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SUCCESS FACTORS OF ERP SYSTEM AT ADHESIVE MANUFACTURING INDUSTRY IN INDONESIA

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ABSTRACT

The rapid growth of technology in the digital era requires companies to implement Information Technology System, such as Enterprise Resources Planning (ERP). ERP is an integrated and systematic information system of various business functions to improve cross-functional and enterprise collaboration. In the use of ERP based on SAP Business One, there are several findings related to the ERP system's internal control that impact the integrity of the ERP system and ease of use. The purpose of this research is to analyze the factors that influence the success of ERP Information System based on SAP Business One with the aim of identifying success factors that can become an alternative solution to improve ERP system. The success factors also need to be considered to ensure successful ERP System in the industry. A new model is proposed to figure out these success factors, which is a combination of Technology Acceptance Model (TAM) and D&M Information Systems Success Model. This research uses data from one of the adhesive manufacturing companies in Indonesia. For determining the factors that affect Perceived Ease of Use, Perceived Usefulness, User Satisfaction and Net Benefits, data was collected with 50 respondents. Data analysis was performed using the PLS-SEM method using software SmartPLS version 3.0. The results show User Satisfaction affects Net Benefits, Perceived Usefulness and Service Quality affect User Satisfaction, Perceived Ease of Use and Management Support affect Perceived Usefulness, and System Quality affects Perceived Ease of Use. In addition, from the answer to open questions in terms of other factors that affect the success of ERP information systems, users answer that human factors, availability of infrastructure, and User Interface affect success of ERP in this digital era.

Keywords: *ERP System, Success Factors, Technology Acceptance Model, Information Systems Success Model, Net Benefits*

1. INTRODUCTION

Along with the advancement of technology, the company always demanded to use information technology to support business process and operational activity. The combination of information technology and the business process produces an information system that has a strategic role in increasing company competitiveness. The information system is required to be an integrated system that can achieve effectiveness and efficiency points.

The information system would obtain benefits for organizations when organizations have successfully implemented it. A successful ERP system will simplify the processes in the company. Therefore, it turns out significant to figure out about information system success in terms of how the system run, ease of the system for users, and the use of technology used in the information system [1].

Enterprise Resource Planning (ERP) is a system to integrate all business functions and can help control the business better. ERP success is how to adopt ERP system to utilize the system and increase the effectiveness in the organization so that it can provide improvements in terms of the company's business operation and achieving the organization's purpose. This success can be known by the net benefits felt by the users of the information system [2]. Net benefits are benefits that can be perceived by all users, both for individual and organization levels. Impacts of the benefits of information system like save time and help in decision making.

This research is conducted in a company that is one of the biggest adhesive manufacturing companies in Indonesia. The company has been growing with the support of seven branches that spread throughout Indonesia. The company is also constantly developing various adhesives products for wood materials, textiles, cartons, bags, labels,

and others, both for B2B (Business to Business) and retail. As one of the biggest companies in the adhesive sector, the company is always innovating and making continuous improvements to consistently provide the best for its clients, study the market, and develop future strategies to become a regional leader in the adhesive industry. To support the business process's growth, the company has implemented ERP information system, namely SAP Business One, since the middle of 2019 as the company core system for supporting operational activities. Total users are 50 persons from any divisions, such as marketing, operational, finance, and procurement from staff, manager until director level.

According to an interview with IT Manager of the company, the implementation of ERP is a part of the company's internal business reinforcement strategy. As an integrated system, the company has a target for ERP to increase efficiency and simplify various operational activities that take a lot of time and energy, for example, material planning activity and financial reports. Integrate each division from different locations and produce the information needed is the aim of ERP implementation. The end purpose of ERP implementation is comprehensive, accurate, and consistent reports, so stakeholders at the company could make anticipation based on it. In the end, ERP could affect a final decision too.

Until now, ERP implementation has never been analyzed its success factors of the information system from the users' side. No report can describe whether the ERP has met the needs of its users. What happens now, there are still many and increasing complaints at the company, as shown in Figure 1. It assumed that the developed information system still needs to be evaluated whether it provides satisfaction and ease for users or not. From the interview result, the complaints and findings were about validation that sometimes did not work and has not been socialized to users. Moreover, response/loading time was slow when opening reports, and some users were still asking how to use it.

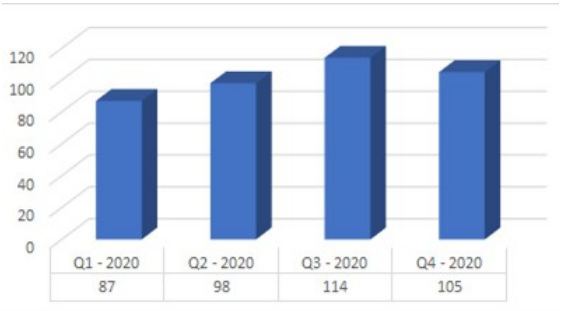

Figure 1: Total of Complaint by Quarter in 2020

Based on the background, this research has problems to be answered: "What are factors that influence the success of the ERP information system based on SAP Business One at Adhesive Manufacturing Industry in Indonesia?". The respondents are employees who use ERP system, SAP Business One in the company. Companies that have applied ERP system need to analyze success factors to identify and determine the factors the company should consider. The purpose of the study is to identify the success factors that influence ERP information system based on SAP Business One.

2. LITERATURE REVIEW

2.1 Information System

According to [3], information system is a set of formal procedures that collect, process and distribute data to users.

Information system is a system within an organization that provides business process needs, operational support, and strategic activities. Information system has several components such as input, model, output, technology database, and control [4]. Whereas [5] defined, information system as a technology used by organizations or users to collect, process, store, use, and spread information. Information system contains information that has been meaningful and useful to users.

2.2 Enterprise Resource Planning (ERP)

ERP is an information system that integrates data across all functions within organizations supported by application modules to assist internal business processes and manage company resources [6].

According to [7], ERP is an information system that combines information and information-based processes to support information system needs in various divisions within an organization. By utilizing ERP, the system becomes an integrated system with one database, so each division can easily share data and communicate.

2.3 Technology Acceptance Model (TAM)

The Technology Acceptance Model is one of [8] theories based on the Theory of Reasoned Action (TRA), the theory of reasoned action by Fishbein & Ajzen in 1975. According to [9], the TAM model explains user intentions when using information technology that affects job performance. TAM is one of the theories about information technology system uses that is considered very influential and usually used to explain user acceptance of information technology

systems [10]. TAM is used to find out how users try new technologies. This model focuses on two variables, i.e., perceived usefulness and perceived ease of use; both describe beliefs. Perceived usefulness is the user's belief level that information system will improve their job performance. Meanwhile, perceived ease of use refers to the user's belief that using information system will make the job easier [9].

From all explanations above, it can be concluded that TAM explains that behavioral intentions towards the system use determine acceptance of a system. TAM aims to explain and predict user acceptance of an information technology system and identify changes to the system so users can accept it.

The variables in the Technology Acceptance Model (TAM) are; Perceived Usefulness, is one of the first factors related to how a person believes when using a particular system that will improve his performance [11]; Perceived Ease of Use, is how easily the system used without making a significant effort [12]; Attitude, is a positive or negative feeling from users when doing the behavior that has been set [13]; Behavioral Intention to Use, is a tend of behavior when using technology [14]; and Actual System Use, is a real condition when using the system [15].

2.4 D&M Information Systems Success Model

DeLone and McLean is a framework for measuring complex variables in information system research that emphasizes the need to validate information systems' effectiveness [16].

DeLone & Mclean ISSM is one of the comprehensive models in measuring success information systems and is based on many thorough literature studies [17]. DeLone and Mclean (D&M) Information Systems Success Model is an essential model in measuring the success of information systems that can represent stakeholder needs [18].

According to [2], a framework D&M ISSM model with six dimensions is used to measure the success information system. The dimensions used in D&M Information Systems Success model are; System Quality, is a necessary characteristic of system information in terms of how the performance of the information system [17]; Information Quality, measures the extent of information is presented and helpful to users [18]; Service Quality, refers to support offered to users by IT Support Staff [19]; Intention to Use, is an attitude, while use is the behavior towards the system's use [19]; User Satisfaction, indicates a person's level in using information system, such as pleasant or unpleasant feelings related to the benefits desired by users as a result of interacting with the information system [20]; Net Benefits, refer to the benefits derived from the use of information system on the quality of user performance both individually and in organizations [19].

2.5 Previous Research

Research 'An Integrated Success Model for Evaluating Information System in Public Sectors [21]' integrated TAM and D&M ISSM and added some variables. The correlation test showed that management support caused an increase in system quality which increased user satisfaction. Training also caused an increase in service quality which will increase perceived ease of use. The results showed that information quality had a significant effect (81.9%), then behavioral intention (80.2%) and perceived usefulness (78.2%). The result of the study proved that the model could be helpful in decision-making in organizations in evaluating the implementation of information system.

Research 'The Evaluation of SIMDA BMD in Grobogan District Using Combination of DeLone McLean and Technology Acceptance Model [22]' was conducted using variables of system quality, information quality, service quality, user satisfaction, and net benefits from DeLone and McLean ISSM model. These variables were combined with perceived usefulness and perceived ease of use from the TAM model to determine the effect on user satisfaction. User satisfaction became a significant factor and took effect on net benefits. The analysis indicated that system quality and information quality affected perceived ease of use; system quality, information quality, and perceived ease of use affected perceived usefulness; perceived usefulness, perceived ease of use, and service quality affected user satisfaction; and user satisfaction affected net benefits. In contrast, variables of system quality and information quality did not affect net benefits.

Research 'Evaluation of Implementation of Enterprise Resource Planning Information System with DeLone and McLean Model Approach [5]' used D&M ISSM model, where the success of information system was proxied by user satisfaction. The variable intention to use and variable use were excluded in this research because information system is mandatory. The variables that affected the success of information system in this research are system quality, information quality, and service quality. In addition, this research also

tested and analyzed the effect of information system success toward net benefits. The result showed that information quality, system quality, and service quality positively and significantly affect user satisfaction. User satisfaction had a positive effect on net benefits. Respondents as users were satisfied, and according to respondents, the implementation of ERP provided net benefits, both in individuals and organizations.

3. RESEARCH METHODOLOGY

3.1 ERP Information System Diagram Structure

ERP information system integrates all divisions, consisting of marketing, operational, finance, and procurement, to support daily operational activity. With the ERP Information System based on SAP Business One, all transactions can be processed efficiently. Stakeholders could get a complete and accurate report in real-time to assist in making decisions making too.

The structure of ERP information system is illustrated in Figure 2 below.

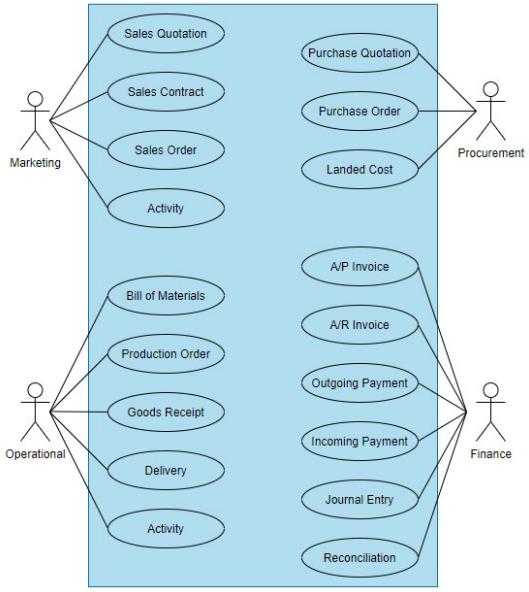

Figure 2: ERP Information System Diagram Structure

3.2 Research Model

In this research, a research model is needed to answer what success factors influence ERP information system based on SAP Business One. The model to answer the purpose of this research is the combination of several models, namely Technology Acceptance Model (TAM) and D&M Information Systems Success Model.

This research will use Training and Management Support. Training variable is needed to give opportunities for users to get training and learning before a new system or module is used so users will be more prepared. This variable is also related to ERP users who are still asking about how to use. Training is an activity of a company that wants to improve and develop employees' attitudes, skills, behavior, and knowledge by the wishes of the relevant company. The training gives users a complete sight of the system and understands how it fits into the entire organization.

Management support has an essential role in every success of the system where this support is needed, so users believe more in the benefits offered by the system. This variable is also based on the fact that the implemented information system is part of the company's internal strategy, so management should fully support it to achieve its strategy [23]. Management support is required to make the ERP system built and implemented is used maximally at all levels so that the function of the ERP system can run properly. The attitude from the top management to change has a significant influence on the adoption outcomes.

From the explanation of the variables above, it can be known that training can encourage users to be more ready about the use and the whole concept of ERP to be more understanding about the system used. Therefore, training variable affect perceived ease of use variable. Continuous management support during ERP system implementation and the operational phase of system, like attention to users and the system's development, can automatically increase perceived usefulness.

Furthermore, the variables used in this research are System Quality, Information Quality, and Service Quality from D&M Information Systems Success Model. System Quality variable is needed in this research to determine the performance of the information system used. There are complaints, such as validation that sometimes did not work and slow response time when open report. In addition, the company also wants ERP to be able to integrate all divisions where the integration indicator is part of the system quality. Information quality is used to determine how information or output from the system refers to the purpose of the ERP implementation, such as a complete and accurate report. Service Quality variable is needed to measure the extent of IT support staff support users because ERP users still need support in operating and learning the existing information system.

According to the explanation of the variable above, system quality aims to explain the

information system's performance characteristics, such as reliability and response time, which can encourage perceived ease of use and perceived usefulness in completing work [22]. Furthermore, the higher system quality will certainly increase user satisfaction because users can interact well to achieve the wanted goal.

Moreover, information quality variable is used to measure the quality of the system's output, such as complete and accurate information, will encourage users to a higher level of use and increase perceived usefulness. Then, higher information quality obtained will certainly provide user satisfaction in using information system because the information is helpful, practical, and not a burden. Service quality focus on fulfilled user's needs and desire of information system. Support like fast service, good knowledge, and a caring attitude will satisfy users with the information system [5].

In the TAM model, perceived usefulness and perceived ease of use are two variables used to explore the extent of users' belief in the information system. Perceived usefulness is used to determine the extent of users' belief that the system can be helpful in their work and help increase performance. The company is targeting ERP to increase effectiveness at work. At the same time, perceived ease of use is needed to determine how the understanding of users when interacting with the system being used.

Perceived usefulness has an impact on user satisfaction. Users expect the information system that is helpful to them. When these expectations are fulfilled, users will feel satisfied or otherwise. Perceived ease of use also impacts user satisfaction variable. The better-perceived ease of use, the higher user satisfaction. In addition, perceived ease of use also affects perceived usefulness. If users believe that the system is easy to use, they are more convinced that the system is helpful in their work [22].

User satisfaction is variable that connect the variables above with net benefits. User satisfaction is one of the important variables in D&M Information Systems Success Model that shows the extend of user satisfaction level in using information system. User satisfaction is users' feeling of pleasure or displeasure with the achieved advantages due to interacting with the information system. User satisfaction has a positive impact on performance and job satisfaction, including supporting the productivity and effectiveness of the ERP system. Use variable from D&M Information Systems Success Model is not used in this research because it is not recommended to analyze the use of ERP or mandatory application [24].

Based on the whole explanation above, the success of ERP information system measure into one benefit, namely net benefits. Net benefits are needed to measure the extent of information system's use, according to final purposes from ERP implementation, such as working is completed faster or does not take much time and help in decision making. The impact of IT affects immediate users and includes workgroups, industries, organizations, consumers, and society. Net benefits appear as a result of user satisfaction with the information system. The proposed research model that will be used in this research is shown in Figure 3.

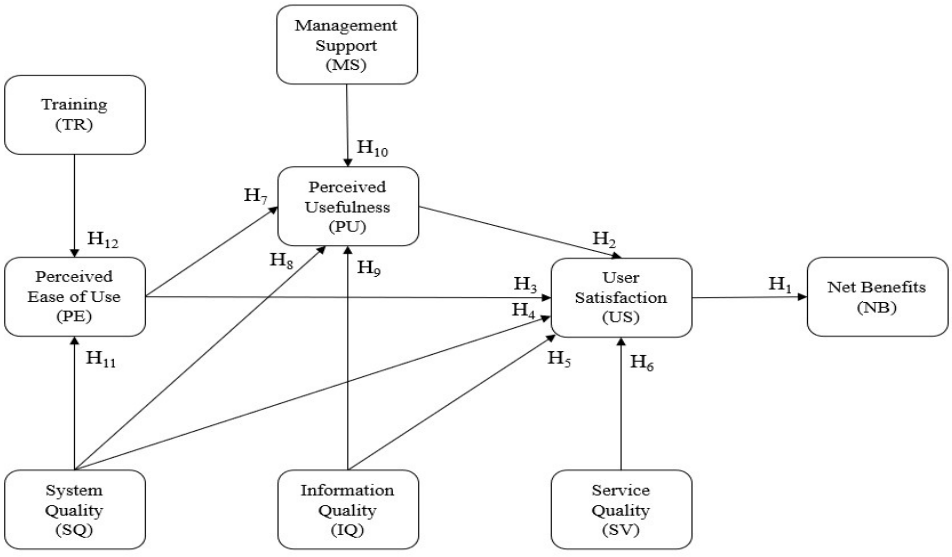

Figure 3: Proposed Research Model

3.3 Research Hypotheses

Hypotheses can show the effect between one variable and another. Based on the research model, below are the hypotheses that will be tested.

H_1: User Satisfaction affects on Net Benefits
H_2: Perceived Usefulness affects on User Satisfaction
H_3: Perceived Ease of Use affects on User Satisfaction
H_4: System Quality affects on User Satisfaction
H_5: Information Quality affects on User Satisfaction
H_6: Service Quality affects on User Satisfaction
H_7: Perceived Ease of Use affects on Perceived Usefulness
H_8: System Quality affects on Perceived Usefulness
H_9: Information Quality affects on Perceived Usefulness
H_{10}: Management Support affects on Perceived Usefulness
H_{11}: System Quality affects on Perceived Ease of Use
H_{12}: Training affects on Perceived Ease of Use

3.4 Variable Measurement

Table 1 shows variables and indicators used in this research model.

Table 1: Variables and Indicators Measurement

Variables	Indicators	
System Quality	SQ1	Integrated with other divisions
	SQ2	Reliable
	SQ3	Flexibility
	SQ4	Response time
Information Quality	IQ1	Completeness data
	IQ2	Easy to understand data
	IQ3	Data according to needs
	IQ4	Accuracy of data
Service Quality	SV1	IT Staff Responsiveness
	SV2	Solution from IT Staff
	SV3	Interaction with IT Staff
	SV4	Adjusting system as needed
Training	TR1	Availability of training
	TR2	Availability of user guide
	TR3	Trainer understanding
	TR4	Facilities during training
Management Support	MS1	Encouragement from management
	MS2	Availability of resources to support
	MS3	Management involvement
	MS4	Award for optimal users
Perceived Ease of Use	PE1	Easy to learn
	PE2	Easy to use
	PE3	Understanding when interacting
	PE4	Easy to become proficient users
Perceived Usefulness	PU1	Useful system
	PU2	Increase effectiveness in work
	PU3	Easiness of doing work
	PU4	Increase performance at work
User Satisfaction	US1	Experience of using system
	US2	Information that provided by system
	US3	Interaction with system
	US4	Willing to recommend system
Net Benefits	NB1	Make works completed faster
	NB2	Help in decision making
	NB3	Increase productivity at work
	NB4	Reduce company costs

3.5 Collecting Data Method

This research takes populations of active ERP users in one of the adhesive manufacturing industries in Indonesia. Respondents are part of marketing, operational, finance and procurement divisions from staff, manager until director level of the company. The total population that used ERP in the company is 50 users. Thus, the total population in this research is 50 users.

The process of collecting data is conducted by submitting a questionnaire to respondents. A questionnaire is a data collection technique that giving respondents a set of questions or written statements to answer. The questionnaire is statements based on indicators from variables research described before. Questionnaires were given to system users to obtain information and feedback on the use of information system implemented. At the end of the questionnaire, there is one open question that users must answer. The question is about another factor that influences the success of ERP information system in this digital era.

In this research, score assessment used Likert scale that has score of 1 to 5. Likert scale is a scale used to measure opinions, attitudes, and perceptions of a person or group of people about a social phenomenon. When responding to statements, respondents determine their level of agreement with a statement by choosing one of the available options consisting of “strongly disagree” with value one (1), “disagree” with value two (2), “neutral” with value three (3), “agree” with value four (4), and “strongly agree” with value five (5).

3.6 Measurement Model

After the actual data was collected using questionnaire, the next step is to analyze the data using SmartPLS. Analysis used by measurement model, i.e., testing validity and reliability.

Validity test is used to measure whether statements in the questionnaire are valid or not. Validity indicates the extent of measuring instruments can measure indicators, so it can be said that the higher validity of measuring instruments, the more precise purpose of measuring instruments. Validity test can be measured using a loading factor that must be greater than 0.7 and the AVE (Average Variance Extracted) value that must be greater than 0.5.

Reliability test is conducted to assess how reliable measuring instruments are for the research. Reliability refers to the accuracy of measurement and results. Reliability test measured using composite reliability and cronbach alpha, the reliability coefficient must be greater than 0.7. If the reliability coefficient is less than 0.7, the measuring instrument used is less reliable in measuring the variables studied.

3.7 Structural Model

After the data was tested with the measurement model, the analysis method used for testing the model and hypotheses is Structural Equation Model (SEM) analysis. According to [5], the structural equation model or SEM is a statistical analysis tool to analyze, explain and test the effect between variables.

There are two approaches in SEM model: Covariance Based-Structural Equation Modeling (CB-SEM) and Partial Least Squares-Structural Equation Modeling (PLS-SEM). PLS-SEM aim at predicting the effect of independent and variable dependent in a model [25]. This research used SEM method with Partial Least Square (PLS).

The base for decision making in regression analysis is to compare the value of significance (sig) and probability (α=0,05). If the value of sig or p-value < α, there is an effect between the variable independent on the variable dependent.

The software used in this research is SmartPLS version 3.0. Using SmartPLS, questionnaires can be processed and analyzed with measurement model or outer model and structural model or inner model.

4. RESULT AND DISCUSSION

4.1 Respondents Profile

The questionnaire in google forms was distributed to all respondents through email. Total of 50 respondents who used ERP system had filled questionnaire. From the questionnaires distributed, the respondent's data is as Table 2 below.

Table 2: Result of Data of Respondents

	Category	Number	Percentage
Gender	Male	37	74%
	Female	13	26%
Age	<=30 y.o.	5	10%
	31 – 40 y.o.	18	36%
	41 – 50 y.o.	18	36%
	>50 y.o.	9	18%
Division	Marketing	18	36%
	Operational	17	34%
	Finance	10	20%
	Procurement	5	10%
Long Time Using	<= 3 months	-	-
	3 months – 1 year	9	18%
	1 – 2 years	21	42%
	>2 years	20	40%

Table 2 shows the characteristics of respondents in this research. The respondents consist of 37 males (74%) and 13 females (26%). The age level of respondents are 5 respondents (10%) less than 30 years old, 18 respondents (36%) are between 31 to 40 years old, 18 respondents (36%) are between 41 to 50 years old, and 9 respondents (18%) more than 50 years old.

The respondents are 36% from marketing, 34% from operational, 20% from finance and 10% from procurement division. 18% of respondents have been using ERP for 3 months to 1 year, 42% of respondents have been using ERP for 1 to 2 years, and 40% of respondents have been using ERP more than 2 years.

4.2 Validity Testing

Validity testing is part of Measurement Model conducted to measure whether statements in the questionnaire is valid or not. An indicator with good validity is if the loading factor has a value greater than 0.7 and AVE has a value greater than 0.5. Table 3 shows the result of the validity test, Loading Factor for each indicator of research variable.

Table 3: Validity Test - Loading Factor

Variables	Indicators	Loading Factor	Result
System Quality	SQ1	0.817	Valid
	SQ2	0.910	Valid
	SQ3	0.852	Valid
	SQ4	0.313	Not Valid
Information	IQ1	0.880	Valid

Quality	IQ2	0.887	Valid
	IQ3	0.836	Valid
	IQ4	0.745	Valid
Service Quality	SV1	0.807	Valid
	SV2	0.891	Valid
	SV3	0.856	Valid
	SV4	0.846	Valid
Training	TR1	0.823	Valid
	TR2	0.830	Valid
	TR3	0.561	Not Valid
	TR4	0.896	Valid
Management Support	MS1	0.923	Valid
	MS2	0.864	Valid
	MS3	0.878	Valid
	MS4	0.599	Not Valid
Perceived Ease of Use	PE1	0.759	Valid
	PE2	0.913	Valid
	PE3	0.948	Valid
	PE4	0.811	Valid
Perceived Usefulness	PU1	0.851	Valid
	PU2	0.775	Valid
	PU3	0.840	Valid
	PU4	0.710	Valid
User Satisfaction	US1	0.719	Valid
	US2	0.809	Valid
	US3	0.889	Valid
	US4	0.819	Valid
Net Benefits	NB1	0.877	Valid
	NB2	0.778	Valid
	NB3	0.918	Valid
	NB4	0.461	Not Valid

Based on Table 3, indicators SQ4, TR3, MS4, NB4 are not valid because the loading factor is less than 0.7. Therefore, four indicators are eliminated from this research. Furthermore, unless the four indicators mentioned above, all indicators have loading factor greater than 0.7, so valid to use in this research.

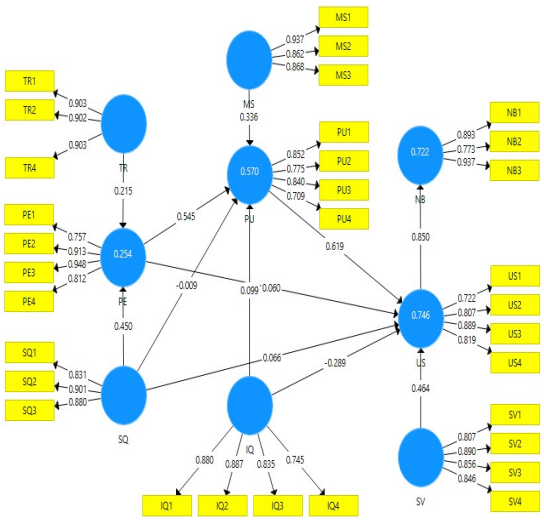

Figure 4: Loading Factor Value after Elimination

The Figure 4 shows the indicator SQ4, TR3, MS4, and NB4 had been eliminated. Thus, for now, loading factor for all indicators is greater than 0.7.

Based on the Table 4, all variables are valid and can be used in this research because the AVE value is greater than 0.5.

Table 4: Validity Test - AVE

Variables	Average Variance Extracted (AVE)	Result
System Quality	0.759	Valid
Information Quality	0.704	Valid
Service Quality	0.723	Valid
Training	0.815	Valid
Management Support	0.792	Valid
Perceived Ease of Use	0.741	Valid
Perceived Usefulness	0.633	Valid
User Satisfaction	0.658	Valid
Net Benefits	0.758	Valid

4.3 Reliability Testing

Reliability testing is to see composite reliability and cronbach alpha value where the coefficient must be greater than 0.7. In this research, all variables are reliable and can be used in this research. Table 5 shows the result of the reliability testing of each variable research.

Table 5: Result of Reliability Test

Variables	Cronbach alpha	Composite Reliability	Result
System Quality	0.843	0.904	Reliable
Information Quality	0.862	0.904	Reliable
Service Quality	0.872	0.913	Reliable
Training	0.894	0.929	Reliable
Management Support	0.870	0.920	Reliable
Perceived Ease of Use	0.882	0.919	Reliable
Perceived Usefulness	0.810	0.873	Reliable
User Satisfaction	0.825	0.885	Reliable
Net Benefits	0.840	0.903	Reliable

4.4 Evaluation of R Square (R2)

The first step in the structural model is to determine R Square value of the dependent variable. This value can describe the extent of the dependent variable can be explained by the

independent variable. R square has a range between 0 to 1. The following is R Square value of each dependent variable.

Table 6: R Square Value

Variables	R Square
Perceived Ease of Use	0.254
Perceived Usefulness	0.570
User Satisfaction	0.746
Net Benefits	0.722

As shown in Table 6 above, indicates that Perceived Ease of Use has R square value equal to 0.254, which means Training and System Quality can influence Perceived Ease of Use variable by 25.4%. In contrast, the remaining 74.6% is explained by other variables not included in this research.

Perceived Usefulness variable has R square value equal to 0.570, which means Perceived Ease of Use, System Quality, Information Quality and Management Support can influence Perceived Usefulness variable by 57%. In contrast, the remaining 43% is explained by other variables not included in this research.

User Satisfaction has R square value equal to 0.746, which means Perceived Usefulness, Perceived Ease of Use, System Quality, Information Quality and Service Quality can influence User Satisfaction variable by 74.6%. In contrast, the remaining 25.4% is explained by other variables not included in this research.

Net Benefits variable has R square value equal to 0.722, which means User Satisfaction can influence Net Benefits variable by 72.2%. In contrast, the remaining 27.8% is explained by other variables not included in this research.

4.5 Hypotheses Testing

Hypotheses testing is conducted by measuring path coefficients that show the correlation between two variables, namely the relationship between independent and dependent variables. The correlation is seen from the p-value. A variable with another variable has a significant effect if the p-value is <0.05, and if p-value >0.05, there is no significant effect. In addition, the hypotheses are accepted if the T-statistics value is greater than 1.96.

Table 7: Hypotheses Result

Hypotheses		T Statistics	p-value	Influence	Result
H_1	User Satisfaction → Net Benefits	20.647	0.000	Significant	Accepted
H_2	Perceived Usefulness → User Satisfaction	6.389	0.000	Significant	Accepted
H_3	Perceived Ease of Use → User Satisfaction	0.474	0.636	Non-Significant	Rejected
H_4	System Quality → User Satisfaction	0.461	0.645	Non-Significant	Rejected
H_5	Information Quality → User Satisfaction	1.596	0.111	Non-Significant	Rejected
H_6	Service Quality → User Satisfaction	3.526	0.000	Significant	Accepted
H_7	Perceived Ease of Use → Perceived Usefulness	3.303	0.001	Significant	Accepted
H_8	System Quality → Perceived Usefulness	0.058	0.954	Non-Significant	Rejected
H_9	Information Quality → Perceived Usefulness	0.397	0.692	Non-Significant	Rejected
H_{10}	Management Support → Perceived Usefulness	2.675	0.008	Significant	Accepted
H_{11}	System Quality → Perceived Ease of Use	4.669	0.000	Significant	Accepted
H_{12}	Training → Perceived Ease of Use	1.088	0.277	Non-Significant	Rejected

Based on the results of analyzing twelve hypotheses using SmartPLS that can be seen in Table 7, it was found that six hypotheses are accepted and have a significant effect, namely H_1, H_2, H_6, H_7, H_{10}, and H_{11}. In contrast, the six other hypotheses, namely H_3, H_4, H_5, H_8, H_9, and H_{12} are rejected and have no significant effect on the success of ERP information system based on SAP Business One.

4.6 Interpretation of Result

This research is focused on the ERP system implementation for the post-implementation. The target in this study is the end-user of the ERP system implemented, especially users who have used the ERP system for a certain period. Therefore, respondents in this study can reflect the generalization of ERP system implementation in real life.

Based on Table 7, User Satisfaction has a significant effect on Net Benefits, indicated by the acceptance of H_1. It strengthens previous research, which also found a significant effect between User Satisfaction variable on Net Benefits [4], [18]. In this case, users are satisfied with ERP information system that impacts users' performance, such as making work faster and increasing productivity.

User Satisfaction is significantly influenced by Perceived Usefulness and Service Quality, indicated by the acceptance of H_2 and H_6.

It strengthens previous research, which also significantly affected the two relationships [9], [20]. The use of ERP based on SAP Business One that is useful in work and supportive IT support team will determine user satisfaction. System users expect helpful information system for their work, supported by fast IT services and good knowledge. When the goal is met, the user will feel satisfied or otherwise.

While Perceived Ease of Use and Information Quality do not affect User Satisfaction, indicated by the rejection of H_3 and H_5. It does not support previous research [5], [9], which found the effect of Perceived Ease of Use on User Satisfaction and Information Quality on User Satisfaction. System Quality does not also affect User Satisfaction, indicated by the rejection of H_4, which strengthens previous research that found no significant effect between System Quality on User Satisfaction variable [26]. It can be caused by the perception of users that basically ERP system based on SAP Business One should be easy to use, reliable, and accommodate specific information needs.

Based on the answer to an open question in the questionnaire, there is a factor affecting ERP user satisfaction, namely human factors. One intangible asset in an organization is the human resources, including of knowledge, capabilities, behavior, skills, and attitudes of employees. Human resources contributed significantly to the building of shareholder value. Humans are resources that cannot be controlled and predicted but very essential to the success of the organization. Therefore, it is very useful to increase the readiness and understanding of human resources involved so all users can make changes by using the system optimally. In addition, teamwork is needed from all users because ERP is the responsibility of all divisions, not just one division. With the ERP, there will be a close relationship between each division, creating synergy and transparency. The following is one of the answers from respondents who stated about human factors:

> *'The success of ERP system also comes back to the people/users respectively, it is useless if the ERP has been prepared in such a way, but the user has not operated it optimally and cooperated with all divisions.'*

Perceived Usefulness variable is significantly influenced by Perceived Ease of Use and Management Support, indicated by the acceptance of H_7 and H_{10}. It strengthens previous research, which also found a significant effect between the two relationships [9], [17]. It is in line with Technology Acceptance Model (TAM), where users will feel useful and greater benefits when they feel the ease of using information system. In addition, management involvement and support have an essential role, so users have more beliefs about benefits obtained from the information system.

While System Quality and Information Quality variables do not affect Perceived Usefulness, indicated by the rejection of H_8 and H_9. Based on the answer to an open question in the questionnaire, there is a factor that can affect Perceived Usefulness, namely availability of infrastructure. Some users expect a smoother and capable network connection. In addition, updated devices are needed so the use of ERP can be more optimal. As one of the performance improvement process, ERP users will feel easier to do their jobs with a more supportive infrastructure and facilities conditions. The following is one of the answers from respondents who stated about availability of infrastructure:

> *'If internet network access is smooth and capable, ERP will be useful when needed to update the required data.'*

Furthermore, based on the result of the analysis in Table 7, System Quality has a significant influence on Perceived Ease of Use, indicated by the acceptance of H_{11}. It strengthens previous research, which also found a significant influence between System Quality on Perceived Ease of Use variable [22]. An integrated, reliable, and fast response system makes users feel convenience when using ERP information system. The higher of system quality, the higher perceived ease of use.

While Training variable does not affect Perceived Ease of Use, indicated by the rejection of H_{12}. ERP information system training needs to be improved, and the availability of user guides still needs to be improved to make users easier. In addition, based on the answer to an open question in the questionnaire, there is a factor that can affect Perceived Ease of Use, namely User Interface. The following is one of the answers from respondents who stated about User Interface:

> *'Adjusting the menu displayed in the application will ease of use of the information system.'*

Some users want the menu on ERP information system to be adjusted by the role and

level of the user, so it can make it easier to use ERP system.

5. CONCLUSION

The purpose of this study is to identify the success factors that influence ERP information system based on SAP Business One in Adhesive Manufacturing Industry. To determine the success factors is to use the proposed model with several variables, namely Net Benefits, User Satisfaction, Perceived Usefulness, Perceived Ease of Use, System Quality, Information Quality, Service Quality, Training, and Management Support.

The variable used to measure the success of ERP information system is net benefits variable. Net benefits variable is significantly influenced by user satisfaction. Perceived usefulness and service quality variables significantly influence user satisfaction variable. Perceived usefulness variable is significantly influenced by perceived ease of use and management support. Furthermore, system quality variable significantly influences perceived ease of use variable.

For further research, it is suggested to use the research variables that influence the success of ERP information system in the digital era, such as Human Factors, Availability of Infrastructure, and User Interface. The research can also be expanded on other applications that used at the company. In addition, future research can consider other frameworks related to ERP system adoption.

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