

Development Of The Means Of Engagement Concept On The Use Of Enterprise Resource Planning (ERP) At The Approval Level

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ABSTRACT

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The causes of failure in implementing an ERP system in a company can be caused by several factors, so a model is needed that can be applied, especially at the approval stage for system use. This research aims to analyze what factors influence approval for product use (approval) in implementing an ERP system in a company and to analyze what factors have a positive and significant influence on the success or failure of system implementation in terms of approval. The object of this research is PT. Glico Indonesia. This research contains a total of eight variables with one dependent variable approval and seven independent variables consisting of certainty of outcome, causality, motive consistency, control potential, situational construal, appraisal, and coping. The tests used in this research are outer model testing and inner model testing. Based on the results obtained from this research, there are three variables that have a significant influence and a positive influence on approval, namely certainty of outcome, situational construal, and coping. There are two variables that have a significant influence but a negative influence on approval, namely causality and motive consistency, there is one The variable that does not have a significant influence and has a negative influence on approval is control potential and there is one variable that does not have a significant influence but has a positive influence on approval, namely appraisal.

1. INTRODUCTION

The Covid-19 pandemic has changed relationship patterns society and the business world to adapt to use information Technology. The impact of the Covid-19 pandemic in the era Globalization has triggered the development of technology information that extends to many areas including are education, health, economics, trade, industry, transportation, services and food[1][2]. Business world/actors large scale companies, medium scale companies, scale companies small, up to the level of micro, small and business actors Medium Enterprises (MSMEs), need to innovate and implement strategic steps to maintain business continuity[3][4]. In the era of globalization steps strategies chosen and carried out by the world businesses/Companies and business people are with taking advantage of advances in information technology, one of them by implementing an Enterprise Resource Planning system (ERP)[5][6]. ERP is an integrated information system designed to help companies in Integrate and manage various business processes companies such as production, finance, inventory, sourcing human resources, and others[7]. ERP systems have been proven and becomes a fundamental and strategic need for company in managing operations and resource they[8][9]. But the implementation is automated something that was previously used to being done Manually is not easy, let alone automated flow of a company's main business processes[10][11]. Needs getting used to, adjustment, and adaptation to the new system so that does not cause problems that could be the beginning from failed ERP implementations, such as problems that appeared in PT. Glico Indonesia is the object of This research is, training in using the system provided by vendors to employees is inadequate and explanation regarding the relationship between modules in the system with less detailed company business processes causing employee knowledge of the system to remain minimal so that the initial use of the ERP system aimed at streamlining the company's business processes and make employees' jobs easier maximum[12][13].

In research conducted [14] stated that 79% of problems occur during the project duration. Mostly roots. The problem occurs in the organization/company itself including an unrealistic Project Schedule and space expanded project scope. About 60% the organization/company experiences operational disruption during implementation, both technical and non-technical problems technical. Then based on the survey results, failure There are 50 ERP software implementations in the world 70%, according to the Standish Group only 10% are successful implementing ERP, 55% experienced delays in implementation, and 35% of projects are cancelled, and also in a study published by Deloitte in 2017 it is estimated that 55% to 75% of implementation projects ERP fails

to achieve company goals. The Means of Engagement (MoE) concept aims to measure the level of success of using something product. By considering the four levels viz agreement, acceptance, approval, and adoption[15]. With using the Means of Engagement model, company can understand the requirements that must be met for implement ERP software. so that it can reduce the possibility of failure. One of important aspects in implementing an ERP system in a company is at the approval stage.

At this stage it can be interpreted companies that want to implement an ERP system. agree to use the system and start consider the factors that must be taken into account when implementing an ERP system. With the high number of ERP implementation failures there needs to be a theory to identify which ERP system used by an organization or company to cause failure ERP applications can be minimized. From the explanation above, the author made this research to analyze What factors influence approval use of the product, which in this case is the product is an ERP system and to analyze what factors which has a positive and significant influence on success or failure of system implementation from the side approval. It is hoped that with the development of this theory problems that exist when implementing the ERP system can be identified so that we can know how to do it system implementation can be successful in companies and minimize the possibility of failure.

2. LITERATURE REVIEW

A. Enterprise Resource Planning

ERP is useful software for help the development of the company's business processes so that become more effective and efficient by providing complete integration of all related data with information systems[16][17]. The ERP system consists of: of the many modules which of course have different functions different for each module. All functional areas existing in an organization or company can integrated with the ERP system and is important for a organizations to pay attention to the probability of implementation ERP to minimize the possibility of failure due to ERP is a complex system. In the ERP system, there is a collection of business applications called modules, such as Financial Accounting, sales, Materials Management, Human Resource Management (HRM). Supply Chain Management (SCM), and others. Each module is responsible for automating a business process activity in an organization [18][19].

B. Means of Engagement

Means of Engagement can be described as an effective engagement method that aims to increase the measurement of the success of the product that will later be released. By using the Means of Engagement model, companies can understand the requirements that must be met to implement ERP software. so that we can reduce the possibility of failure. Means of Engagement has four levels of the model, namely adoption, approval, acceptance, and agreement [20][21].

C. Appraisal Theory of Emotion

According to [22] appraisal theory is an approach that focuses on how individuals assess or evaluate a situation. Appraisal theory explains that when someone is in a situation, they automatically make an assessment of how the situation is relevant and significant for their goals, desires, and other values. Based on this assessment, certain emotions are triggered. In this context, appraisal refers to an individual's cognitive interpretation of the situation they face[23][24]. Based on this assessment, certain emotions are triggered. In this context, appraisal refers to an individual's cognitive interpretation of the situation they face. There are 4 main dimensions in the appraisal theory of emotion, namely:

1. certainty of outcome This dimension explains the extent to which an individual's beliefs about the outcome or consequences of a situation can influence emotional responses.
2. Causality: This dimension discusses how individuals assess the cause of a situation, whether it is caused by internal factors or external factors and whether the situation was intentional or not.
3. motive consistency This dimension discusses the consistency of a situation. If the situation supports the achievement of a person's goals or motives, positive emotions will be more likely to emerge. However, if situations threaten or hinder the achievement of motives, then negative emotions can arise.
4. control potential This dimension discusses the extent to which an individual has control or the ability to overcome the situation or event they are facing.

D. Cognitive Motivational Emotive

The cognitive motivational relational theory discusses a complex interaction between cognitive, motivational and emotional aspects[25]. According to [26], the main aim of cognitive motivational relational theory is to explain how individuals overcome a situation and how this assessment can influence their emotional response. There are three main dimensions discussed in the cognitive motivational relational theory, namely situational construal (Cognitive) which is a combination of environmental aspects with goals/beliefs which discusses how individuals understand a situation and how to respond to it, the appraisal dimension (Motivational) which consists of several aspects of appraisal outcome with the main aspect being affect discusses how to assess the situation at hand and the coping (relational) dimension which discusses how Individuals can provide coping strategies related to a problem situation.

E. Diffusion of Innovation

The diffusion of innovation theory developed by Everett Rogers is a theory that discusses how new innovations and technologies spread within a certain population or social sphere. Through the book diffusion of innovation, [27] offers the concept of diffusion of innovation including the speed of a social system in accepting new ideas offered by an innovation. The end result of this theory is that someone can adopt an innovative idea, habit, or product. Until now, the theory of diffusion of innovation has been widely used in various research fields, including information technology, education, sociology and other fields. In the diffusion of innovation theory, there are three main concepts, namely diffusion, innovation, and adoption[28]. Diffusion is the process of communication of an innovation to existing units in a social system, while innovation is an idea, concept, or product that is perceived as something new by individuals, and adoption is individuals doing something different from what previously existed. The key to adoption discussed in the diffusion of innovation is understanding ideas, ideas, or products as something new and innovative[29][30][31].

3. RESEARCH METHODS

A. Conceptual Model

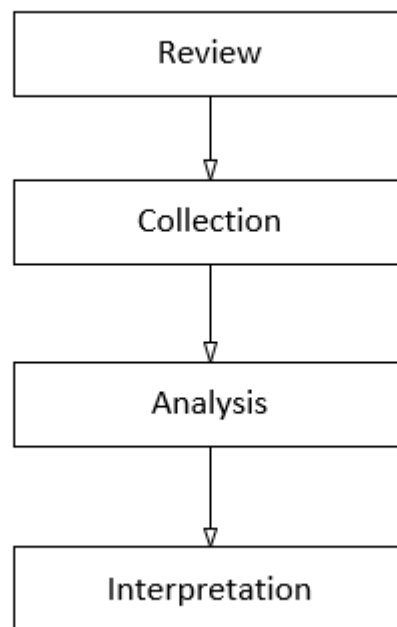


Figure 1. Conceptual Model

Description of figure 1 as follows:

1. **Review**
The review method used in this research is traditional literature review. Traditional literature review is a method or approach used to review or analyze existing literature on a particular topic. According to [10] Traditional literature review is a written assessment of what is already known about a particular topic. This literature review is an important process in the research process and helps form a theoretical framework and focus for the research to be conducted.
2. **Collection**
To collect data in this research, quantitative research was used with research instruments in the form of a questionnaire survey via Google Form using data samples obtained from questionnaires whose respondents were staff from PT. Glico Indonesia and in the form of questions asking respondents' opinions regarding factors related to approval for the use of ERP products.
3. **Analysis**
The type of analysis that will be carried out in this research is exploratory analysis. This research is an initial, tentative analysis of a new topic, namely the development of the Means of Engagement (MOE) model, especially at the approval level.
4. **Interpretation**
At the peak of the tree or interpretation, the researcher will carry out extraction and assimilation. The assimilation interpretation method in quantitative research focuses on integrating quantitative data with a predetermined theoretical framework. In this method, researchers attempt to compare data with existing theory or knowledge in order to strengthen or support understanding of the research topic.

B. Research systematics

Research systematics are used as an illustration of what stages will be carried out during the research. This research will be carried out in 4 research stages, namely the review stage, data collection, analysis and interpretation as shown in Figure 2

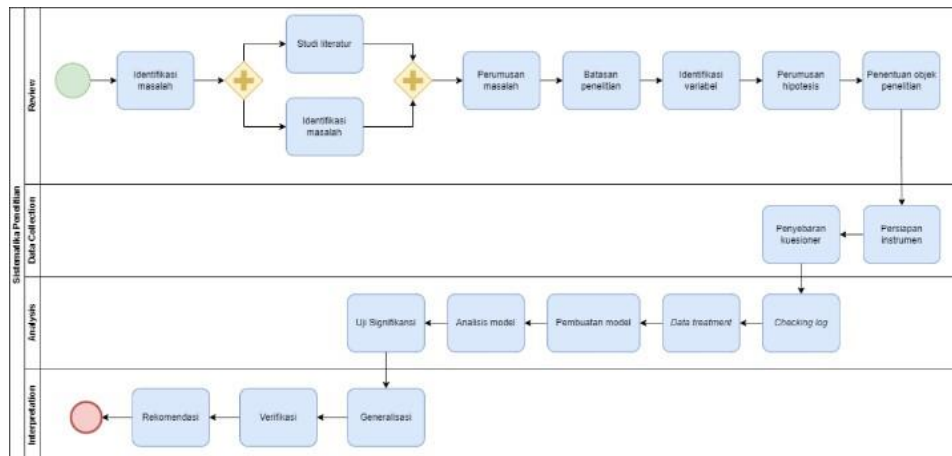


Figure 2. Research systematics

The review stage goes through several stages, namely problem identification, literature study, problem formulation, research objectives, research problem boundaries, research benefits, variable identification, hypothesis formulation, and determining research objects. Data collection went through several stages, namely instrument preparation, validation testing. instrument, finalizing the instrument, determining the sample, and distributing the questionnaire. In the analysis through the stages of checking logs, data treatment, model creation, model analysis, and in the interpretation stage through the stages of generalization, verification and recommendations.

C. Framework

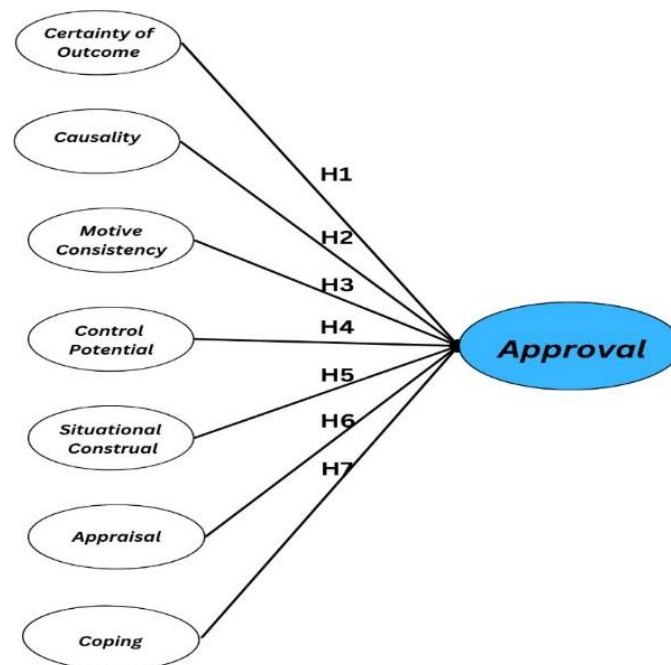


Figure 3. Framework

The image above shows the framework that will be used in this research along with the relationships whose significance will be tested at the analysis stage

3 RESULTS AND DISCUSSIONS

A. Model Measurement (Outer Model)

1. Convergent Validity Test

Table 1. Convergent Validity Test

Variable	Indicator	Outer Loading Value	Information
Approval	AP1	0,750	Valid
	AP2	0,671	Valid
	AP3	0,679	Valid
	AP4	0,292	Not Valid
	AP5	0,771	Valid
	AP6	0,744	Valid
	AP7	0,526	Not Valid
	AP8	0,755	Valid
Certainty of Outcome	CO1	0,022	Not Valid
	CO2	0,633	Valid
	CO3	0,768	Valid
	CO4	0,774	Valid
	CO5	0,834	Valid
	CO6	0,824	Valid
Causality	CA1	0,820	Valid
	CA2	0,703	Valid
	CA3	0,805	Valid
	CA4	0,906	Valid
	CA5	0,436	Not
Motive Consistency	MC1	0,690	Valid
	MC2	0,589	Tidak valid
	MC3	0,931	Valid
	MC4	0,832	Valid
Situational Construal	SC1	0,652	Valid
	SC2	0,699	Valid
	SC3	0,453	Not Valid
	SC4	0,710	Valid
	SC5	0,421	Not Valid

Table 1 shows that each variable has an invalid indicator because it does not meet the criteria for an outer loading value greater than 0.60. In the approval variable with the AP indicator code, precisely the indicators AP1, AP2, AP3, AP5, AP6, and AP8 are declared valid because they have an outer loading value greater than 0.6, while the AP4 and AP7 indicators are invalid because they have an outer loading value of less than 0.6. below 0.6, precisely AP4 = 0.292, and AP7 = 0.526. Furthermore, the certainty of outcome variable with the CO indicator code, specifically the CO2, CO3, CO4, CO5 and CO6 indicators, is valid because it has an outer loading value greater than 0.6, while the CO1 indicator is invalid because it has an outer loading value of 0.022. The causality variable with the CA indicator code, to be precise, the CA1, CA2, CA3, CA4 indicators are declared valid because they have an outer loading greater than 0.6, while the CA5 indicator is invalid because it has an outer loading value of 0.436. The motive consistency variable with the MC indicator code, specifically MC1, MC3, and MC4, is declared valid because it has an outer loading greater than 0.6, while the MC2 indicator is declared invalid because it has an outer loading value of 0.58.

In the situational construal variable with the indicator code SC, to be precise, the indicators SC1, SC2, SC4, and SC6 are declared valid because they have an outer loading greater than 0.6, while the indicators SC3 and SC5 are declared invalid because they have an outer loading below 0.6, to be precise, SC3 = 0.453, and SC5 = 0.421. In the control potential variable with the CP indicator code, to be precise, the CP1, CP2 and CP4 indicators are declared valid because they have an outer loading greater than 0.6 and the CP3 indicator is declared invalid because they have an outer loading of 0.552. In the appraisal variable with the APP indicator code, to be precise, the APP1 and APP3 indicators are declared valid because they have an outer loading greater than 0.6 and the APP2 and APP4 indicators are invalid because they have an outer loading of 0.304 and 0.557. And in the coping variable with the COP indicator code, all variables are declared valid because they have an outer loading value above 0.6. This research uses validity criteria, namely an outer loading value of 0.60. The next step is to carry out the process of removing invalid indicators or what is called the trimming process. The trimming process is carried out by removing invalid indicators according to the outer loading value in table 2. The trimming results in this study are as shown in table 2.

Table 2. Trimming Results

Variable	Indicator	Outer Loading Value
<i>Approval</i>	AP1	0,776
	AP2	0,627
	AP3	0,623
	AP5	0,805
	AP6	0,770
	AP8	0,785
<i>Certainty of Outcome</i>	CO2	0,634
	CO3	0,789
	CO4	0,770
	CO5	0,839
	CO6	0,819
<i>Causality</i>	CA1	0,844
	CA2	0,719
	CA3	0,801

Apart from being seen from the outer loading value of each indicator, convergent validity can be seen from the average variance extracted (AVE) value. The average variance extracted (AVE) value is declared valid if it has a value > 0.50 and can be seen in table IV-3 showing the AVE value of each variable in this research model is declared valid because it has a value > 0.50 .

Table 3. AVE Results

Variable	Indicator	Average Variance Extracted (AVE)
<i>Approval</i>	AP1	0,540
	AP2	
	AP3	
	AP5	
	AP6	
	AP8	
<i>Certainty of Outcome</i>	CO2	0,598
	CO3	
	CO4	
	CO5	
	CO6	
<i>Causality</i>	CA1	0,683
	CA2	
	CA3	
	CA4	
<i>Motive Consistency</i>	MC3	0,815
	MC4	
<i>Situational Construal</i>	SC1	0,500
	SC2	
	SC4	
	SC6	
<i>Control Potential</i>	CP1	0,828

		CP2	0,850
		CP4	
	Appraisal	APP1	
		APP3	
Coping		COP1	0,723
		COP2	
		COP3	
		COP4	

B. Structural Model Test (Inner Model)

The next step is testing using the Partial Least Square method after the model in this research meets the requirements for the outer model test, namely carrying out a structural model test (inner model). The following is a picture of the structural model for testing the inner model, namely assessing the path coefficient and testing the coefficient of determination.

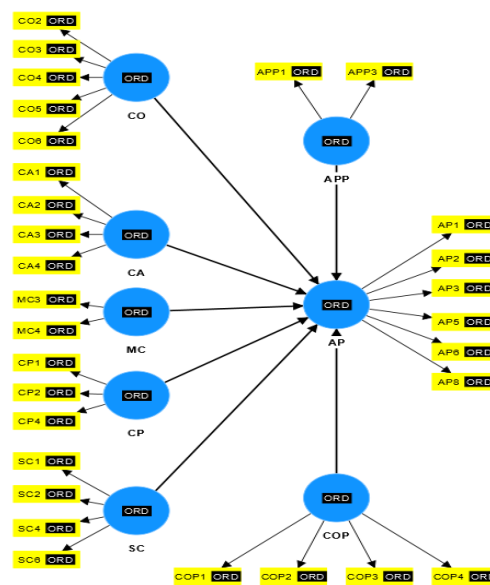


Figure 4. Testing Structural Model

1. Coefficient of Determination Test

Table 4. Coefficient of Determination Test

Variable	R-square
Approval	0,859

The table above shows the results of the coefficient of determination in this research model. Based on this table, it is found that the R-square value for the approval variable is 0.859. This value shows that the variables certainty of outcome, causality, motive consistency, situational construal, control potential, appraisal, and coping are able to explain the approval variable by 85% (100% - 85% = 15%) the rest is influenced by factors outside this research model.

2. Path Coefficient

Tabel 5. Path Coefficient

Connection	β	Information
Appraisal – Approval	0,235	Positive
Causality – Approval	-0,427	Negative
Certainty of Outcome –Approval	0,397	Positive

Coping – Approval	0,623	Positive
Control Potential - Approval	0,031	Negative

Based on the table above, it can be seen that if the path coefficient value is less than 0.1 then the relationship between variables is negative and if the path coefficient value is greater than 0.1 then the relationship between variables is positive. The following is an explanation of the relationship between each variable. The table above shows the results of the effect size test with

1. The appraisal variable has a positive influence on the approval variable because the path coefficient value for the appraisal variable with approval is 0.235.
2. The causality variable has a negative influence on the approval variable because the path coefficient value for the causality variable with approval is -0.427.
3. The Certainty of Outcome variable has a positive influence on the approval variable because the path coefficient value for the appraisal variable with approval is 0.397.
4. The Coping variable has a positive influence on the approval variable because the path coefficient value for the appraisal variable with approval is 0.623.
5. The Control Potential variable has a negative influence on the approval variable because the path coefficient value for the causality variable with approval is 0.031.
6. The Motive Consistency variable has a negative influence on the approval variable because the path coefficient value for the causality variable with approval is -0.365.
7. The Situational Construal variable has a positive influence on the approval variable because the path coefficient value for the appraisal variable with approval is 0.345.

4 CONCLUSION

This research is the development of the Means of Engagement (MOE) model in product implementation at the approval level. For this research, the product in question is an ERP system. Where before product implementation is carried out, it is necessary to pay attention to several stages, namely agreement, acceptance, approval, and adoption, which are the four levels of Means of Engagement and the main focus of this research is on the approval level. This research was conducted on 42 respondents at the company PT. Glico Indonesia and for data processing uses the smartPLS 4 application. Based on the analysis that has been carried out, the following conclusions can be drawn.

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