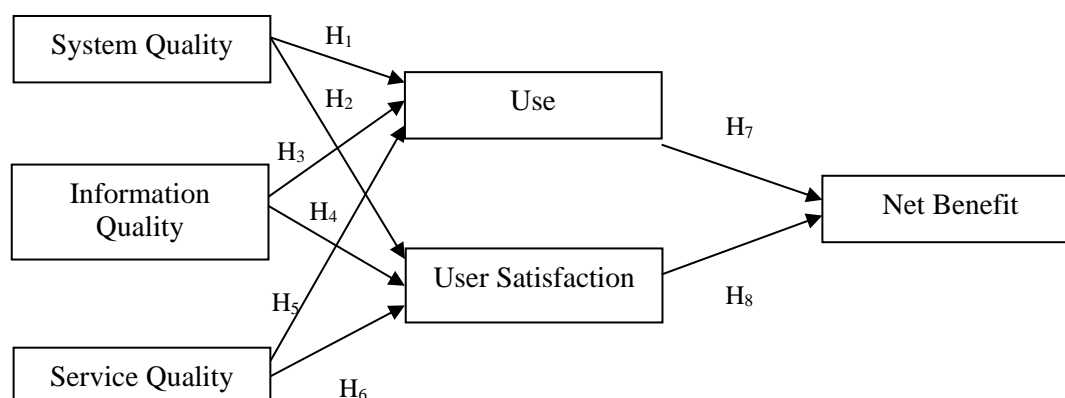


Figure 2. The analysis framework for e-commerce success

The hypothesis in this study can then be stated as follows:

H₁: System quality has a significant effect on Use

H₂: System quality has a significant effect on user satisfaction

H₃: Information quality has a significant effect on Use

H₄: Information quality has a significant effect on user satisfaction

H₅: Service Quality has a significant effect on Use

H₆: Service quality has a significant effect on user satisfaction

H₇: Use has a significant effect on net benefits

H₈: User satisfaction has a significant effect on net benefits

METHODS

This research was conducted at PT XYZ located in Bogor, West Java, Indonesia. Primary data in the study were obtained from the results of questionnaires filled out online. The questionnaire contains structured questions with answers measured on a Likert scale (scale 1-5). The sample size was determined using the inverse square root method with an expected path coefficient absolute value of 0.200; significance level of 5% (0.050); statistical power level (power level) of 80% (0.800) obtained a minimum

number of samples in the study of at least 142. Processing data analysis using multivariate analysis method namely Structural Equation Model-Partial Least Square (SEM-PLS). This analysis was conducted to test hypotheses based on the theories and concepts that have been developed in this study. Before answering the hypothesis, it is necessary to evaluate the measurement model. Measurement model evaluation criteria for SEM-PLS include reliability and validity. The approach to measuring reliability is to use Cronbach alpha and composite reliability. Evaluation of convergent validity was carried out using an Average Variance Extracted (AVE).

After the validity and reliability of the model have been tested, an evaluation is then carried out on the structural model to obtain an interpretation of the results and conclusions. Structural model criteria measures include R² (explained variance) and the magnitude and significance of the path coefficient. The magnitude of the significance of the path coefficient (path coefficient) of the model shows the relationship between the hypothesized constructs. The p-value (p-value) indicates that a path is said to be statistically significant if the value is less than the significance level used in the study (5%). So that the hypothesis in this study can be

accepted if it is proven to be significant with the *p-value* in each path (hypothesis 1 to 8) the value is > 0.05 and rejected otherwise.

RESULTS AND DISCUSSION

Characteristics of Respondents

This research involved 166 respondents who were users of PT XYZ e-commerce and consisted of 73% male and 27% female. The majority of respondents are over 25 years old, with the highest number from the 25–40-year age group of 60 %, then the 41-55 year age group of 28 %, and the smallest number from the 17-24 year age group and >55 years, respectively by 9 % and 3%. The distribution of the number of respondents was based on their domicile, the majority came from Sumatra as much as 45 %, and the smallest number came from Kalimantan as much as 5 %.

Conditions for Successful Implementation of IS E-commerce PT XYZ

Analysis of the success of implementing PT XYZ's e-commerce information system in this study was carried out on each dimension. The average rating score for each variable is calculated using One Way ANOVA and the results are formulated in Table 2.

Table 2. Variable assessment categories

Variable Count	Average Results	Category
1-2		Not good
2-3		Pretty good
3-4		Good
4-5		Very good

E-commerce users, the quality of the system, and the net benefits of e-commerce as a whole are in the very good category with an average overall score of 4.01 and 4.08 respectively, then information quality, service quality, and user satisfaction are considered sufficient good with an average score of 3.83 each; 3.50; and 3.83. The results showed that PT XYZ e-commerce users' perceptions of Use were in the unfavorable category with an overall average score of 2.72.

Table 3. Average variable count results

Success	Value Interpretation	Variable	Variable Count Average
Success Technical	Very good	System Quality (KS)	4.01
Success Semantics	Good	Information Quality (KI)	3.83
Success Service	Good	Service Quality (KL)	3.50
Success System Effectiveness	Good (Average 3.54)	Use (P)	2.72
		Satisfaction User (KP)	3.83
		Net Benefit (MB)	4.08

The success rate grouping is based on the research conducted by Shannon and Weaver (1949). System quality (KS) is used to measure information system success at the technical level, service quality (KL) measures service success, and information quality (KI) is used to measure information system success at the semantic level. The level of use (P), user satisfaction (KP), and net benefits (MB) of information systems are used to measure the success of information systems at the level of effectiveness (DeLone and McLean 2003). Based on the results of the study, it can be concluded that the successful implementation of information systems in e-commerce PT XYZ as a whole performs well. Rating scores at the semantic,

service, and system effectiveness levels have an average count of 3.83 each; 3.50, and 3.54. PT XYZ e-commerce users assess success at the technical level as the highest success with an average score of 4.01.

Results of Measurement of Success Model Implementation of IS e-commerce PT XYZ

Table 4 shows that in general the overall fit of the model is good. The AVE value of all constructs or variables has met the criteria namely ≥ 0.50 . Besides that, all in this study can be said to be reliable/acceptable because it gives a Cronbach alpha value of > 0.6 and composite reliability ranged from 0.6-0.9.

Table 4. Model fit test results

Variable	Validity	Reliability	
	Average Variance Extracted (AVE)	Cronbach's Alpha	Composite Reliability
System Quality (KS)	0.690	0.773	0869
Information Quality (KI)	0.586	0.788	0849
Quality of Service (KL)	0.644	0.816	0.878
Use (P)	0.620	0.850	0891
User Satisfaction (KP)	0.640	0.719	0.841
Net Benefits (MB)	0.695	0.885	0.858

The relationship between variables in this study was tested and proven by 8 research hypotheses. The results of testing the relationship between variables in the model to explain the factors that influence PT XYZ's e-commerce success are depicted in Figure 4.

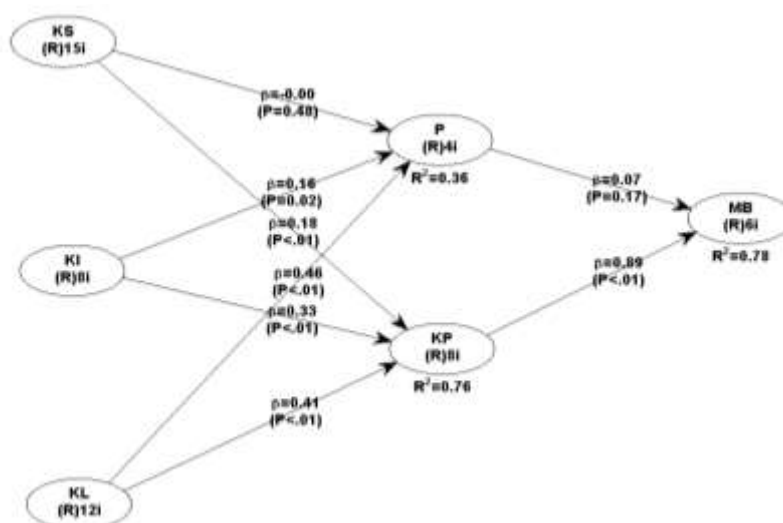


Figure 4. Path Diagram of PT XYZ Information System e-commerce success model

The test results using the SEM-PLS model show that the effect of System Quality (KS) is not significant on Use (P), so hypothesis 1 is rejected. This result is in line with Angelina et al. (2019) which states that system quality has no significant relationship to Use. This can be caused by the trust factor (Chong et al. 2010), even though there are deficiencies in system quality, it will not significantly affect Use if there is a trust factor for e-commerce users. Other causes are possible because of the novelty of the system (Ventrakesh et al. 1996) which is supported by the support of the internal e-commerce system development team (Marjanovic et al. 2016) can always see new potential to increase e-commerce success so that the system can continue to evolve and Use increases. On the other hand, System Quality (KS) has a significantly positive effect on Use (P) so hypothesis 4 is accepted. These results are in line with the research by Angelina et al. (2019); Nirwanto and

Andarwati (2019) which state that system quality has a significant effect on user satisfaction. According to Nirwanto and Andarwati (2019), this is due to convenience and system integration. Based on the results of interviews with PT XYZ's e-commerce development team, the e-commerce system continues to experience developments that make it easier for users, such as adding several payment features that further increase user convenience in transactions. Based on the test results, Information Quality (KI) has a significant influence on the Use (P) and User Satisfaction (KP) of e-commerce so Hypothesis 2 and Hypothesis 5 are accepted. These results are to the research of Suroso et al. (2020), which states that the quality of information has a significant positive effect on the use and satisfaction of IS users. Good quality information increases user understanding so that it can increase user satisfaction with the information presented in e-commerce

(McGill et al. 2003). In addition, Palmer (2002) states that user satisfaction can increase due to aspects of the quality of information, namely the content and layout of a website. According to Khayun et al. (2012), system quality can affect user satisfaction which will ultimately affect Use. This is reflected in the research results and is supported by information that there are no mandatory factors for using PT XYZ e-commerce. Due to the existence of mandatory or mandatory use, this will cause the quality of information to have no significant effect on Use (Goodhue and Thomson (1995); Iivari (2005)). Service Quality (KL) has a significant and positive impact on Use (P) and User Satisfaction (KP) so Hypothesis 3 and Hypothesis 6 are accepted. Based on Wang et al. (2010), trust is the cause of service

quality having a significant impact on Use. In addition, according to Hussein et al. (2007), another supporting factor is the existence of supporting services in the form of good customer service and having successful experience in solving problems or complaints from users. This has been owned by PT XYZ e-commerce with the "Help" and "Contact Us" features to help smooth user communication if you experience problems or submit complaints directly to the admin or personnel on duty. However, based on the results of the descriptive analysis (Table 3), the Service Quality variable is considered good by users but has the lowest score among the other three quality variables. This indicates that PT XYZ's e-commerce service quality still needs to be improved to increase e-commerce success.

Table 5 . Results test significance hypothesis

hypothesis	Variable Relations	Path Coefficient	P value	Decision
H1	KS → P	- 0.00 4	0.48	No Significant
H2	KI → P	0.16 2	0.02	Significant
H3	KL → P	0.455	< 0.01	Significant
H4	KS → KP	0.18 0	< 0.01	Significant
H5	KI → KP	0.329	< 0.01	Significant
H6	KL → KP	0.406	< 0.01	Significant
H7	P → MB	0.07 3	0.17	Not Significant
H8	KP → MB	0.886	< 0.01	Significant

Based on the test results, Use (P) has no significant effect on net benefits (MB), which causes hypothesis 7 to be rejected. These results are by the research of Wu and Wang (2006) which shows that if there is a net benefit felt by the user it will affect Use but not vice versa, if there is no benefit felt by the user towards e-commerce, then it will not have a significant effect against use. The use of e-commerce does not have a significant effect on net benefits because users do not use PT XYZ's e-commerce in their daily lives. So that the frequency and duration of actual use of PT XYZ's e-commerce do not get a good rating, and this is not in line with user ratings which show that PT XYZ's e-commerce has good benefits for the interests of users. User Satisfaction (KP) has a significant effect on Net Benefit (MB) so hypothesis 8 is accepted. As we know that there e-commerce

PT XYZ provides more convenience to users such as saving costs, time, and simplifying the transaction process without having to come in person, thereby increasing efficiency and effectiveness. This is in line with McGill's research (2003) which states that the more satisfied users are in using *e-commerce*, the higher the perceived benefits. According to Gelderman (1998), the significant impact can be caused by increased performance or benefits felt by users.

Managerial Implications

The E-commerce success path model needs to be focused first on increasing User Satisfaction rather than focusing on Use because this path has a significant influence between variables and a larger R2 value of 0.76. This means that the Net Benefit variable can be better explained by User Satisfaction compared to Use. Other supporters are also

reinforced by rejecting H7, which means that use does not significantly affect net benefits. It is hoped that by focusing on increasing user satisfaction, PT XYZ's e-commerce can increase its success in general and ultimately have a positive impact on increasing the use of e-commerce.

Based on the results of the descriptive analysis (Table 3), the Service Quality variable is considered good by users but has the lowest score among the other three quality variables. In addition, based on the analysis of the SEM model (Figure 4), Service Quality is a variable that has a positive and significant effect on User Satisfaction with the largest coefficient value of 0.41. This indicates that PT XYZ's e-commerce service quality still needs to be improved to increase e-commerce success. When described back into its dimensions, service quality variables have dimensions of tangible, reliability, responsiveness, assurance, and empathy. These five dimensions each have a loading factor of 3.88 respectively; 3.67; 3.74; 3.64; and 3.86. Based on the measurement results based on the user's assessment, the aspects that need to be prioritized that need to be improved by PT XYZ's management sequentially based on the lowest score to the highest, namely assurance, reliability, responsiveness, empathy, and tangible.

The results of sorting the dimensions of Service Quality based on scores can indicate the urgency of improvements that must be made by PT XYZ's e-commerce management. These results can be described as a good overall user rating of PT XYZ's services. However, the lowest rating given by users on the assurance aspect can be interpreted that users still lack the experience that users are guaranteed to solve problems or complain when using PT XYZ e-commerce. These results were strengthened based on the observations of researchers and interviews with management that there were indeed experiences of users experiencing delayed responses or answers to complaints experienced in using e-commerce via the chat feature provided on e-commerce.

Therefore it can be concluded, even though e-commerce has provided features or services that support a communication system that is established between users and admin officers who are responsible for providing responses and answers to solving problems experienced by users, in practice, this response needs to be improved on time guarantees (speed) and guaranteed completion (accuracy).

Based on the analysis that has been done, several recommendations can be given to the management of PT XYZ to increase the success of its e-commerce. Management needs to place special customer service personnel to handle e-commerce user requests according to predetermined e-commerce active hours. The existence of certainty indicating the active working hours of e-commerce will also increase user satisfaction due to the guarantee that the time to resolve the problem can be handled. In addition, customer service personnel need to be provided with clear job descriptions and performance targets for achieving task completion in handling user complaints. This is expected to increase the speed of time and responsiveness. Finally, management needs to consider providing training to customer service personnel regarding company product knowledge and operational technical e-commerce websites if problems occur when users operate the e-commerce system.

CONCLUSION

E-commerce users, the overall success of e-commerce is in a good category. The model measurement results indicate that PT XYZ's e-commerce success in providing net benefits is positively and significantly influenced by user satisfaction. User satisfaction is positively and significantly affected by system quality and information quality and is most influenced by service quality. Based on the research results, recommendations that can be given to the management of PT XYZ to be able to increase the success and success of e-commerce management need to focus on increasing user satisfaction by further

improving service quality. Consideration of urgency based on the assessment scores of factors that affect user satisfaction and service quality, recommendations that can be implemented by the company are to place special customer service personnel who have been equipped with performance goals and knowledge to handle e-commerce user requests.

Declaration by Authors

Acknowledgement: None

Source of Funding: None

Conflict of Interest: The authors declare no conflict of interest.

REFERENCES

1. Angelina RJ, Hermawan A, Suroso AI. 2019. Analyzing E-Commerce Success using the DeLone and McLean Model. *J.Inf. syst. Eng. buses. Intell.* 5(2):156.doi:10.20473/jisebi.5.2.156-162.
2. BUMN K. 2021. *Minister of BUMN Regulation Per-11/MBU/07/2021 concerning Requirements, Procedures for Appointment and Dismissal of Members of the Board of Directors of State-Owned Enterprises.* 15th volumes.
3. Chong H, Cates D, Rauniar R. 2010. Validity of DeLone and McLean's E-commerce model in B2C student loan industry. *Journal of International Technology and Information Management.* 19(1): 11-19
4. Davis FD. 1989. Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *JSTOR.* 13(3):319–340.doi:https://doi.org/10.2307/249008.
5. DeLone, McLean. 1992. The quest for the dependent variable. *Information Systems Research. inf. syst. Res.* 3(1):60–95.
6. DeLone WH, McLean ER. 2003. The DeLone and McLean model of information systems success: A ten-year update. *J. Manag. inf. syst.* 19(4):9–30. doi:10.1080/07421222.2003.11045748.
7. Gelderman M. 1998. The relation between user satisfaction, usage of information systems, and performance. *Information & Management.* 34(1): 11-18.
8. Goodhue D, Thompson R. 1995. Task-technology fit and individual performance. *MIS Quarterly.* 19(2):213-236.
9. Hussein R, Nor Shahriza AK, Selamat M H. 2007. The impact of technological factors on information systems success in the electronic government context. *Business Process Management Journal.* 13(5): 613-627.
10. Iivari J. 2005. An empirical test of the DeLone-McLean model of information system success. *Database for Advances in Information Systems.* 36(2): 8-27.
11. Khayun V, Ractham P, Firpo D. 2012. Assessing E-Excise Success With DeLone And Mclean's Model. *The Journal of Computer Information Systems.* 52(3): 31-40.
12. Laudon KC, Traver CG. 2021. *E-commerce 2020-2021: business. technology. society.*
13. Marjanovic U, Delic M, Lalic B. 2016. Developing a model to assess the success of e-learning systems: Evidence from a manufacturing company in a transitional economy. *Information Systems and eBusiness Management.* 14(2): 253-272.
14. Mason R.O. 1978. Measuring Information Output: A Communication System Research. *inf. Manag.* 1(5):219–234. doi:doi:10.1016/0378-7206(78)90028-9.
15. McGill T, Hobbs V, Klobas J. 2003. User-developed applications and information systems success: A test of DeLone and McLean's model. *Information Resources Management Journal.* 16(1): 24-45.
16. Nguyen TD, M.NT, Cao TH. 2015. Information Systems Success: A Literature Review. *Lect. Computer Notes. sci. (including Subser. Lect. Notes Artif. Intell. Lect. Notes Bioinformatics)* 9446:242–256. doi:10.1007/978-3-319-26135-5.
17. Nirwanto N, Andarwati M. End-user satisfaction as an impact of the system quality, information quality, and top management support, upon the perceived usefulness of technology utilization. 2019. *Journal of Marketing Development and Competitiveness.* 13(1): 59-75.
18. Palmer J W. 2002. Website usability, design, and performance metrics. *Information Systems Research.* 13(1): 151-167.
19. Rahman DF, Ahdiat A. 2022. Digital Financial Transactions Grow Rapidly in the First Quarter of 2022. [Downloaded 2022 Jul 21]. Available at: <https://databoks.katadata.co.id/datapublish/2022/04/19/transaksi-keuangan-digital-tumbuh-pesat-pada-triwulan-i-2022>
20. Shannon CE, Weaver W. 1949. *The Mathematical Theory of Communication.*

- Illinois: The University of Illinois Press.
21. Suroso AI, Meilani L, Yuliati LN. 2020. Evaluation of the Success of Academic Information Systems with the DeLone and McLean Model Approaches. *J. Sist. inf. business*. 2:137–144. doi:10.21456/vol10iss2pp137-144.
22. Venkatesh V, Davis F D. 1996. A model of the antecedents of perceived ease of use: development and test. *Decision Sciences*. 27(3): 451-481.
23. Wang T, Cao Y, Yang S. 2010 Building the model of sustainable trust in e-government. *2nd IEEE international conference on information and financial engineering*. 698-701.
24. Wu JH, Wang Y M. 2006. Measuring KMS success: a respecification of the DeLone and McLean model. *Information & Management*. 43(6): 728-739.
- How to cite this article: Silva Latisya, Siti Jahroh, Iman Yani Harahap. Digital marketing information system of plantation research company (case study: PT XYZ's E-Commerce). *International Journal of Research and Review*. 2023; 10(7): 814-823. DOI: <https://doi.org/10.52403/ijrr.20230796>
