

**CUSTOMER ACCEPTANCE IN ONLINE MARKETING USING TECHNOLOGY
ACCEPTANCE MODEL
STUDY CASE: PT RAJAWALI MEDIKA MANDIRI**

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Abstract. Selling medical equipment is difficult because its use is specific and thus customer needs to be well informed about this product. This make the market of this product is small. To face the problem, nowadays every Distributor Company needs to spend much money on sales department to selling the product. This also happens in PT Rajawali Medika Mandiri. PT Rajawali Medika Mandiri needs to make efficiency in the time in the convince doctors and purchasing staff to inform the specification of medical equipment and the advantages if they choose PT Rajawali Medika Mandiri's products. Online website is one of alternative that will help PT Rajawali Medika Mandiri because internet users in Indonesia will growth and it will help provide information for both doctors and purchasing staff. However that will be some factors that can affect the usage of internet. For some people, internet is a new technology. So, PT Rajawali Medika Mandiri needs to know whether customers will use this technology before PT Rajawali Medika Mandiri develops the website. The purpose of this research is to explore whether online marketing can be used as part of sales efforts to inform potential customers about medical equipment. To be able to explore it, TAM is used to identify customers' perception about online website and how it influence customers' intention to use it. In using TAM, PT Rajawali Medika Mandiri use eCatalogue website from LKPP as the prototype. The respond of correspondent are good enough to use this as prototype to build PT Rajawali Medika Mandiri's own website. But, they need to improve more to make the customer more comfort in using the website.

Keywords: Marketing, Technology, Online Marketing, Technology Acceptance Model.

Introduction

Technology has been employ one aspect that has important role in our life. To be set as example, every machine that must be manually operated has changed into with a motorized application such as, in the early days farmers use cattle to act as their transportation, but now tractors are available. We can set simpler example such as toothbrush, nowadays some people are using motorized toothbrush as an exchange of the conventional one. It can be conclude that every aspect of our life, no matter how simple or complex things can be, technology is inseparable, which also affects the medical equipment industries.

Medical equipment industries are growing day by day rapidly with a promising prospects. Promising prospects invite many companies to join this sector. For example, for last 10 years GE has been one of the famous medical equipment brands in Indonesia, now, many new brands such as Philips and Edan surfaces in Indonesia to compete on this specific sector. Thus the competition level is high and innovation is required to build a great brand image.

Concerning back to the competition issues, nowadays marketing expenses on sales department is high, which is caused by the rapid frequencies of visits to the hospitals. A direct meeting with doctors and purchasing staff is required in order to communicate well. By that it means that the sales person must go back and forth to meet the doctors as well as the purchasing staff of the hospital. Purchasing staff is the key person who is able to authorize the purchase of an equipment. Some of whom are acting as a researcher whose objective is to determine the most required equipment by the hospitals and later it recommend it to the hospitals management. This situation has made the effort to introduce the equipment to the doctors and maintain well relationship with the hospital management. Especially the purchasing staff and the effort to convince the purchasing staff, thus purchasing staff will recommend the cost of convincing. Both parties in form of visit to the hospitals is not as high as its benefits, thus the company profit will surely decrease. In the same time, competitors have the advantages to sell superior product with similar specifications which makes it hard for PT RajawaliMedikaMandiri' sales person to sell the product and it is required to find solutions for these problems. The cost of "dating" the doctor and purchasing staff not equal with the benefit the company gets and it will defect to the company's income. In the same situation, competitor come and selling product with almost same specification or more superior from our product. It's a difficult situation and they need solution in this problem. Based on the fact, sales will meet the doctor that has position in the hospital or clinic and give off the other, and the result the doctor that the sales given off, will buy competitor product And all health equipment distributors company will do same thing and need to make differentiation and revolutionary idea in selling their product.

Based on this issue, it is considered that PT RajawaliMedikaMandiri should differentiate it marketing strategy of which on this case is using internet as its marketing medium. The reason internet is chosen as the solution for the new marketing strategy is mainly because based on redwing-asia.com, the number of internet users in Indonesia is growing rapidly, the numbers are increasing from 55 million in the 2012 to 100 million in 2014 and predicted to reach 125 million in 2015. However, the future cannot be predicted precisely, and there is a chance that not every persons can adapt to new technology such as internet. Thus it is considered crucial to determine what factors that affect people's behavior toward technology, such as ages, genders, and job. In order to create model to be applied on this research, TAM is applied since TAM is the most commonly used method. The purpose of this research is to identify the ability of online marketing as part of sales facilities to the potential customer. In order to identify the potential customers, TAM is applied as the model to identify customer perception about online website and how influence customers. Not only that after finding the new strategy, this research will also try to find a way integrate existing strategies with new ones.

Literature Review

Medical Equipment

Medical Equipment which is also known for armamentarium, has several definitions with similar meanings. Based on The American Heritage Dictionary of the English Language 4th edition (Houghton Mifflin Company, 2009) armamentarium is defined as the complete equipment of physician or medical institution, including books, supplies, instruments; the complete range of materials available or used for a task. Other definition, based on Collin English Dictionary (HarperCollins Publishers, 2003) stated armamentarium is defined as the items that comprise the material and equipment used by a physician in his professional practice.

Marketing

Marketing defined as the process by which companies create value for customers and build strong customer relationship in order to capture values from customers in return (Kotler & Armstrong, 2007). This definition explains that nowadays marketing does not only announce to people and sell the product; it also requires customer satisfaction as the other "ingredients" for the company. Marketing doesn't only intend to meet and sell product in a singular frequency but it is a must to

build a customer relationship, thus this activity will continue to happen. So, marketing can be explained as a social and managerial process by which individuals and organizations obtain what they need and want through creating and exchanging value with others. (Kotler and Armstrong, 2007).

Online Marketing

Online marketing is defined as the efforts to market products and services and to build a relation with customers through the internet. Nowadays, online marketing has been one type of direct marketing that grows fast and rapid. To be set as an example, the number of internet users around the world is approximately 2,944,396, the number has been increasing throughout the year, and if compared to the data dated. On 2004, the internet users were only 14,161,570 users. Not only that, Asia has also become the location with most internet users, proportioning 48.4% from around the world. Indonesia is ranked on the 13th position based on the internet users. These numbers can support the theories that online marketing can be effectively executed.

Technology Acceptance Model

TAM is tailored to Information System contexts, and was designed to predict information technology acceptance and usage on the job. TAM is usually used as the starting point to decide that this technology can be used by the customer or not.

TAM constructs are perceived of usefulness, perceived ease of used, intention to use, and actual system use. For this research researcher using only 3 from 4 factors, because the system are not available yet. In this case, perceived usefulness and perceived ease of use are used to measure independent factors and intention to use is used to measure dependent factors. Three of this factor need to be calculates because one factor can be affected to the other factor. Based on the theory, if perceived of usefulness high and perceived ease of used high, people or correspondent have intention in using the technology is high.

TAM has been widely applied to a diverse set of technologies and users (Venkatesh, Morris, Davis, & Davis, 2003).

Methodology

Problem Identification

In order to conduct a research, problem must be identified. In this part, main problem will be discussed throughout. Based on the previous chapter, the research problem is how adaptive consumer of medical equipment if being faced with new system. From this problem, the objectives of this research can be determined.

Research Objectives

The purpose of this research is to explore if online marketing can be applied as a part of sales efforts with the intention to give information to the potential customers. This research will apply multiple linear regression analysis in order to identify the correlation between the dependent variable and the independent variables.

Literature Review

In this research, several books and articles regarding online marketing are being compiled as a base theory. Not only that, significant amount of journal regarding TAM is also being studied as the base model. Based on those literatures, this research are conducted along with the assumptions made. It is hoped that these literature can provide information to help this research.

Research Variable

As mentioned before, this research uses TAM as its base for model development, but on this case it is modified by not using the conventional TAM of which only using three variable. The reason is that there is no website exist at the moment. The variables on this research are divided into dependent and independent variables.

The Prototype: LembagaKebijakanPengadaanBarang/JasaPemerintah (LKPP)

LembagaKebijakanPengadaanBarang/JasaPemerintah is one of 28 Non - Government Institutions Ministry (LPNK) which is subordinate and accountable to the President of the Republic of Indonesia. One of LKPP's duties is to maintain transaction of the purchasing equipment in the government

area. They have website called e-Catalogue. This website has been widely used by the government hospital to purchase the medical equipment. This website will be adopted and simplified by PTRajawaliMedikaMandiri in order to build its own website.

Variable

Intention to use

As for the dependent variable, the intention to use is indicated to affected by perceived of usefulness and perceived ease of use.

Perceived of usefulness

Perceived of Usefulness is defined as the degree to which an individual believes that using the system will help him or her to attain gains in job performance.

Perceived eased of use

Perceived ease of use is defined as the degree of ease associated with the use of the system.

Questionnaire Development

In this research, questionnaire is used in order to gather statistical data. The questionnaire is derived from Venkatesh's questionnaire (Venkatesh, Morris, Davis, and Davis, 2003), which later that translated from English to Bahasa Indonesia and distributed to the respondent in Bandung. Distribution of questionnaire is conducted on July 2014. The questionnaire consists of several types of questions.

Data Analysis

The researcher uses primary and secondary data obtained from several sources to conduct this research. The primary data are interview results and questionnaires. This data also supported by theory and some information from secondary data.

After all data collected, the next process is to input data to SPSS. The purpose is to process the data and to identify the correlation between the dependent variable and the independent variables.

Tools

Reliability and Validity

Reliability is defined as the degree to which an assessment tool produces stable and consistent results.

Validity refers to how well a test measures what it is purposed to measure. It's required to rub validity test because the data must be both reliable and valid.

Multiple Linear Regression

Multiple linear regressions method is defined as a regression method that uses two or more explanatory variables (X) to estimate the numerical value of the response variable (Y) (Levine, Krebiel, & Berenson, 2010).

Result and analysis

Exploratory Analysis

With the purpose to fully comprehend the problem and obtain a integrated understanding, additional background information is being gathered by exploratory research. Information regarding PT RajawaliMedikaMandiri is being collected by interviewing CEO and Director of PT RajawaliMedikaMandiri, and observing some customers of PT RajawaliMedikaMandiri. The method is to come to hospital and interview the doctors and purchasing staff about how the business process in the hospital is like. Not only that, the researcher also use secondary data such as journal and other literatures along with the web with the purpose to find solution for the problem to conduct the researcher to find the solution for the problem.

Descriptive Analysis

Following the exploratory analysis, descriptive analysis is applied with the aim to support the conclusion has been made and recheck the result from questionnaire. Furthermore, the final count is done using Ms. Excel and being processed using spss. Statistic and multiple linear regression as its tool. The results will be analyzed and using the analysis, conclusion and recommendation will be developed.

Respondent Profile

The first part is intended to determine respondents profile as a basis for further analysis.

Job

There are 89 respondents, all of whom are working as a purchasing staff of which diversified from 22 different hospitals operating at Bandung. Purchasing staff has the authority to decide which equipment are going to be bought by the hospital. Many of them are researchers whom seek information about equipment that needed by the hospital and they will recommend the item to the hospital management.



Figure 4.1. Job Graph

Gender

From 89 respondents, 52% of them are woman, while the other 48 % are man.

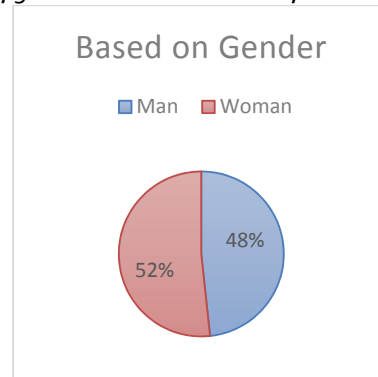


Figure 4.2. Gender

Age Group

The respondents' age distribution is diversified. Most of the respondents' age is between 25 – 35 years old. This segment proportional is 45% and then 35% of the respondents' age is between 36–45 years old. The other 20% is divided into 17% of respondents of whom age is between 46 – 55 years old. And the 3% are more than 55 years old.

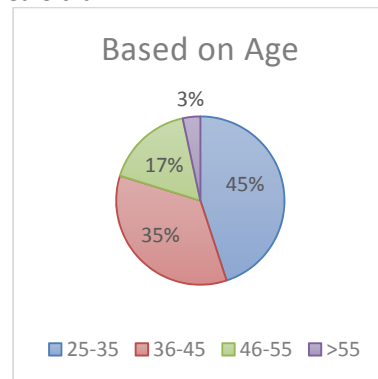


Figure 4.3. Age group

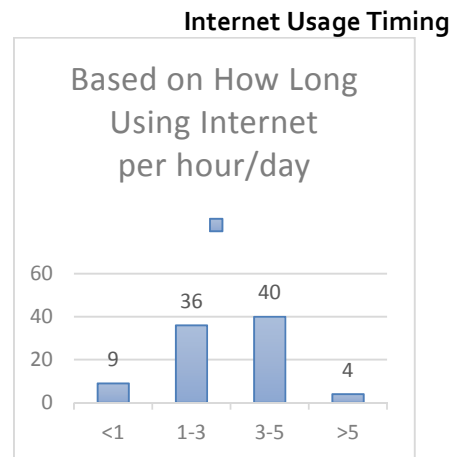


Figure 4.4. Internet Usage Timing

The graph above shows the amount of time being spent by the respondents daily. From this graph, respondents' internet usage habit can be indicated.

Table 4.1. Technology acceptance of online marketing for health equipment

**Technology acceptance of online marketing for health equipment
Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
PU1	89	2	5	3.52	.740
PU2	89	2	5	3.55	.674
PU3	89	2	5	3.38	.761
PU4	89	2	5	3.35	.740
ITU1	89	2	5	3.60	.849
ITU2	89	1	5	3.38	.715
PEU1	89	2	5	3.35	.709
PEU2	89	2	5	3.43	.782
PEU3	89	3	5	4.29	.661
PEU4	89	2	5	3.43	.782
Valid N	89				

The table above shows respondents' acceptance toward website as part of online marketing strategy. Generally, all variables' mean is above 3 which means it is good enough but still needing more development, specifically to enhance respondents' effectiveness on doing their job.

However, the easiness of use by the system has the highest mean, if compared to other factors. To summarize it, the findings indicated that the respondents will accept the development if PT RajawaliMedikaMandiri intends to develop a similar website. But it is to be noted that perceived of usefulness and perceived ease of use must be improved.

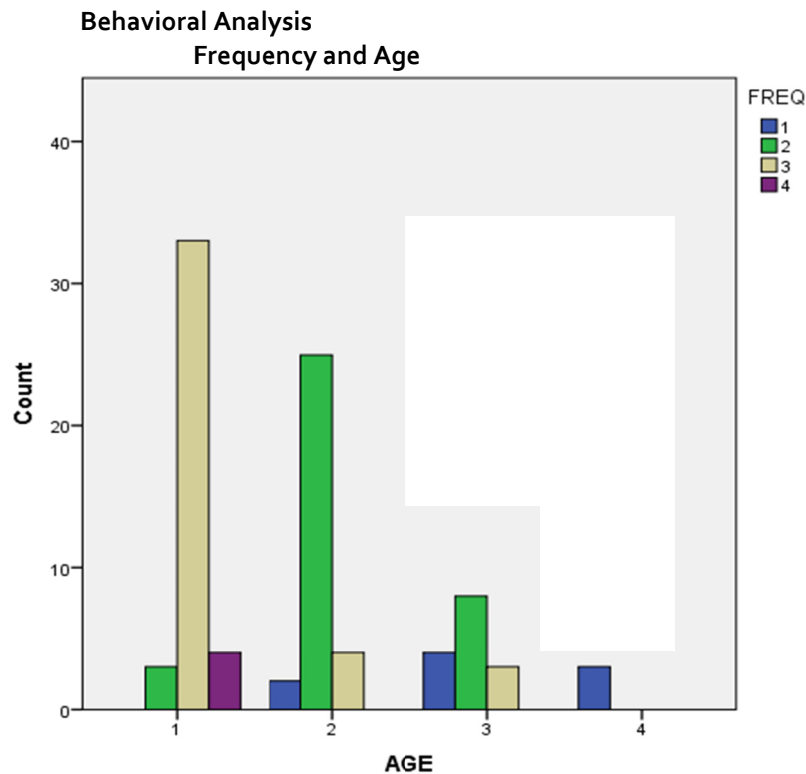


Figure 4.5. Behavioral Analysis Frequency and Age

Figure 4.5 shows the younger a person is, the higher its frequency to use the internet. Respondents that use the internet the most are between the ages of 25-35 years old. This group use internet 3-5 hours per day. However, the older a person is, the usage of internet will decrease as well. But according this, it is indicated that online marketing will be potential if treated as a marketing tool since PT RajawaliMedikaMandiri's customer are mostly between 25-45 years old.

Quantitative analysis

This part is supposed to analyze the questionnaire in detail. The questions developed on this questionnaire are based on TAM (Venkatesh, Morris, Davis, and Davis, 2003) of which has been translated into Indonesia. The first analysis that will be concluded is reliability and validity test.

Table 4.2. KMO and Bartlett's Test

Validity Test			
KMO and Bartlett's Test			
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.			.669
Bartlett's Test of Sphericity	Approx. Chi-Square		138.11
	Df		3
	Sig.		.000

From the analysis using Kaiser-Meyer-Olkin Measure and Bartlett's test, the result of Kaiser- Meyer-Olkin Measure of Sampling Adequacy is 0.669, which means that this model is valid because the value is more than 0.5. Besides that, Bartlett's Test of Sphericity's result has chi square value of 138.112 and significant value of 0.000. This results supports the Kaiser-Meyer-Olkin Measure's which indicated that the questionnaires are valid.

Reliability Test

Reliability Statistics

Cronbach's Alpha	N of Items
.860	3

Table 4.3. Reliability Statistics and Item Total Statistics

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PU	7.1124	1.223	.834	.711
ITU	7.0730	1.269	.737	.804
PEU	6.9382	1.415	.644	.886

If a research instrument has a Cronbach's alpha is equals to 0.70, it is indicated that the research instrument are reliable. From this research instrumentsCronbach's alpha is 0.860 and it is more than 0.70 which indicates the reliability of this instruments.

Research Result

Multiple linear regression is applied to a set of data which consists several items thus the data are required to be simplified into singular variable.

Multiple Linear Regressions

Table 4.4. Descriptive Statistics

Descriptive Statistics

	Mean	Std. Deviation	N
ITU	3.4888	.63950	89
PU	3.4494	.61605	89
PEU	3.6236	.61598	89

Table 4.4 shows the mean and standard deviation result from the model for each independent variable and dependent variable.

Table 4.5. Correlation

Correlations

		ITU	PU	PEU
Pearson Correlation	ITU	1.000	.795	.552
	PU	.795	1.000	.672
	PEU	.552	.672	1.000
Sig. (1-tailed)	ITU	.	.000	.000
	PU	.000	.	.000
	PEU	.000	.000	.
N	ITU	89	89	89
	PU	89	89	89
	PEU	89	89	89

Table 4.5 shows the result of correlation between the independent and dependent variables. If the significance level is lower than 0.005,it means that the correlation between independent variable

and dependent variable is significant. Pearson correlation indicated that correlation between independent & dependent. Positive numbers show the dependent variable has a one-way relationship towards the independent variable while the higher value indicates its strength show the strength of the relationship. From the results it is indicated that all variables are correlated significantly. However the strongest is the correlation between intention to use and perceived of usefulness, which indicated by the value of 0.795. The weakest is the correlation between intentions to use and perceived of usefulness with the correlation value of 0.552

Table 4.6. Model Summary

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.796 ^a	.633	.625	.39181	1.597

a. Predictors: (Constant), PEU, PU

b. Dependent Variable: ITU

R Square shows us how the impact of independent variable to dependent variable. In this part, dependent variable are Intention to use (ITU) and independent value is Perceived of usefulness (PU) and Perceived ease of used (PEU). This table explain that value of R Square is 63.3% that shows impact on independent variable (perceived of usefulness and perceived ease of use) to dependent variable (intentions to use) is 63.3%. Durbin Watson has value that if the value is between -2 and 2, meaning there is no autocorrelation. In this case, the Durbin Watson is 1.597 and this value between -2 and 2, this mean there's no autocorrelation. Standard Error of the Estimate is to count can be independent variable used as predictor of dependent variable. If Standard. Error of the Estimate is lower than dependent variable's standard deviation, that's mean independent variable can be used as predictor of dependent variable. In this case SEE is 0.39181 < dependent's (intentions to use) standard deviation is 0.63950 means these independent variables can be used as predictor of dependent variable (intentions to use)

Hypothesis

Ho: Perceived eased of use and Perceived of usefulness do not influence Intention to use

H1: Perceived eased of use and Perceived of usefulness influence Intention to use

F Test

F test is aimed to explain all of independent variables effect to the dependent variable. F test is analyzed by comparing F score and F value from the table. If the F score is higher than F value from the table, it means that Ho is rejected and H1 is accepted.

Table 4.7. ANOVA

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	22.787	2	11.393	74.216	.000 ^b
	Residual	13.202	86	.154		
	Total	35.989	88			

a. Dependent Variable: ITU

b. Predictors: (Constant), PEU, PU

From the ANOVA table, F score is 74.216 with significant level of 0.05. The critical value of F is determined by applying $v_1=k=2$ while $v_2=n-(K=1)=86$. The critical value of F is 4.88 since the critical value table is lower than the F score from regression model, the independent variables

simultaneously give significant explanatory to the dependent variable. Thus H_0 is rejected while H_1 is accepted.

T Test

T test is aimed to explain the influence of one independent variable as an individual variable in order to describe the variation of the dependent variable. T test is analyzed by comparing T score and T table. If the T score is higher than t table, than H_0 will be rejected and H_1 will be accepted.

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.598	.266		2.248	.027
PU	.804	.092	.774	8.780	.000
PEU	.033	.092	.032	.360	.720

a. Dependent Variable: ITU

Table 4.8. Coefficients

According to the coefficient table, the B column shows correlation between independent variable to dependent variable. All variable are positive that means that independent variable give positive effect to the dependent variable. From t column, the value of t for each variable is expressed, t score is later compared to the t table to find the critical value of t distribution with level of significance of 0.05 and the result is perceived of usefulness is lower than 0.05 this means that perceived of usefulness is significant. This result is different from perceived ease of use that is not significant because the significant of perceived ease of use is higher than 0.05. This result is not according to the theory that perceived ease of use and perceived of usefulness must significant. T score of all independent variable are lower than T table. This result means all independent variables don't give significant effect to the dependent variables. Thus, H_0 is accepted and H_1 is rejected. This hap

Conclusion and Recommendation

Conclusion

The purpose of this research is to identify the ability of online marketing as part of sales facilities to the potential customer. TAM is applied as the model to identify customer perception about online website and how influence customers. Not only that after finding the new strategy, this research will also try to find a way integrate existing strategies with new ones. This research are made to solve some problem that found in PT RajawaliMedikaMandiri. Findings show that intention to use in general purchasing staff in hospitals in Bandung are a bit high, this concluded using the assumption of the usage of internet. The researcher found that there's some objective to solve the problem. First, TAM factor that can affect to the proposed online marketing design need to be identified, second, the researcher need to identify TAM factor that need to be improved and the last one, existing strategies with online marketing can be intergrated. From that objective, researcher make a research and found that, intention to use have correlation with perceived ease of use and perceived of usefulness. This model affects the system according to TAM theory. But there are TAM factors that need to be improved, there are findings show that users' perception of online ekatalog as improving effectiveness in their job needs to be improved. Other factors that need to be improved are users' perception of the website's usefulness to help users' job; users' perception of the system's clarity and easiness to understand; and last but not least are users' intention to use. So researcher can give suggestion that PT RajawaliMedikaMandiri can build their own website to support their face to face marketing.

Recommendation for PT RajawaliMedikaMandiri

Based on this research, The researcher suggest PT RajawaliMedikaMandiri to use the prototype (eKatalog LKPP) because Findings show that consumer's perception of usefulness, perception eased

of use and intention to use are overall good. However there are 4 items that needs to be improved which are PT RajawaliMedikaMandiri need build website that can enhances the effectiveness for the customer. With this website, customer can open it at all devices, so they can mobile not only browsing in their office. PT RajawaliMedikaMandiri's website will also be useful for the customer. The website needs to give feature that help the users like adding newsletter about the latest technology that can solve health problem. The website also needs to be clear and understandable. Customers need the website that can help them compare two or more type so they can easily choose what their (doctor) or hospitals need (purchasing staff). This improvement can make the doctors and purchasing staffs can easily choose what doctors and purchasing staff need in their planning.

Recommendation for future research.

Although this research has been able to solve the problem, it is considered that future research should implement the website before doing the research. Based on the result, further researches correspondents need a real tool to score TAM.

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