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Impact of Supply Chain Integration in Enterprise Resource Planning Systems that Affect Company Performance

Dhia Zalfa[1]

[1]*Binus University, Indonesia*

**Corresponding Author: Dhia Zalfa*
Email: dhia.zalfa@binus.ac.id

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Abstract

PT Sumber Graha Sejahtera, Way Kanan, Lampung often experiences unfulfilled production targets and customer demands. Many customers give complaints because the number of products sent by the company does not match the desired amount. The purpose of this study was to determine the direct effect of the ERP system on company performance, and the indirect effect of the ERP system on company performance mediated by supplier integration, internal integration, and customer integration. This research uses quantitative methods. The population in this study were all employees at PT Sumber Graha Sejahtera, Way Kanan, Lampung, totaling 340 people. The sample size was calculated using the Yamane and Isaac formula which resulted in 184 employees. Samples were taken using purposive sampling technique. The data analysis technique used is Structural Equation Modeling (SEM)-Partial Least Square (PLS). The results of the study show that ERP has a direct, significant effect on firm performance. In addition, ERP has no significant effect on firm performance through supplier integration, internal integration and customer integration. PT Sumber Graha Sejahtera must improve the management of management resources well, increase performance improvement, and build business innovation, so that corporate decision making can be effective for all related parties. With the implementation of good resource planning, the company will no longer receive complaints from customers.

Introduction

Today's business organizations face a more complex and competitive environment than ever before. The market is becoming more transparent, driven by customers, and in general, the speed of business dynamics is changing very quickly (Mubarik et al., 2019). These developments have greatly influenced the way in which business supply chains are managed. This is because the relevant entity for analyzing the potential for business success is no longer just competition between companies, but rather the organization's supply and delivery chains. Therefore, an efficiently and effectively organized supply chain is one of the main sources of competitive advantage for companies. Tonsakun-aree et al. (2020) are of the view that the efficiency and effectiveness of a supply chain depends exclusively on its level of integration. Therefore, it is very important for companies to integrate supply chains in order to achieve sustainable competitive advantage.

Supply chain integration can be defined as inter- and intra-organizational collaborative management of strategic, tactical and operational business processes to achieve effective and efficient flow of products, information and funds to provide maximum value to end customers at the lowest cost and expense (Vasso et al., 2018).

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There are three dimensions of supply chain integration, namely supplier integration, internal integration, and customer integration. Jagoda & Samaranayake (2017) explain that internal integration within a company allows companies to quickly share information between cross-functional departments to improve response to change. The company's internal integration provides excellent communication and collaboration between synchronization processes in meeting customer needs, and synchronization with suppliers in procuring materials. Internal integration is very important for customers. The level and quality of internal integration influences a company's position in the eyes of customers. Meanwhile, supplier and customer integration refer to strategic information sharing, joint planning and collaboration between the focal organization and its upstream suppliers and downstream customers in managing synchronized processes (Vasso et al., 2018). The higher the supply chain integration of a company, the better the company's performance (Tarigan et al., 2021).

Conceptually, the goal of supply integration is to achieve cost efficiency and delivery effectiveness across the supply chain, while creating value for customers. Organizations with greater supply chain integration will benefit from superior performance outcomes (Vasso et al., 2018).

ERP systems allow companies to build internal integration between departments and external integration with suppliers and customers (Tarigan et al., 2021). Integration allows companies to reduce production costs by collaborating with suppliers and customers. The implementation of an ERP system by a company provides an overview of the company's internal conditions by providing regular reports on the availability of raw materials, which ultimately allows suppliers to provide the company's needs.

Al-Hadi & Al-Shaibany (2017) explained that the use of an ERP system provides support for all important activities such as (manufacturing and logistics, finance, sales, CRM, SCM, and HR) through data integration and knowledge sharing between all business units. Furthermore, Abdel et al. (2018) said that supply chain integration is one of the most important elements of Supply Chain Integration (SCI) requirements for designing networks where supply chain partners work together with internal business processes to achieve optimal practices. Jagoda & Samaranayake (2017) discuss that SCI seeks to connect internal processes with external processes (outside partners) such as: suppliers and customers through an ERP system to achieve quick responses to customer needs. Garg & Khurana (2017) state that integrated supply chain management works on controlling information, materials, services and money to improve the quality of business operations.

PT. Sumber Graha Sejahtera, Way Kanan is a subsidiary of PT. Sumber Graha Sejahtera is located in Way Kanan Regency, Lampung Province. This company operates in the downstream processed wood industry without natural forest concessions or industrial plantation forests which was founded in 1978. The company's superior product is Plywood, which is wood that is engineered into sheets with the direction of the grain in the wood layers and arranged transversely between the bottom layer and the surface layer using adhesive.

Over the last 40 years PT. Sumber Graha Sejahtera focuses on development, management capabilities, processing, logistics and distribution to achieve competitive advantage among other producers. However, this has not been implemented comprehensively in all subsidiaries. Based on the results of initial observations, it is known that at PT. Sumber Graha Sejahtera, Way Kanan, Lampung often experiences production targets and customer demands not being achieved. Many customers complain because the number of products sent by the company does not match the desired quantity.

There are problems experienced by PT. Graha Sejahtera's source above shows that the company has not been able to integrate various existing resources to create synergy with business partners, is unable to meet production targets and customer demands, thus causing the

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company's operational performance to be poor. Therefore, companies need to examine more deeply their ability to carry out business processes by analyzing the relationship between the material requirements planning system and the entire supply chain network integration on company performance.

The aim of this research is to determine the direct influence of the ERP system on company performance, and the indirect influence of the ERP system on company performance which is mediated by supplier integration, internal integration and customer integration. The novelty of this research lies in the research model which analyzes the relationship between the ERP system and company performance directly, and the relationship between the ERP system and company performance indirectly through three dimensional components of supply chain integration, namely supplier integration, internal integration, and customer integration as mediating variables.

Literature Review

Company Performance (Firm Performance)

Putri & Endiana (2020) define firm performance as a description of the level of achievement of an activity program or company policy in realizing an organization's goals, objectives, vision and mission as outlined through an organization's strategic planning. Meanwhile, Tarigan et al. (2021) defines company performance as the performance obtained by a company from management activities, and is then used as a parameter or benchmark in assessing the success of company management. Factors that influence company performance according to several research results, include Enterprise Resource Planning (ERP), IoT *(*Internet of Things) Integration and Supply Chain Integration.

Enterprise Resource Planning (ERP)

Tonsakun-aree et al. (2020) define ERP as a system for managing work processes in an organization. ERP uses the concept of managing the use of existing organizational resources at every step to maximize profits by collecting information contained in business processes such as accounting and financial systems, production human resources, and sales production management systems, including distribution systems to integrate efficient planning and managing the resources available within the organization.

Fauzi (2021) defines ERP as an integrated system that organizes and describes all existing resources, both in terms of finance, marketing, sales, service and other support to facilitate and support the performance of all related elements in the company and as a liaison for all stakeholders related. Factors that influence a company's ERP according to Alhazmi (2021) and Izzati & Najwa (2018) , namely communication, change management, project management, and top management sponsorship.

Supplier Integration

Jaja et al. (2018) stated that Supplier integration is integration that measures the extent to which a company shares master production schedules with key suppliers, determines common goals with key suppliers, identifies and determines new markets together with key users, always shares new ideas with key suppliers, and shares practices. best with major suppliers. Tarigan et al. (2021) defines supplier integration as a form of cooperation between buying companies and suppliers, which is involved in the process of bringing supplies to the buying company for mutually acceptable results. Activities carried out include choosing products to sell, decisions about how to determine prices and market products, and ensuring products are sent to the company on time. Factors that can influence *supplier integration* according to Nurkamil et al. (2020) , Laulita (2021) , and has been modified by researchers, namely interest , supply chain leadership style , trust , and commitment .

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Internal Integration

Chaudhuri et al. (2018) stated that internal integration refers to cross-functional collaboration and information sharing through interconnected and synchronized processes and systems, and the alignment of intra-company goals. Tarigan et al. (2021) defines internal integration as a process that occurs within a company that involves interaction between departments, and is carried out to facilitate interaction, communication and collaboration between company functions in achieving company goals. Factors that can influence *internal integration* according to Jaja et al. (2018), and has been modified by researchers, namely communication and cooperation .

Customer Integration

Tarigan et al. (2021) define consumer integration as integration that focuses on the relationship between sellers and buyers. Companies or organizations will implement several new components to meet customer needs, such as product innovation or innovation in serving customers. Siagian et al. (2020) define consumer integration as the company's active involvement in improving product quality and increasing operational effectiveness to maintain good relationships and increase customer satisfaction. Consumers can also provide feedback to the company on whether the company has met their wishes and overall satisfaction. Factors that can influence *customer integration* according to Schweitzer et al. (2020) , and has been modified by researchers, namely customer skills and knowledge , and customer willingness to contribute.

Development Hypothesis

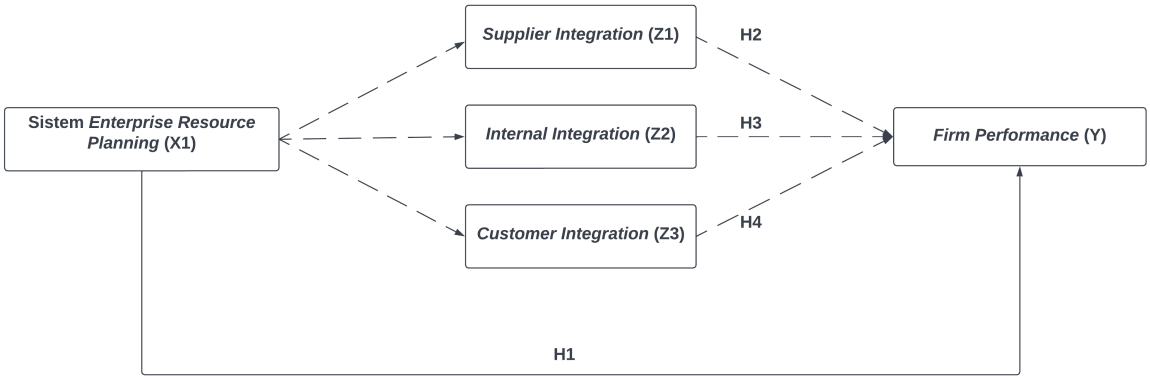

Figure 1. Research Framework

Based on the research framework in Figure 1, the research hypothesis proposed in this study is:

H1: ERP directly has a significant effect on firm performance.

H2: ERP indirectly has a significant effect on firm performance through Supplier Integration.

H3: ERP indirectly has a significant effect on firm performance through Internal Integration

H4: ERP indirectly has a significant effect on firm performance through Customer Integration

Methods

This research uses quantitative methods. The research object is the subsidiary PT Sumber Graha Sejahtera which is located in Way Kanan Regency, Lampung. The population in this study were all employees at PT Sumber Graha Sejahtera, Way Kanan, Lampung, totaling 340 people. The sample size was calculated using the following Yamane and Isaac formula in Sugiyono (2019):

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$$n = \frac{N}{1 + N(e)^2}$$

Information:

n = Number of samples required

N = total population

e = Sample error rate = 0.05

Using a significant *error* of 0.05 and a population of 340 people, the calculation is as follows:

$$n = \frac{340}{1 + 340(0{,}05)^2} = 183{,}783 = 184\ people$$

Based on the results of these calculations, the sample size for this research is 184 employees. Samples were taken using purposive sampling technique. The characteristics of the respondents in this study are that the respondent is an employee from the PPIC/IC, Sales, Purchasing, Warehouse, Quality or Accounting sections.

The data collection technique used in this research is literature study , observations made by observing and conducting short interviews with purchasing and sales staff at PT Graha Sejahtera Source , and questionnaire . The questions asked in the questionnaire are closed questions that can be selected from several alternative answers available. Respondents only need to choose answers according to their perceptions using a scale likert.

The data analysis technique used in this research is using Structural Equation Modeling (SEM)-Partial Least Square (PLS), where after the researcher has tested the Outer Model, the researcher continues by testing the Inner Model which is used in causality testing (testing hypotheses with models prediction). Evaluation of the Structural Model (Inner Model) carried out, namely R-square test (R^2), Blindfolding (Q^2) (Predictive Relevance Test), Path Coefficient (hypothesis testing), and SEM analysis with mediation effects.

Table 1. Variable Operational Definitions

Variable	Operational definition	Indicator
Firm Performance (Y) Source : Vasso et al. (2018)	Company performance is the company's achievements which originate from all forms of activities and programs that have been carried out, and are then used as a benchmark for the company's success.	a. Enhancement product delivery cycle time. b. Increased productivity c. Increased sales of existing products. d. New income streams discovered. e. There is a strong and sustainable bond with customers. f. Gained precise knowledge about customer purchasing patterns. g. Increased customer satisfaction. h. Increased employee satisfaction. i. Improved employee health and safety. j. Reduced energy use
Enterprise Resource Planning (ERP) System (X)	ERP is a system that integrates all company business processes with the aim that the company can integrate its business	a. Operational (*Operational Benefit of* ERP). b. Tactical (*Tactical Benefits of* ERP)

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Source : Putra & Fiolyta (2018) Angeline et al. (2022)	planning more effectively and efficiently across all elements.	c. Strategic (*Strategic Benefits of* ERP)
Supplier Integration (Z_1) Source : Chaudhuri et al. (2018) Tarigan et al. (2021)	*Supplier integration* is a form of cooperation between companies and suppliers regarding supply business processes that can be implemented between both parties, so that the process becomes best practice for both	a. Share information with key suppliers b. Develop a collaborative approach in the innovation process with key suppliers c. Joint decision making with key suppliers d. Merging systems with major suppliers
Internal Integration (Z_2) Source : Chaudhuri et al. (2018)	*Internal Integration* is cross-functional or cross-departmental collaboration to interact with each other and share information regarding how to achieve company goals	a. Share information with the purchasing department b. Joint decision making with purchasing department c. Share information with sales department d. Joint decision making with the sales department
Customer Integration (Z_3) Source : Chaudhuri et al. (2018)	*Customer Integration* is an integration that focuses on the company's relationship with its customers, by increasing operational effectiveness and innovating in products and service delivery so that customers feel satisfied with the products and services provided by the company.	a. Share information with key customers b. Develop a collaborative approach with key customers. c. System integration with major customers. d. Joint decision making with key customers

Source: Processed Data (2023)

Results and Discussion

Respondent Characteristics

All respondents in this study were men. Table 2 shows that 103 respondents were in the age range 27-32 years, 24 people were in the age range 33-38 years, and 57 people were in the age range 39-45 years. Apart from that, the respondents in this study consisted of 6 PPIC staff, 1 head of PPIC, 1 logyard staff, 3 GA staff, 2 HR staff, 4 warehouse staff, 2 quality staff, 4 HSE staff, 1 staff in the rotary section, 3 finance staff, 142 people as production operators, 1 accounting staff, 1 boiler staff, 1 maintenance staff, 10 shift heads, 1 GA head, and 1 person with the position of HR head.

Table 2. Characteristics of Research Respondents

No.	Characteristics		Frequency	Percentage
1	Gender	Man	184	100%
		Woman	0	0%
Amount			184	100%

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2	Age	27-32 Years	103	56%
		33-38 Years	24	13%
		39-45 Years	57	31%
Amount			184	100%
3	Position	PPIC Staff	6	3%
		Head of PPIC	1	1%
		Staff Logyard	1	1%
		GA Staff	3	2%
		HR Staff	2	1%
		Warehouse Staff	4	2%
		Quality Staff	2	1%
		HSE Staff	4	2%
		Rotary Section Staff	1	1%
		Finance Staff	3	2%
		Production operator	142	77%
		Accounting Staff	1	1%
		Boiler Staff	1	1%
		HR Staff	1	1%
		Maintenance	1	1%
		Shift Head	10	5%
		Head GA	1	1%
Amount			184	100%

Convergent Validity

Convergent Validity is used to determine the validity of each relationship between indicators and their latent constructs or variables (Ghozali, 2021). Based on Table 3, the Convergent Validity results for all indicator items on all variables are valid, with a value of > 0.5.

Table 3. Convergent Validity Test Output

Customer Integration (Z3)		**ERP (X)**	**Firm Performance (Y)**	**Internal Integration (Z2)**	**Supplier Integration (Z1)**
CI.2	0.801				
CI.3	0.814				
CI.4	0.595				
ERP.4		0.867			
ERP.5		0.919			
ERP.6		0.914			
ERP.7		0.951			
ERP.8		0.907			
FP.1			0.658		
FP.2			0.864		
FP.3			0.768		
FP.7			0.740		
II.1				0.799	
II.4				0.716	
SI.1					0.888
SI.2					0.590
SI.4					0.869

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Discriminant Validity

Discriminant validity explains whether two variables are quite different from each other or not (Ghozali, 2021). Based on Table 4, the square root value of customer integration (Z3) is 0.743, ERP (X) is 0.912, Firm Performance (Y) is 0.761, internal integration (Z2) is 0.758, and supplier integration (Z1) is 0.794, all of which are higher the magnitude of the correlation value between constructs.

Table 4. AVE Square Root Output and Correlation Between Latent Constructs

Customer Integration (Z3)		**ERP (X)**	**Firm Performance (Y)**	**Internal Integration (Z2)**	**Supplier Integration (Z1)**
Customer Integration (Z3)	0.743				
ERP (X)	0.184	0.912			
Firm Performance (Y)	0.330	0.431	0.761		
Internal Integration (Z2)	0.158	0.172	0.473	0.758	
Supplier Integration (Z1)	0.143	-0.270	0.012	0.200	0.794

Average Variance Extracted (AVE)

Average Variance Extracted (AVE) is the average percentage of variance extracted (AVE) values between question items or indicators of a variable which is a summary of the convergent indicators. Based on Table 5, all AVE values for all variables are above 0.5, so all indicator items for all variables are declared valid.

Table 5. Average Variance Extracted (AVE) Test Output

	Average Variance Extracted (AVE)	**Information**
Customer Integration (Z3)	0.553	Valid
ERP (X)	0.832	Valid
Firm Performance (Y)	0.579	Valid
Internal Integration (Z2)	0.575	Valid
Supplier Integration (Z1)	0.631	Valid

Reliability Test

A questionnaire can be said to be reliable if a person's answer to a question is consistent over time (Ghozali, 2021). Based on Table 6, the composite reliability value for all variables is greater than 0.7, so it can be said that all research variables are reliable as measurement tools in research.

Table 6. Reliability Test Output

	Composite Reliability	**Information**
Customer Integration (Z3)	**0.785**	**Reliable**
ERP (X)	0.961	Reliable
Firm Performance (Y)	0.845	Reliable
Internal Integration (Z2)	0.730	Reliable
Supplier Integration (Z1)	0.833	Reliable

Hypothesis testing

Hypothesis testing is carried out to see whether the direct influence hypothesis is accepted or rejected. Based on the problem formulation and hypothesis that was created in the previous chapter, the direct influence analyzed in this research is the influence of ERP (X) on Firm Performance (Y). Table 7 shows that the original sample value (O) is 0.324 (positive), so the

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influence of ERP (X) on Firm Performance (Y) is positive. The t-statistic value obtained was 5.497 which was greater than the t-table value of 1.96, and the P-Values value obtained was 0.000 which was smaller than 0.05. So, H1 is accepted, meaning that ERP (X) has a significant effect on Firm Performance (Y), where the direction of the influence is positive.

Table 7. Path Coefficient (Mean, STDEV, T-Values, P-Values)

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Customer Integration (Z3) -> Firm Performance (Y)	0.210	0.215	0.051	4,122	0,000
ERP (X) -> Customer Integration (Z3)	0.184	0.196	0.060	3,072	0.001
ERP (X) -> Firm Performance (Y)	0.324	0.325	0.059	5,497	0,000
ERP (X) -> Internal Integration (Z2)	0.172	0.177	0.068	2,529	0.006
ERP (X) -> Supplier Integration (Z1)	-0.270	-0.278	0.057	4,726	0,000
Internal Integration (Z2) -> Firm Performance (Y)	0.385	0.387	0.069	5,609	0,000
Supplier Integration (Z1) -> Firm Performance (Y)	-0.008	-0.005	0.065	0.121	0.452

Indirect Influence

The t-statistical value of the influence of ERP (X) on firm performance (Y) through supplier integration (Z1) is 0.118 which is smaller than the t-table value of 1.96, and the P-Values value is 0.453 which is greater than 0.05. So, H2 is rejected, meaning that ERP (X) has no significant effect on firm performance (Y) through supplier integration (Z1). In other words, supplier integration (Z1) cannot mediate the relationship between ERP (X) and firm performance (Y).

The t-statistical value of the influence of ERP (X) on firm performance (Y) through internal integration (Z2) is 2.187 which is greater than the t-table value of 1.96, and the P-Values value obtained is 0.015 which is smaller than 0.05. So, H3 is accepted, meaning that ERP (X) has a significant effect on firm performance (Y) through internal integration (Z2). In other words, internal integration (Z2) is able to mediate the relationship between ERP (X) and firm performance (Y).

The t-statistic value of the influence of ERP (X) on firm performance (Y) through customer integration (Z3) is 2.445 which is greater than the t-table value of 1.96, and the P-Values value is 0.007 which is smaller than 0.05. So, H3 is accepted, meaning that ERP (X) has a significant effect on firm performance (Y) through customer integration (Z3). In other words, customer integration (Z3) is able to mediate the relationship between ERP (X) and firm performance (Y). The Specific Indirect Effects test output is shown in Table 8.

Table 8. Output Specific Indirect Effects

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
ERP (X) -> Customer Integration (Z3) -> Firm Performance (Y)	0.039	0.042	0.016	2,445	0.007
ERP (X) -> Internal Integration (Z2) -> Firm Performance (Y)	0.066	0.069	0.030	2,187	0.015

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ERP (X) -> Supplier Integration (Z1) -> Firm Performance (Y)	0.002	0.001	0.018	0.118	0.453

Coefficient of Determination Test

The Adjusted R-Square value for the supplier integration variable (Z1) is 0.068, meaning that 6.8% of supplier integration (Z1) is influenced by ERP (X), with this percentage value the model is included in the weak model category. The Adjusted R-Square value for the internal integration variable (Z2) is 0.024, meaning that 2.4% of the internal integration variable (Z2) is influenced by ERP (X), with this percentage value the model is included in the model category weak. The Adjusted R-Square value for the customer integration variable (Z3) is 0.029, meaning that 2.9% of the customer integration variable (Z3) is influenced by ERP (X), with this percentage value the model is included in the model category weak.

The Adjusted R-Square value for the firm performance (Y) variable is 0.378, meaning that 37.8% of the firm performance (Y) variable is influenced by ERP (X), supplier integration (Z1), internal integration (Z2), and customer integration (Z3), where with this percentage value the model is included in the weak model category. The test results are displayed in Table 9.

Table 9. R-Square output

	R-*square*	***Adjusted* R-*Square***
Customer Integration (Z3)	0.034	0.029
Firm Performance (Y)	0.391	0.378
Internal Integration (Z2)	0.030	0.024
Supplier Integration (Z1)	0.073	0.068

Predictive Relevance Test (Q2)

Table 10 shows that the Q2 value obtained for firm performance (Y) is 0.213 which is greater than 0, meaning that the proposed research model has good predictive validity. This value shows that the model's ability to predict the value is 21.3%. Thus, the influence directly by ERP, as well as indirectly through supplier integration, internal integration, and customer integration is able to predict company performance variables. The results of predictive relevance testing using blindfolding are shown in Table 10.

Table 10. Q2 Predictive Relevance Test Results

	SSO	**SSE**	**Q^2 (=1-SSE/SSO)**
Customer Integration (Z3)	552,000	544,083	0.014
ERP (X)	920,000	920,000	
Firm Performance (Y)	736,000	579,384	0.213
Internal Integration (Z2)	368,000	362,222	0.016
Supplier Integration (Z1)	552,000	528,493	0.043

Direct influence of ERP on Firm Performance

The calculation results show that H1 is accepted, ERP (X) has a significant effect on firm performance (Y). These results are in line with research by Rahmani (2018), Husada Tarigan et al. (2019), Tarigan et al. (2021), and Putra et al. (2021), who found that ERP can significantly influence company performance. This means that the better the implementation of Enterprise

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Resource Planning (ERP), the higher the company's performance. This is in line with the opinion of Putra et al. (2021) which states that ERP systems can help organizations integrate information flows and process all accessible resources. Thus, companies that adopt ERP systems have better performance than those that do not adopt.

So far, based on observations, it is known that the company's performance is not optimal. This is because PT Sumber Graha Sejahtera, Way Kanan, Lampung often experiences production targets and customer demands not being achieved. Many customers complain because the number of products sent by the company does not match the desired quantity. In addition, evaluation of respondents' answers to the ERP variable shows that the company's decision making for workers is still not effective, the company has not been able to reduce inventory costs because it is still stocking up on materials to meet its fabrication needs, the company's external relations with customers and suppliers have not been well established, the company have not been able to build business innovation, and have not been able to improve their performance. Therefore, in order to be able to improve the company's performance, PT Sumber Graha Sejahtera, Way Kanan, Lampung must build strong and sustainable ties with customers, so that it can obtain precise knowledge about customer purchasing patterns so that the company can adjust its material needs and reduce inventory costs.

The Influence of ERP on Firm Performance Through Supplier Integration

The calculation results show that H2 is rejected, supplier integration (Z1) cannot mediate the relationship between ERP (X) and firm performance (Y). These results are not in line with research by Tarigan et al. (2021) who found that Enhanced ERP influenced firm performance through Supplier Integration in East Java manufacturing companies.

ERP has a significant effect on all components of supply chain integration. ERP also has a significant effect on company performance, as well as internal integration and customer integration. Even though ERP directly has a significant effect on company performance. However, supplier integration does not have a significant effect on company performance. This means there is no mediating influence from the supplier integration variable on the relationship between ERP and company performance. Therefore, it can be said that to improve company performance, it is necessary to implement information technology such as an ERP system. Companies can own and use data and information that is managed comfortably, accurately, completely and valuablely through ERP system applications.

Setiabudi et al. (2021) stated that ERP systems produce valuable information, so companies can use it to carry out company business processes. Smooth business processes with accurate and reliable information can improve company performance by generating a good reputation in the eyes of the public. However, in the case of PT Sumber Graha Sejahtera, Way Kanan, the ERP system itself is not easy to implement, so it requires integrated integration with other components, both from the company's internal side, customers and suppliers.

The absence of a mediating effect from the supplier integration variable on the relationship between ERP and company performance indicates that there are obstacles when companies try to integrate suppliers into the implementation of company resource planning. In the case of PT Sumber Graha Sejahtera, Way Kanan, this was proven by the exploratory results carried out on purchasing and warehouse staff which showed that the main cause of the company's failure to integrate the ERP system with suppliers was due to the company's inability to establish good communication and negotiations with supplier. The availability of resources from suppliers is lacking, but suppliers are always able to meet the many material requirements desired by the company. In addition, suppliers often bring in raw materials that do not match the specifications ordered by the company. Even though suppliers bring in a number of materials according to needs, not all materials meet the quality, resulting in a shortage of materials needed for fabrication at each order. Exploratory results of warehouse staff also found that suppliers prefer

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to supply their goods to small industries and feel less interested or loyal to always supply their goods to PT. Sumber Graha Sejahtera, Way Kanan. This is because the company is less able to adjust the price of goods to market prices, so suppliers look for buyers who are able to offer higher purchasing prices. Therefore, it is not surprising that suppliers often send goods that do not match the order specifications, or are late in sending goods, because the supplier prioritizes other buyers who offer higher purchasing prices.

The Influence of ERP on Firm Performance Through Internal Integration

The calculation results show that H3 is accepted, internal integration (Z2) can mediate the relationship between ERP (X) and firm performance (Y). These results are in line with research by Tarigan et al. (2021) who found that enhanced ERP influenced firm performance through internal integration in East Java manufacturing companies.

Tarigan et al. (2021) stated that internal integration allows management to make joint decisions involving all relevant departments in determining the company goals and policies to be achieved. Apart from that, the implementation of ERP will have an impact on internal integration between functions in departments, so that it can improve company performance well. Implementing an ERP system integrates data between departments completely accurately, and allows departments to build secure communication, coordination and collaboration. Integration of related departments supports decision making, such as inventory levels.

The existence of a significant mediating effect by internal integration on the relationship between ERP and company performance indicates that when a company wants to improve its performance, the company must integrate ERP implementation by carrying out internal integration. The results of this study are in line with the statement of Demeter et al. (2016) which states that internal integration within a company allows all departments to access product availability and monitor operational processes.

In the case of PT. Sumber Graha Sejahtera, Way Kanan, the company has not planned and forecasted the required resource requirements properly, so the company often experiences excess levels of raw material inventory in the warehouse. This is done because the company tries to have sufficient inventory to anticipate delays in deliveries by suppliers in the future when fabrication will be carried out, so that the fabrication process will not be delayed from the predetermined schedule.

The Influence of ERP on Firm Performance Through Internal Integration

The calculation results show that H4 is accepted, customer integration (Z2) can mediate the relationship between ERP (X) and firm performance (Y). The existence of a significant mediating effect by customer integration on the relationship between ERP and company performance indicates that when a company wants to improve its performance, the company must integrate ERP implementation by implementing customer integration. The results of this study are in line with the statement of Vasso et al. (2018) who stated that customer integration enables a deeper understanding of market expectations and opportunities for more accurate and rapid responses to customer needs.

Tarigan et al. (2021) stated that consumer integration focuses on the relationship between sellers and buyers. Companies or organizations will implement several new components to meet customer needs, such as product innovation or innovation in serving customers. In other words, consumer integration is a form of active company involvement in improving product quality and increasing operational effectiveness to maintain good relations and increase customer satisfaction. Consumers can also provide feedback to the company on whether the company has met their wishes and overall satisfaction.

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In the case of PT. Sumber Graha Sejahtera, Way Kanan, the company often experiences production targets and customer demands not being achieved. Many customers complain because the number of products sent by the company does not match the desired quantity. The main factor that caused the production target to not be achieved was the delay in the fabrication schedule caused by delays in sending raw materials from suppliers. Therefore, to be able to improve the company's performance well, PT. Sumber Graha Sejahtera must be able to improve its business processes with customers by sharing information with key customers regarding (sales forecasts, production plans, order tracking and tracing, delivery status, inventory levels), taking a collaborative approach with key customers such as (risk/revenue sharing, long-term agreements), combining systems with key customers (vendor-managed inventory, as well as continuous replenishment of goods), as well as joint decision making with key customers regarding (product design/modification, process design/modification, quality improvement and cost control).

Conclusion

Based on the results of the data analysis that has been carried out, the research results show that ERP directly has a significant effect on firm performance. Apart from that, ERP does not have a significant effect on firm performance through supplier integration, internal integration and customer integration.

The findings of our study have important managerial implications for companies in terms of improving the management of management resources well, increasing performance improvements, and building business innovation, so that company decision making can be effective for all parties concerned. By implementing good resource planning, the company will no longer receive complaints from customers. This is because companies can meet customer needs proactively and more efficiently, companies can also build business innovation, build better and more sustainable external relationships with customers, and make decisions more effectively. Apart from that, resource planning will also have an impact on the company being able to gain precise knowledge about customer purchasing patterns, so that the company will be able to fulfill customer demands well. The limitation of this research is that it only focuses on the company's non-financial performance.

The advice that researchers can give based on the research results is that companies must maintain good communication with suppliers by trying to understand and respond to supplier desires. If the supplier wants a high purchase price, the company can focus on other agreements such as low-down payments, discounts on large purchases, lower interest, or longer payment terms. Next, the company must research and select a backup supplier to anticipate things that might happen, such as not reaching an agreement on negotiations with the permanent supplier. This research only focuses on the company's non-financial performance. It is hoped that future researchers can conduct research by examining financial performance using the company's financial reports.

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