Implementation Of Enterprise Resource Planning On Sales Management And Accounting & Finance Management Using Odoo Software (Case Study Of Furniture Company)

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Abstrak

Berbagai manfaat yang diperoleh dari penerapan teknologi menyebabkan perusahaan berusaha untuk menerapkan teknologi pada proses bisnisnya, dimana penerapan teknologi dapat meningkatkan kinerja perusahaan. Salah satu penggunaan teknologi yang dapat dimaanfaatkan yakni ERP. ERP (Enterprise Resource Planning) merupakan sebuah software yang dapat digunakan perusahaan untuk mengkoordinasikan dan mengintegrasikan informasi pada area bisnis perusahaan. Kenny Furniture merupakan perusahaan dengan aktivitas utama memproduksi dan menjual furniture. Permasalahan yang dialami oleh Perusahaan Furniture Kenny Furniture yaitu pencatatan pemasukkan dan pengeluaran perusahaan Kenny Furniture diarsipkan ke dalam pembukuan tanpa menggunakan teknologi. Solusi yang ditawarkan untuk mengatasi permasalahan perusahaan Kenny Furniture yaitu dengan menerapkan ERP pada proses bisnis perusahaan, penerapan ERP dilakukan dengan menggunakan aplikasi Odoo 15 dan berfokus pada modul sales management dan accounting and finance. Odoo 15 dapat mengintegrasikan data divisi penjualan dan keuangan sehingga data laporan penjualan dan keungan perusahaan dapat diproses lebih cepat dan efektif.

Kata kunci: Enterprise Resource Planning, Accounting and Finance, Sales, Odoo

Abstract

Various benefits derived from application of technology caused company attempted to apply technology in their business processes, which can improve company performance. One of most used technology that can utilized is ERP. ERP (Enterprise Resource Planning) is software which can be used by companies to coordinate and integrate information in company's business areas. Kenny Furniture is company with main activity of producing and selling furniture. The problem that faces by Kenny Furniture is record of income and expenses of Kenny Furniture is archived into bookkeeping without using technology. The solution offered to overcome problems of Kenny Furniture is implement ERP in the company's business processes, ERP implementation is carried out using the Odoo 15 application and only focuses on sales management and accounting and finance modules. Odoo 15 can integrate sales and finance division data so that company financial and sales report data can be processed more quickly and effectively.

Keywords: Enterprise Resource Planning, Accounting and Finance, Sales, Odoo

1. Introduction

Various benefits obtained from the application of technology has inspired companies to try to apply technology to their business processes owned by the company. The application of technology is beneficial to speed up the flow of information across company divisions so that it provides satisfaction for consumers and employees this in turn can improve company performance [1]. The problem faced by conventional companies is with the data management process that has not been integrated between departments in the company, causing the company division to have difficulties in sharing information.

The solution of the problems experienced by conventional companies is by integrating data in each company department, to integrate data, the company can implement the ERP software (Enterprise Resource Planning). ERP (Enterprise Resource Planning) is a software used by companies to integrate company divisions so as to produce efficient business processes and even distribution of information across all company divisions [2]. The ERP software used in this study is Odoo, Odoo is an ERP software that can be used by companies for the needs of enterprise division integration systems containing various modules that are in accordance with the needs of the company [3]. Odoo software is open-source and can be customized according to the needs of the company so that it can be used by the company to manage more integrated business processes [4]. Kenny Furniture is a conventional company with the main activity of producing and selling furniture. The problem experienced by the Kenny Furniture company is that the entry and expense records of the Kenny Furniture company are archived into bookkeeping without the use of technology, in which the entry and expense records of Kenny Furniture is considered less effective.

Various studies on ERP implementation in various fields have been carried out, one of them was the reseach conducted by Made Diah Pradnya Pramitadewi in 2020. This study discusses the reengineering of bakery companies's business process aims to solve problems whose data collection on production, procurement, and sales processes is still done manually without using an integrated system, making it difficult to maintain market share. This research improves business processes with Business Process Reengineering. Implementation of new business processes is carried out using the Odoo application at Sales, Purchase, Manufacturing, and Inventory modules. The result of this research is the improvement of business processes in the production process so as to produce new effective business processes [5].

Christian Hardjono conduct further research on ERP system implementation in 2017. This study discusses ERP implementation at CV. Brada aims to create an ERP (Enterprise Resource Planning) system that can accommodate the departments of the company that are getting bigger over time. The ERP implementation process uses the Odoo version application on the Sales, Warehouse and Accounting modules. The result of this research is that Odoo ERP (Enterprise Resource Planning) software can help with problems from Cv Brada in the Sales Department with an integrated and real time system [6].

Further research on ERP implementation was also carried out by Feiggi Lucia in 2019. This study discusses the implementation of ERP in weaving companies Putri Ayu aims implementing integrated information system technology using ERP. The existence of an integrated information system will optimize communication between departments within the company, as well as communication with customers. The ERP implementation process uses the Odoo version 11.0 application on the HR and Accounting modules. The research produces an integrated ERP system that had an effect on improving the company's performance, both back office and front office [7].

Implementation of ERP on Kenny Furniture using the ERP application Odoo 15 by integrating sales and accounting & finance modules. The method used in applying ERP to Kenny Furniture is using the Traditional ERP Life Cycle method, which is a method used for the implementation and optimization of ERP software with stages: Scope and Commitment, Analysis and Design, Acquisition and Development, Implementation, and Operation [8].

2. Research Method

This study uses the Traditional ERP Lifecycle method. Traditional ERP Life Cycle is method that used in ERP implementation. Traditional ERP Life Cycle is carried out with a final result approach to each stage that can be reviewed by the management and can make a decision whether the project can be continued or declined [9]. The first stage of this research is Problem Identification, during the identification of problems stage the researcher conducted an interview with Kenny Furniture to analyze the problems faced by the company and study their business process, with emphasis in the sales and finance section, the next stage is the literature review stage. The literature review stage is where the process of searching for information can be used as a basis in implementing and information that can be used to solve the problems faced by the company. Information collection is done by reading related researches and studying books as reference, the next stage is the stage of determining the scope and commitment. The stage of determining the scope and commitment is the stage

where researcher with the company owner Kenny Furniture determines the commitment related to the research conducted, the next step is to determine the limits of ERP implementation in the company including determining the data and time needed.

The analysis and design stage is the stage where researchers and companies determine the software to be used in the ERP implementation process, at this stage researchers also analyze the differences in existing business processes and business processes proposed using Odoo 15. The next stage is the acquisition and development stage, where at this stage the researcher executes a comparison of existing business processes and business processes proposed using Odoo15. The acquisition and development phase begins with the installation of ERP software and creating a database, the process of moving company data and company information into the Odoo software and configuring the Odoo 15 software, if the system has been completed then testing is carried out using the UAT questionnaire and Likert scale to test whether the system can be accepted by system users, if the system is in accordance with Kenny Furniture's company needs, then the last stage is the documentation stage. The documentation stage is the stage of preparing documentation for the development of the ERP system on Kenny Furniture in a report.

3. Literature Study

3.1. Enterprise Resorce Planning

Enterprise Resource Planning (ERP) is a system developed to integrate all divisions in the company so that it becomes an effective and efficient business process. The company has four functional areas, namely Marketing and Sales, Supply Chain Management (SCM), Accounting and Finance, and Human Resources [10].

3.2. Odoo

Odoo is an easy to use all-in-one management software. Odoo provides various integrated application modules, such as Inventory module, Accounting module, eCommerce, Marketing, MRP, and so on. The advantage of using Odoo software is that it can be used easily and with all divisions in the company being integrated [11]. Odoo ERP software uses Phyton, XML, and JavaScript programming languages [12].

3.3. Traditional ERP Lifecycle

Traditional ERP LifeCycle is a method used in the ERP system implementation process. The traditional ERP lifecycle method consists of several stages, namely Analysis and Design, Scope and Commitment, and Acquisition and Development. Traditional ERP Life Cycle is run based on the assessment provided by the company with the company able to determine whether the system is a good fit for them [13].

3.4. Conference Room Pilot

Conference room pilot (CRP) is a term used in the process of testing software acceptance and procurement of ERP software. CRP can assess all aspects of the system by looking at the suitability of the system with ongoing business processes and testing new system users related to their understanding of the system. The area of CRP testing is the company's business processes from start to finish [14]. The CRP method uses the UAT questionnaire to conduct final testing of software acceptance.

3.5. UAT

User Acceptance Testing (UAT) is a form of testing for software developers by asking questions to users directly to find out the level of acceptance of software users. The purpose of the UAT is to assess whether the system can support the user's business processes on a daily basis and ensure the system is sufficient and correct to use. The UAT questionnaire can find gaps in the system. Work related to the UAT begins with a written statement and continues until the final stage of testing before the client / user accepts the new system. [15].

3.6. Likert Scale

The Likert scale is a scale utilized to assess a person's views on a matter, in conducting an evaluation. Likert scale can be used in measuring success, acceptance or user satisfaction of a program. This scale has a value range of 1 to 5 [16].

4. Results and Discussion

4.1 Existing Business Processes

The ongoing business processes at Kenny Furniture company are sales business processes and company financial records. The divisions related to the sales and recording process are the sales division and the finance division. The process starts from the sale of the product, receipt of payment, checking the availability of the product, production of furniture, and delivery of goods.

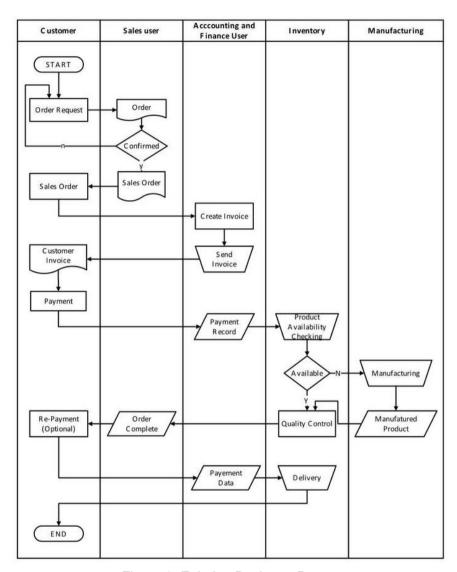


Figure 1. Existing Business Process

Figure 1 is a business process of product sales in progress at the Kenny Furniture company. Process begin with customer quotation, invoices delivery, payment receipt, product stock checking, product manufacture, and product delivery. Sales of products involves consumers and sales departments, creation and delivery of customer invoices as well as receipt of payments involves administrative and financial departments.

4.2 Business Processes Using Odoo

The business process proposed using Odoo is the business process of selling and recording company finances. The business process using Odoo interprets the sales and finance divisions with the modules available in Odoo ERP software, namely the sales module and the invoicing module.

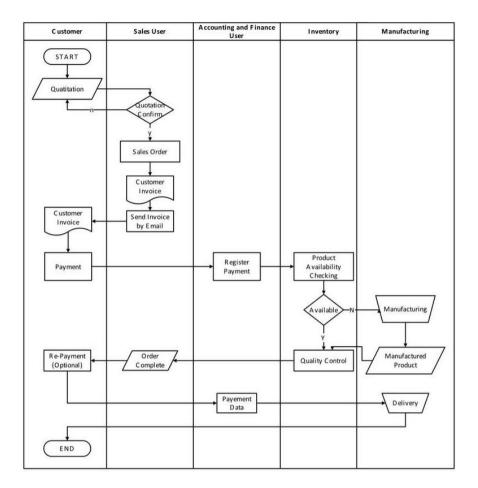


Figure 2. Business Process Using Odoo

Figure 2 is a business process of product sales filed using Odoo ERP software. The process starts from the sale of the product, receipt of payment, checking the availability of the product, production of furniture, and delivery of goods. Sales of products and delivery of customer invoices involve the consumer and the sales department, receipt of payments involves the administrative and financial departments.

4.3 Analysisi of Business Process differences

Analysis of the comparison between existing business processes and business processes applied on sales modul and accounting and finance modul on Kenny Furniture's company business processes using Odoo software can be concluded by looking at the comparison table in Table 1.

Table 1. Business Process Differences

Existing Business Processes		Implementation Business Processes	
Business Unit Administration 1 and Finance 2	Business Process Formulating order data and sales transaction. Creating Vendor data list Writing documents of material	Business Unit Administration and Finance 1. Validating customer invoices and vendor bills 2. executing register payment 3. Journal Entries Input 4. Checking the inflow an	nd
4	purchases Creating PO	outflow of funds on analytic account	

invoices for vendors 5. Submitting a PO			5. Checking Genreal Ledger
	, and the second	Sales	Confirm Quotation to Sales Order
			2. Sending Invoice by Email

From the results of the analysis of differences in business processes, there has been changes found in the company's ongoing business processes compared to the one obtained by using the Odoo system by the Kenny Furniture company. Changes in business processes that occur are business process of sales order. Changes that occur in the *sales order* process when implementing the company's Odoo system on Kenny Furniture are as follows:

- a. The recording in the sales book that was initially done manually is replaced by the sales order module in the sales order menu in Odoo System
- The recording that occurred during the product price negotiation process has been approved by Kenny Furniture and the customer.
- c. The payment system is carried out in accordance with the agreement between Kenny Furniture and the customer whether with prepayment or payment in full.
- d. Proof of delivery of goods on sales order and customer invoice is sent by sales.

4.4 Implementasi Odoo

The implementation of the Odoo 15 software in Kenny Furniture company in the sales module and accounting module starts when the customer orders the product.

4.4.1 Quotation

Quotation is used to store data on sales offers made by customers. Sales users can go to the sales menu and then the quotation sub-menu and click Create to create a new quotation.

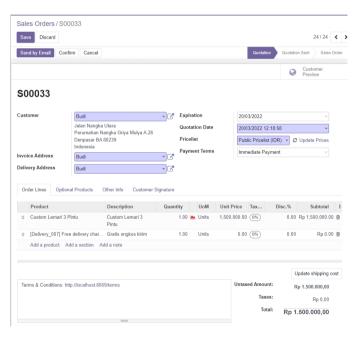


Figure 3. Quotation

Quotation files can be sent to customers via email if the data in the Quotation is appropriate. Quotation files can be sent to customers by clicking the send by email button.

4.4.2 Sales Order

Sales Order is a purchase file made by the customer. Sales Order can be created by the Sales user when the customer has confirmed the submitted Quotation file.

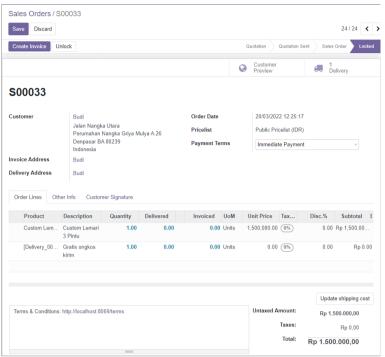


Figure 4. Sales Order

Sales Order files that have been confirmed by the customer changed its status to locked and the sales user can now create a customer invoice by clicking the Create Invoices button

4.4.3 Customer Invoice

Customer Invoice is an invoice that must be paid by the customer in accordance with the sales order document that has been confirmed by the customer. Customer Invoice will then be validated by the sales user and then the Customer Invoice file will be sent to the customer.

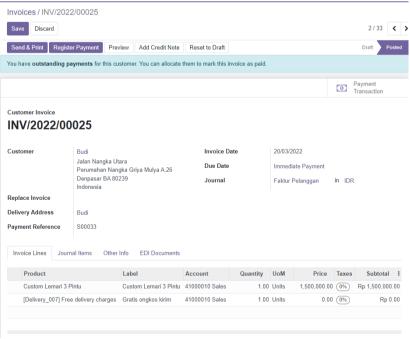


Figure 5. Customer Invoice

The next stage is the recording of payments made by accounting and finance users in the invoicing module. The stage of recording customer payments can be carried out if the customer invoice has been paid by the customer.

4.4.4 Payment

Payments that have been made by the customer will then be validated and recorded by the accounting and finance user through the invoicing menu then the customer sub menu, before going to the payment menu and record their payment by clicking the create button

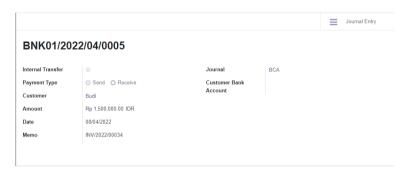


Figure 6. Register Payment

Accounting and finance users can allocate payments that have been made to customers invoices through the invoicing menu contained in the invoicing menu dashboard if the payment has been recorded by the accounting and finance user.

4.4.5 Payment Allocation

Payment Allocation is done when the payment record has been done accounting and finance user, by selecting the customer invoice file in the invoicing menu and then the customer sub menu and invoicing

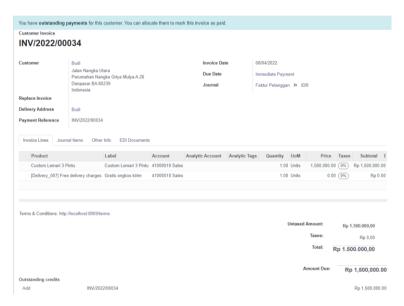


Figure 7. Payment Allocation

Payment Allocation can be done by selecting outstanding credit that has been recorded in the payment menu, so that it is available on the customer's invoice. If the Payment Allocation has been carried out, then the next process is the checking of general ledger that is carried out by the Accounting and Finance Manager.

4.4.6 General Ledger Checking

The General Ledger is the company's financial statement that contain transaction journals. Accounting and Finance Manager can access the General Ledger through the invoicing menu then through the accounting submenu, then finally the General Ledger menu.



Figure 8. General Ledger

The general ledger cheking process is completed if the debit and credit in the journal used by the accounting and finance user to record payments by customers on the general ledger are in order.

4.5 System Testing

Testing in the study was carried out by distributing Questionnaires to managers and 8 employees of Kenny furniture company consisting of 7 employees of the sales division and one employee of the finance division. The method used for testing uses the UAT method. The questionnaire contains 5 Aspects consisting of 18 questions. Testing is still within the outer stages where respondents can only see a system demo after customization based on the needs of Kenny furniture company conducted by researchers. Respondents' answer categories were divided into 5, namely Strongly Disagree (TS) with a score of 1, Disagree (KS) with a score of 2, Moderately Agree (CS) with a score of 3, Agree (S) with a score of 5.

Aspect	Results				
-	1	2	3	4	5
Content			13.9%	63.9%	22.2%
Modules			18.5%	59.3%	22.2%
Multimedia			33.3%	55.6%	11.1%
Navigation			41.7%	50.0%	8.3%
Functions			27.8%	55.6%	16.7%

Table 2. Questionnaire Results

Table 2 is the result of a questionnaire that has been distributed to the Managers and Employees of Kenny Furniture's financial and sales divisions. The results of the questionnaire were obtained based on the respondents answers that are divided into 5 aspects. The first aspect is the Content Aspect where the largest presentation of respondents agree, with a percentage value of 63.9%, this implies the content displayed in the system is appropriate. continuing on the module aspect. The Module Aspect with the largest presentation of respondents agreeing, with a percentage value of 59.3%, this implies the module in the system is functioning well. The third Aspect, Multimedia have the largest presentation of respondents agreeing, with a percentage value of 55.6%, this implies that the system's display is comfortable to use. The fourth Aspect, Navigation have the majority of respondents agreeing, with a percentage value of 50.0%, this implies users can easily understand the flow of system use. The last aspect, namely the Usability Aspect, has the largest presentation of respondents' answers agreeing with a percentage value of 55.6%, meaning that the system is already running in accordance with the company's business process, after obtaining the results of the questionnaire percentage, the UAT measurement is carried out. UAT measurements were carried out to measure the level of acceptance of the implementation of the Odoo system in Kenny Furniture company. UAT measurements were made using the Likert Summated Rating scale against the questionnaire results in table 2.

Table 3. Questionnaire Result Responses Total

Results	Respondent Results	Scores Results
1	0	0
2	0	0
3	45	135
4	92	368
5	25	125
Tota	al	628

Table 3 is a calculation of the total value of respondents and the total score. Total Respondents is the number of respondents' answers in the assessment category in each aspect of the questionnaire. Total Score is the score value of each category of answers to the questionnaire obtained by the formula:

$$Score = Respondent\ Total\ \times Category\ Score$$
 (1)

The result of the Total Score calculation becomes the score of the research conducted. Next phase is to determine the value range of the Likert Summated Rating Interpretation.

Table 4. Calculation Total Score

Categories	Score per	Total
	respondent	respondent
		score
Maximal	90	810
Minimum	18	162
Median	36	324
Quarter 1	54	486
Quarter III	72	648

Table 4 is the calculation of the total score of each respondent and the score of all respondents. The total score of each respondent is the value of all questions in the questionnaire obtained using the formula:

Each Respondent Total Score = Category Score
$$\times$$
 Number of statement (2)

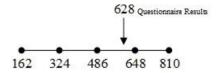
The score of all respondents is the value of all questions that have been answered by the questionnaire respondents. The score of each category respondent is obtained using the formula:

Score of All Respondents = Each Respondent Score \times Number of Respondent (3)

The result of the calculation of all of the respondents became an interpretation of the Likert Summated Rating to determine if the system has been accepted by the company.

Table 5. Interpretation of Total Score

Scoring Interpret	ation
Value Limits	Description
648 < Score < 810	Very positive
486 < Score < 648	Positive
324 < Score < 486	Negative
162 < Score < 324	Very negative



Figures 9. Respondent Score of Questionnaire Results

The results of the study from the interpretation of the *Likert Summated Rating* Scale with the assessment score obtained from 9 respondents was in the third quarter of 486 < 628 < 648, thus the questionnaire distributed was positive and the implementation of the ERP system in Kenny Furniture company received a fairly successful predicate.

5. Conclusions

The business process of selling and recording finances in Kenny Furniture company is still less effective because it is still carried out on a conventional basis, so that improvements are made to the business process of Kenny Furniture company in accordance with the SOP of (Standard Operating Procedure) Odoo 15 *software*. Entities involved in the business process of sales and financial records are Consumers, Sales Division, and Finance Division. The difference between the proposed business process that utilized the Odoo 15 software and the existing business process are with the *sales order* process and recording of the company's finances, with the Odoo software using an integrated system model with one data basis. The implementation of Odoo 15 ERP software is proven to integrate the entities involved in the sales and financial recording business processes so that the company can meet the needs of consumers quickly and precisely. The results of system testing using UAT questionnaires and the Likert Scale, showed that the implementation of Odoo ERP *software* was quite successful with 628 as the final results.

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