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Analysis of the Successful Implementation of SAP Business One in PT. P.R. Indonesia

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Abstract

Along with the development of information technology, more companies will need to apply information technology to their operations, especially for data processing. One of the applications of information technology is through Enterprise Resource Planning (ERP) systems such as SAP Business One. The SAP Business One system is an affordable ERP for SMEs that can be integrated into every business process and tends to be easy to use. PT. P.R. Indonesia has been implementing the SAP Business One system for 2 years but they still faced some obstacles such as bugs, error messages that cannot be understood by the user, reports generated by the system that require customization, and recommendation information that does not address the user's wants. The obstacles experienced by PT. P.R. Indonesia has prompted an analysis regarding the success of ERP implementation at PT. P.R. Indonesia. To measure and determine the success of the implementation of an information system, the determinants of successful implementation need to be analyzed. Thus, this study used the Structural Equation Modeling (SEM) method to analyze data. The SmartPLS software version 3.3.9 was used to process the data. Based on the calculations, the factors that contribute the most are implementation with the Accelerated Implementation Program (AIP) method with a value of 0.734, the Business Process Reengineering (BPR) factor with a value of 0.326, and the Vendor Support (DV) factor of 0. 354.

Keywords
success factors; ERP; implementation; accelerated implementation program

I. Introduction

ERP implementation is often only associated with large companies and conglomerates. According to Candra (2012) ERP implementation is costly and requires extensive processes due to the complexity of the tasks to be managed by the system. The system also involves several stakeholders and requires considerable knowledge during its implementation. Therefore, most small and medium-scale (SME) companies would face limitations in terms of finance and resources for implementing a system. While some SMEs that have implemented the system tends to not integrate it with all of their business processes. According to the Ministry of Cooperatives and Small and Medium Enterprises in 2018, there are 64,194,057 businesses in Indonesia with a contribution to the Gross Domestic Product (GDP) of 57.8%.

Based on this potential, SMEs need a system that can provide convenience and also be easily integrated into their business processes. One of the many ERP information systems for SMEs is SAP Business One. The SAP Business One system is an affordable ERP for SMEs because it can be integrated into all business processes, and tends to be easy to use. PT. P.R. Indonesia chose SAP Business One because several of its partners in Indonesia are ready to utilize this system. Moreover, the SAP Business One system also suits the company's business needs.

After using the SAP Business One system for 2 years, the system still had several obstacles such as bugs, error messages that cannot be understood by the user, reports that still need to be customized, and recommendation information that does not address the user's wishes. Thus, an analysis of the ERP system implementation so far is needed.

According to (Huang, 2019), several factors can be measured to determine the success of implementation, including a Clear Understanding of Strategic Goals of Implementing an ERP System, Top Management Support, Project Management, Vendor Support, Consultant Skill, Data Accuracy, Budgeting, ERP Quality, Task Force Team Competence, Effective Communication, Internal Readiness to Change, Adequate Planning, and Training.

Based on the aforementioned problems, the author will determine which factors can affect the success of ERP implementation and how they do so. This research process was only carried out at PT. P.R. Indonesia, the implementation guidelines that the author used referred to the Accelerated Implementation Program method, and the respondents were employees who worked at PT. P.R. Indonesia.

II. Review of Literature

2.1 Enterprise Resource Planning

According to Laudon (2014) Enterprise Resource Planning is a software system that is useful for integrating business processes in manufacturing and production, finance and accounting, sales and marketing, and human resources. There are 5 modules in ERP:

a. Production Planning

This is a module related to process planning such as capacity planning, materials, production implementation, bill of materials, and movement of goods so that the production process can be more controlled.

b. Integrated Logistics

This is a module that allows for collaboration, planning, implementation, and the coordination of networks from the supply chain, from producers to consumers.

a) Accounting and Finance
b) Human Resources
c) Sales Distribution and Order Management.

According to (Bajahzar, 2012) the benefits of implementing ERP include improved work efficiency, reporting, communication, data integrity and security, standardized processes, and increased customer satisfaction.

1. ERP SAP

SAP has 3 types of products, namely SAP Business Suite (R3), SAP All in One (A1), and SAP Business One (B1). SAP Business One is an affordable solution for running the business processes of small and medium-sized companies. SAP Business One covers finance, sales, customer relationship management, supply chain management, inventory, purchasing,

small-scale manufacturing, project tracking, planning, and reporting. According to Wolfgang (2009) SAP Business One is an ERP software that was created to provide real-time and integrated access to company information to support its operations. As a fairly simple but powerful solution, it provides a direct and complete view of all business operations and customer activities.

2.2 Success Factors in ERP Implementation

The determinants of success include the activities necessary to ensure the success of a business. The determining factors of success for ERP projects are defined by (Finney, 2007) as a reference for any conditions or elements that are deemed necessary for ERP implementation to be successful.

a. Top Management Support

Top management must be able to create an awareness of the system among their employees in the form of guidance and direction. They would need to highlight how successful ERP implementation can increase the effectiveness of the company and make it easier for an organization to achieve its goals (Winahyu, 2005). The role of top management in ERP implementation consists of developing an understanding of their capabilities and limitations as a leader, setting reasonable time and budget allocations necessary for ERP systems, and demonstrating commitment (Umble, 2003).

b. Effective Project Management

Effective project management is an activity or process of organizing a project that uses the right methodology, is in line with the company's vision, and sets realistic time limits (Sum, 1997). Research conducted by Zhang, (2002) showed that effective project management must have formal planning, the establishment of a realistic time limit, an experienced project leader, and the existence of regular meetings to monitor the status of the project. Thus, all of these elements are needed to improve the success of ERP implementation.

c. Business Process Reengineering

As a company’s main goal is to become one of the strong competitors in the market, they can do so by implementing Business Process Reengineering (BPE) and combining strategies to promote business innovations (Hammer, 1993). BPR consists of the rethinking and redesigning of business processes to improve the company’s performance in terms of cost, quality, speed, and service. According to Yusuf (2004), an organization should redesign its processes to utilize the full advantage of an ERP system. However, if the organization's processes do not align with the ERP, then the organization could either modify its ERP system or change its processes.

d. Data Accuracy

Data accuracy may be one of the components that affect the success of ERP implementation. Research conducted by Jhakaria using the Interpretive Structural Modeling methodology stated that low data accuracy and lack of support from top management are the roots of failures in ERP implementation.

Data accuracy could be improved by implementing Data Quality Management (DQM). In a study done by (Glowalla, 2014) where they interviewed 15 people of high positions in companies with 500 – 10 thousand employees, they found that companies that do not implement DQM when implementing ERP had difficulties in interpreting data. This

is because the data generated by ERP tends to be used for a wide variety of tasks and systems.

e. Education and Training

Education and training are important factors that can support the successful implementation of a company's system. According to (Maditinos, 2011) the process of knowledge transfer from consultants plays a more important role in the successful implementation of the system. Furthermore, F. Fui (2007) argued that adequate training can help improve the success of ERP implementation. Education has a very strategic role in determining the direction of the forthcoming of the nation's quality of community knowledge (Musdiani, 2019). Research by Sum et al. (1997), in T.R Winahyu (2005), also stated that education and training must be considered to improve the success of ERP implementation. Thus, education and training are important for explaining ERP concepts and logic, providing hands-on training, and distributing simple usage guidelines for trainees.

f. Vendor Support

Cooperation with vendors and customers is very important to the success of ERP projects. A good fit between the vendor's software and the organization's users is positively related to the success of the software implementation package (M.A. Janson, 1996). Maximum vendor support could manifest in the form of quick responses to all problems that arise, providing the service of consultants who have good knowledge of unique business processes, and good service quality will. These elements will increase the success of ERP implementation.

2.3 Accelerated Implementation Program

Each vendor tends to have its methods when implementing a system for their customers. One method that consultants use when implementing sap is the accelerated implementation program (aip) method. This method is useful as it involves all parties in the implementation. Thus, everyone can contribute effectively and efficiently. the stages in aip are project preparation, business blueprint, project realization, final preparation, and the go-live support phase (Wolfgang, 2009).

III. Research Method

3.1 Research Framework

Based on the literature review, the author will analyze the factors that affect the success of ERP implementation in PT. P.R. Indonesia. The following is the theoretical framework that was used in this study.

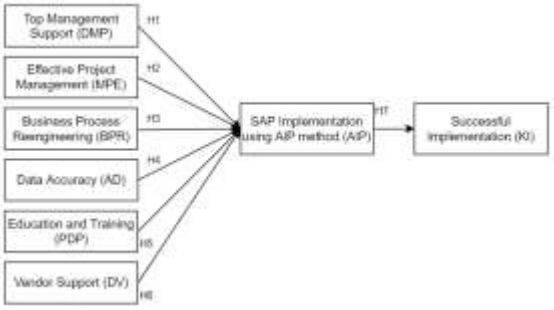

Figure 1. *Conceptual Research Model*

3.2 Hypothesis

The following is a hypothesis formulated based on the formulation of the problem and the theoretical framework created:

$KI = \beta_{10} + \beta_{11}AIP + \varepsilon_1$ ……..... (1)

$AIP = \beta_{20} + \beta_{21}DMP + \beta_{22}MPE + \beta_{23}BPR + \beta_{24}AD + \beta_{25}PDP + \beta_{26}DV + \varepsilon_2$ ……...(2)

H_0: $\beta_1 = 0$
H_A: $\beta_A \neq 0$
Notes:

KI = Successful Implementation
AIP = SAP Implementation using AIP Method
$B_{10,20}$ = Constant
β_A = Regression Coefficient
DMP = Top Management Support
MPE = Effective Project Management
BPR = Business process reengineering
AD = Data Accuracy
PDP = Education and Training
DV = Vendor Support
$E_{1,2}$ = Error Coefficient

H1: Top management support has an influence on implementation using the AIP method.
H2: Effective project management has an influence on implementation using the AIP method.
H3: Business Process Reengineering has an influence on implementation using the AIP method.
H4: Data accuracy has an influence on implementation using the AIP method.
H5: Education and training have an influence on implementation using the AIP method.
H6: Vendor support has an influence on implementation using the AIP method.
H7: SAP implementation using the AIP influences the Success of the Implementation.

3.3 Variable Measurements

The following are the variables used in this study:

Table 1. Variable Measurement

Variable	Dimension	Indicator	Sources
Top Management Support (DMP)	DMP1: User has capabilities	Participating users can operate the system.	(M. Amini, 2013), (S. Y. Huang, 2019), (E. Yassien, 2017), (D. Maditinos, 2011), (S. AlMuhafith, 2020)
	DMP2: Compensation	Management provides overtime compensation to the users involved.	
	DMP3: Reward	Management facilitates user needs.	
Effective	MPE1: Have a	The user knows the	

Project Management (MPE)	purpose	purpose of the implementation.	
	MPE2: Schedule	The schedule is mutually agreed upon.	
	MPE3: Output	The output quality is appropriate.	
Business Process Reengineering (BPR)	BPR1: Efficiency	Able to eliminate activities that do not have a direct impact on implementation.	
	BPR2: Business Process	Able to optimize business processes.	
	BPR3: Integration	Able to integrate users' jobs.	
Data Accuracy (AD)	AD1: Data Completeness	The data generated by the system is complete.	(M. Amini, 2013), (S. Y. Huang, 2019), (E. Yassien, 2017), (D. Maditinos, 2011), (S. AlMuhafith, 2020), (P. Glowalla, 2014)
	AD2: Data Relevance	The data generated meets the needs of employees.	
	AD3: Data Quality	The resulting data reflects the actual state of affairs.	
Education and Training (PDP)	PDP1: Scenario	Users can provide the problems faced before the implementation.	
	PDP2: Problem Solving	The consultant can provide a solution to the problem.	
	PDP3: Dedicated Database	The presence of a dedicated database for exercises.	
Vendor Support (DV)	DV1: Qualified Consultants	Vendors provide consultants who understand business processes at PT. P.R. Indonesia.	
	DV2: Solution	Provide fast and precise solutions to the problems that users face.	
	DV3: Active role	Consultants play an active role during the implementation process.	
Implementation using the Accelerated Implementation Program method (AIP)	AIP1: Time	The time required for implementation follows the predetermined timeline.	(M. Amini, 2013), (S. Y. Huang, 2019), (E. Yassien, 2017), (D. Maditinos, 2011), (S. AlMuhafith, 2020)
	AIP2: Scope	The information obtained during the implementation stage	

		can facilitate the users' and companies' needs.	
	AIP3: Reliability	The system is used and can be relied on by users in their daily work.	
Successful Implementation (KI)	KI1: User Needs	Users are helped by the company's implementation of this system.	(S. AlMuhayfith, 2020)
	KI2: Recommendations	Users recommend the system to others.	
	KI3: Meets Expectations	Users are satisfied with the results of the system implementation.	

3.4 Data Collection

This study used primary and sequential data from PT. P.R. Indonesia. The primary data in this study were obtained through the following methods:

1. Observation of the implementation process. The researchers played a direct role in the implementation process as consultants and analyzed the needs and differences between the old system with the SAP Business One system.
2. Questionnaires were distributed to all relevant parties who participated in using the ERP system at PT. P.R. Indonesia. This questionnaire data aimed to provide supporting data to the observations. The scale used in the questionnaire was the Likert scale with a score of 1 to 5. The questionnaires were distributed through Google form.

The population of SAP Business One ERP system users is 60 people, which includes owners, staff, and managers from each division.

Table 2. User Population

Module	User
Purchasing	9
Sales	28
Finance	8
Inventory	10
All module	5
Total	60

3.5 Data Analysis Method

According to Sugiyono (2015), before the questionnaire is distributed, it should be tested for validity and reliability. The validity test was conducted to determine whether the questions/statements in the questionnaire are valid, while the reliability test was done to determine the instrument's level of consistency.

3.6 Measurement Model

a. Validity Test

The Validity Test used in this study was a convergent validity test and a discriminant validity test. The criteria for measuring convergent validity testing were determined by looking at the value of outer loading and Average Extracted Variance

(AVE). An indicator can be said to be valid if it has a Loading Factor value of above 0.50 and if it has a lower value, then the indicator needs to be eliminated except if it has another strong measurement base. Whereas acceptable AVE values are above or equal to 0.5 (J.F. Hair, 2017).

b. Reliability Test

Reliability was determined by conducting the Cronbach's Alpha and Composite Reliability tests. The purpose of these tests was to find out the degree of consistency of the measuring instrument. A valid value for a Cronbach's Alpha test is if the tested factor has a value above 0.6 and a valid value for a Composite Reliability test is if the tested factor has a value above 0.7.

3.7 Structural Model

a. Coefficient of Determination Test (R-Square)

To measure the model's ability to explain the variations of the bound variables, R-Square testing is required. Sugiyono (2015) has mapped a guideline table to determine the level of relationship based on the magnitude of the coefficient interval.

Table 3. Coefficient Interval

Coefficient Interval	Relationship Level
0.000 – 0.199	Very Weak
0.200 – 0.399	Weak
0.400 – 0.599	Medium
0.600 – 0.799	Strong
0.800 – 1.000	Very Strong

b. Hypothesis Test

The data obtained in this study were analyzed using a multiple linear regression model. This was done to determine the influence of independent variables on dependent variables. Statistical analysis was conducted using Structural Equation Modelling (SEM) so that the differences of each variable could be obtained. Testing and drawing conclusions on the data used the SMART-PLS software. This software was chosen because it can efficiently test a wide range of samples.

IV. Discussion

4.1 Data Collection

The data used in this study was obtained from the results of the questionnaires distributed online using Google Forms through several social media platforms such as Instagram, WhatsApp, and Facebook. The questions contained in the questionnaire included email addresses, gender, and length of employment at the company, as well as 24 research questions. A total of 60 respondents filled out and submitted the questionnaire.

4.2 Descriptive Statistics

After the questionnaire was distributed, the following are the demographic results of the respondents' profiles from this study:

Table 4. Respondents' Profile by Gender

Category	Participants	Percentage
Male	43	72%
Female	17	28%
TOTAL	60	100%

Based on table 4, most respondents were male (72%) and the remainder were female (28%). For the length of employment, 37% of employees had a work span of 1-2 years and the smallest percentage was 13% for workers with a work span of less than 1 year.

Table 5. Profile of Respondents Based on Experience

Category	Participants	Percentage
< 1 Year	8	13%
1 – 2 Years	22	37%
3 – 4 Years	12	20%
> 5 Years	18	30%
TOTAL	**60**	**100%**

4.3 Descriptive Analysis Results

The explanation of the questions on the questionnaire is contained in the results of the descriptive analysis. The questions are grouped based on each of the following 8 research variables: Top Management Support, Effective Project Management, Business Process Reengineering, Data Accuracy, Education and Training, Vendor Support, Implementation with Accelerated Implementation Program Methods, and Successful Implementation. The questionnaire given to respondents used a 5-point Likert scale with the following details:

1. = Strongly Disagree
2. = Disagree
3. = Neutral
4. = Agree
5. = Strongly Agree

Table 6. Respondents' Answers

Variables	Indicators	Code	Weighted Average					
			1	2	3	4	5	Average
Top Management Support (DMP)	User has capabilities	DMP1	0.017	0	0.3	1.468	2.585	4.37
	Compensation	DMP2	0.033	0.234	0.75	0.932	1.835	3.784
	Reward	DMP3	0	0.1	0.351	1.668	2.085	4.204
Effective Project Management (MPE)	Have a purpose	MPE1	0.017	0	0.15	1.468	2.835	4.47
	Schedule	MPE2	0.017	0.066	0.45	2.068	1.415	4.016
	Output	MPE3	0	0.034	0.801	1.868	1.25	3.953
Business Process Reengineering (BPR)	Efficiency	BPR1	0	0.034	0.351	1.532	2.415	4.332
	Business Process	BPR2	0	0.066	0.249	1.668	2.335	4.318
	Integration	BPR3	0	0.034	0.249	1.468	2.665	4.416
Data Accuracy (AD)	Data Completeness	AD1	0.017	0.066	0.351	1.868	1.835	4.137
	Data Relevancy	AD2	0.017	0.034	0.399	1.8	1.915	4.165

	Data Quality	AD3	0	0	0.399	1.668	2.25	4.317
Education and Training (PDP)	Scenario	PDP1	0.033	0.034	0.45	1.668	1.915	4.1
	Problem Solving	PDP2	0	0.066	0.45	1.6	2.085	4.201
	Decicated Database	PDP3	0.017	0.066	0.501	1.6	1.915	4.099
Vendor Support (DV)	Qualified Consultants	DV1	0.017	0.034	0.45	1.532	2.165	4.198
	Solution	DV2	0.017	0.134	0.351	1.868	1.665	4.035
	Active Role	DV3	0	0.034	0.249	1.868	2.165	4.316
Accelerated Implementation Program (AIP)	Time	AIP1	0	0.066	0.699	1.732	1.5	3.997
	Scope	AIP2	0	0.066	0.3	2	1.835	4.201
	Reliability	AIP3	0.017	0	0.351	1.668	2.25	4.286
Successful Implementation (KI)	User Needs	KI1	0	0.034	0.201	1.732	2.415	4.382
	Recommendations	KI2	0	0.066	0.3	1.668	2.25	4.284
	Meets Expectations	KI3	0	0.034	0.3	1.6	2.415	4.349
							Total	100.93
							Average	4.205

4.4 Measurement Model Test Results

In this study, data analysis was conducted using the Structural Equation Modeling (SEM) method. The data was processed using the SmartPLS software version 3.3.9. The research model used is shown in Figure 2.

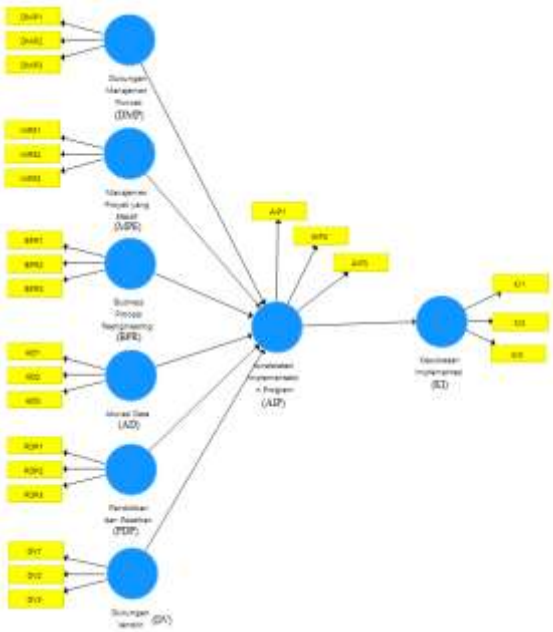

Figure 2. *Research Model*

4.5 Outer Model

a. Convergent Validity Test Results

Figure 3 exhibits the result of the outer model calculations done using SmartPLS software version 3.3.9.

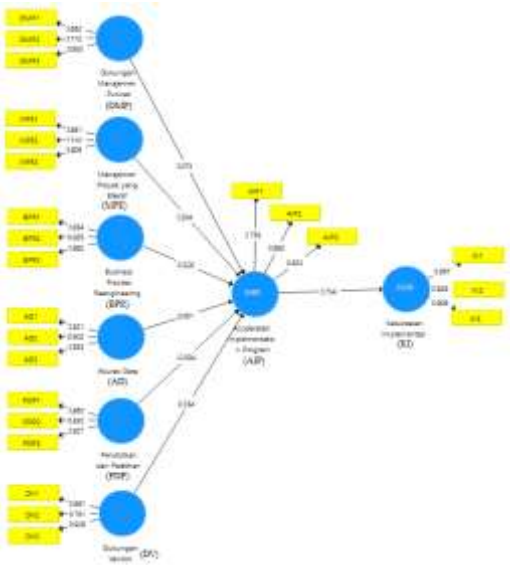

Figure 3. *Convergent Validity Calculation Results*

The results of the convergent validity calculation test can be seen in Figure 3. Based on these results, all Loading Factors have met the minimum value limit of 0.5. The following table shows the convergent validity test results, namely the Value of Loading Factor (LF), Cronbach's Alpha (CA), Composite Reliability (CR), and Average Variance Extracted (AVE).

Table 7. Convergent Validity Test Results

Variabel	**Kode**	***Loading Factor***	***Cronbach's Alpha***	***Composite Reliability***	***AVE***
Top Management Support (DMP)	DMP1	0.863	0.751	0.852	0.659
	DMP2	0.710			
	DMP3	0.853			
Effective Project Management (MPE)	MPE1	0.861	0.616	0.782	0.555
	MPE2	0.518			
	MPE3	0.809			
Business Process Reengineering (BPR)	BPR1	0.854	0.865	0.918	0.789
	BPR2	0.926			
	BPR3	0.882			
Data Accuracy (AD)	AD1	0.821	0.828	0.894	0.738
	AD2	0.902			
	AD3	0.853			
Education and Training (PDP)	PDP1	0.860	0.790	0.877	0.704
	PDP2	0.830			
	PDP3	0.827			
Vendor Support. (DV)	DV1	0.861	0.810	0.887	0.726
	DV2	0.761			
	DV3	0.926			
Implementation using Accelerated Implementation Program method (AIP)	AIP1	0.759	0.771	0.866	0.684
	AIP2	0.883			
	AIP3	0.883			

Successful Implementation (KI)	KI1	0.667	0.663	0.813	0.593
	KI2	0.828			
	KI3	0.806			

Based on the test results in Table 7, all variables are valid because the value of Cronbach's Alpha is greater than 0.6, the value of Composite Reliability is greater than 0.7, and the value of the Average Variance Extracted (AVE) is greater than 0.5. Therefore, each variable can be declared valid and worthy of use in research.

b. Discriminant Validity Test Results

The validity of discriminants can be determined by looking at the results of the Cross Loading values of each indicator. This test allows for the comparison of the correlation values to its construct, which is greater when compared to other constructs. The following is a table of the results of the Cross Loading test.

Table 8. Cross Loading Value

	DMP	MPE	BPR	AD	PDP	DV	AIP	KI
DMP1	**0.863**	0.666	0.547	0.457	0.652	0.531	0.571	0.487
DMP2	**0.710**	0.446	0.298	0.227	0.301	0.134	0.284	0.244
DMP3	**0.853**	0.625	0.498	0.426	0.565	0.344	0.463	0.443
MPE1	0.667	**0.861**	0.640	0.395	0.595	0.559	0.670	0.585
MPE2	0.584	**0.518**	0.289	0.254	0.350	0.237	0.236	0.255
MPE3	0.452	**0.809**	0.467	0.660	0.347	0.535	0.526	0.567
BPR1	0.507	0.570	**0.854**	0.538	0.623	0.577	0.660	0.602
BPR2	0.537	0.599	**0.926**	0.576	0.605	0.687	0.688	0.813
BPR3	0.491	0.589	**0.882**	0.497	0.619	0.649	0.661	0.714
AD1	0.348	0.447	0.355	**0.821**	0.466	0.616	0.374	0.360
AD2	0.359	0.521	0.526	**0.902**	0.400	0.649	0.535	0.533
AD3	0.498	0.550	0.616	**0.853**	0.572	0.714	0.641	0.691
PDP1	0.692	0.582	0.532	0.388	**0.860**	0.470	0.519	0.356
PDP2	0.592	0.478	0.625	0.594	**0.830**	0.636	0.549	0.496
PDP3	0.446	0.428	0.584	0.434	**0.827**	0.641	0.533	0.492
DV1	0.338	0.488	0.622	0.624	0.723	**0.861**	0.600	0.589
DV2	0.440	0.521	0.544	0.749	0.470	**0.761**	0.505	0.490
DV3	0.411	0.603	0.665	0.646	0.587	**0.926**	0.769	0.741
AIP1	0.378	0.495	0.485	0.509	0.502	0.535	**0.759**	0.415
AIP2	0.509	0.576	0.668	0.593	0.594	0.676	**0.883**	0.644
AIP3	0.508	0.636	0.687	0.461	0.488	0.632	**0.833**	0.713
KI1	0.355	0.428	0.447	0.447	0.389	0.476	0.422	**0.667**
KI2	0.321	0.495	0.618	0.370	0.309	0.459	0.548	**0.828**
KI3	0.477	0.593	0.735	0.642	0.520	0.703	0.681	**0.806**

Table 8 indicates that the correlation value is greater when compared to the construct itself. Therefore, it can be concluded that the Cross Loading value has met the criteria.

4.6 Inner Model

a. Coefficient of Determination Test Results (R-Square)

R-Square testing was used to measure the capabilities of models that explain dependent variations. Table 9 exhibits this study's R-Square test results.

Table 9. R-Square Test Results

Variable	R-Square	R-Square Adjusted
Accelerated Implementation Program (AIP)	0.691	0.657
Successful Implementation (KI)	0.539	0.531

The results of the R-Square test showed that the coefficient of determination that was adjusted for the implementation variable by using the Accelerated Implementation Program (AIP) method resulted in a value of 0.657 or 65.7%. Based on these values, 34.3% of the Accelerated Implementation Program (AIP) variables can be explained by other variables and 65.7% of the Accelerated Implementation Program variables can be explained by the variables of Top Management Support (DMP), Effective Project Management (MPE), Business Process Reengineering (BPR), Data Accuracy (AD), Education and Training (PDP), and Vendor Support (DV).

For the Implementation Success (KI) variable, the adjusted coefficient of determination obtained a value of 0.531 or 53.1%. Therefore, 46.9% of the Implementation Success variable can be explained by other variables and 53.1% can be explained by the Accelerated Implementation Program (AIP) variable.

b. Hypothesis Test Results

The following is the result of a hypothesis test conducted using the SmartPLS software version 3.3.9. The calculation was conducted by bootstrapping and a significance level (p-value) of 0.05. If after testing the p-value is > 0.05 then the hypothesis is rejected and is said to have an insignificant influence. If the value of its p-value is < 0.05 then the hypothesis is accepted and is said to have a significant influence. The following are the results of hypothesis testing in this study:

Table 10. Hypothesis Test Results

	Original Sample (O)	*Sample Mean (M)*	*Standard Deviation (STDEV)*	*T Statistics (|O/STDEV|)*	*P-values*	*Results*
DMP -> AIP	0.073	0.085	0.155	0.471	0.638	Declined
MPE -> AIP	0.204	0.184	0.132	1.543	0.123	Declined
BPR -> AIP	0.326	0.283	0.143	2.272	0.024	Accepted
AD -> AIP	0.001	0.057	0.159	0.004	0.997	Declined
PDP -> AIP	-0.004	0.017	0.148	0.028	0.977	Declined
DV -> AIP	0.354	0.327	0.196	1.807	0.071	Accepted
AIP -> KI	0.734	0.733	0.069	10.683	0.000	Accepted

H1: Top management support has an influence on implementation using the AIP method

As shown in Table 12, the value of Top Management Support on the Accelerated Implementation Program is considered insignificant because the p-value exceeds 0.05 at 0.638. Thus, H1 can be categorized as rejected. It can therefore be concluded that the user's ability to operate the system, the provision of overtime compensation during implementation, and the provision of other supporting facilities for the implementation process do not have a significant influence on implementation using the AIP method. Past literature also explained that the main aspect of the support of top management is the help of parties who have good leadership skills in managing users, as well as the provision of both technical and non-technical facilities during ERP implementation.

H2: Effective project management has an influence on implementation using the AIP method

Based on Table 12, the value of Effective Project Management on the Accelerated Implementation of the Programme is considered insignificant because the p-value exceeds 0.05 at 0.123. Thus, H2 can be categorized as rejected. It can then be concluded that the user's ability to know the purpose of implementation, suitability in schedule agreements and the suitability of the data results generated by the system do not have a significant influence on ERP implementation using the AIP method.

H3: Business Process Reengineering has an influence on implementation using the AIP method

According to Table 12, the value of Business Process Reengineering on the Accelerated Implementation Program is considered significant because the p-value is less than 0.05 at 0.024. Thus, H3 can be categorized as acceptable. It can then be concluded that users agree that with the implementation of the system, their work has become easier, optimized, and the system has been well-integrated into their day-to-day work. Therefore, BRP has a significant influence on ERP implementation using the AIP method.

H4: Data accuracy has an influence on implementation using the AIP method

As shown in Table 12, the value of Data Accuracy on the Accelerated Implementation Program is considered insignificant because the p-values exceed 0.050 at 0.997. Thus, H4 can be categorized as rejected. It can therefore be concluded that the ability of the system to produce complete data that meets the users' needs, as well as the suitability of the existing data on the system with the actual situation, do not have a significant influence on ERP implementation using the AIP method.

H5: Education and training have an influence on implementation using the AIP method

Based on Table 12, the value of Education and Training on the Accelerated Implementation Program is considered insignificant because the p-values exceed 0.050 at 0.977. Thus, H5 can be categorized as rejected. It can then be concluded that the contribution of users in providing problem simulations, the ability of consultants to solve problems, and the provision of special databases for exercises from vendors do not have a significant influence on ERP implementation using the AIP method.

H6: Vendor support has an influence on implementation using the AIP method

As shown in Table 12, the value of Vendor Support on the Accelerated Implementation Program is considered insignificant because the p-value exceeds 0.050 at 0.071. However,

some literature in management and social studies uses an error of 10%. As the calculation for this result is slightly above 5%, therefore this variable is still considered influential with a significance level of 7.2% and H6 can be categorized as accepted. It can thus be concluded that the provision of consultants who understand the business process of PT. P.R. Indonesia, the provision of fast and appropriate solutions for user problems, as well as the active role of consultants during the implementation process have an influence but with a significance level of 7.2% on ERP implementation using the AIP method.

H7: SAP implementation using the AIP Method influences the Success of the Implementation

According to Table 12, the value of SAP Implementation using the AIP method on Implementation Success is considered significant because the p-value is less than 0.050 at 0.000. Thus, H7 can be categorized as acceptable. It can therefore be concluded that the accuracy of the implementation timeline, the information that users get during the implementation process, as well as the ability of the system to assist users in completing their work, can have a significant influence on the success of ERP implementation.

V. Conclusion

1. The factors that influence ERP implementation success are Top Management Support, Effective Project Management, Business Process Reengineering, Data Accuracy, Education and Training, Vendor Support, and implementation with the Accelerated Implementation Program (AIP) method. The factors that have a significant influence are Business Process Reengineering and implementation with the Accelerated Implementation Program method.
2. Based on this study's calculations, the factors that contribute the most are implementation with the Accelerated Implementation Program (AIP) method with a value of 0.734, the Business Process Reengineering (BPR) factor with a value of 0.326, and the Vendor Support (DV) factor of 0.354.

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