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Enhancing Sales Through ERP Odoo-Based Intercompany and E-Commerce Integration in Textile SMEs

Cindy Himawan[1], Devina Aurellia[*2]

[1] Industrial Engineering Study Program, Faculty of Industrial Engineering, Institut Teknologi Harapan Bangsa, Indonesia
[2] Industrial Engineering Study Program, Faculty of Industrial Engineering, Institut Teknologi Harapan Bangsa, Indonesia

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ABSTRACT

Surplus materials generated from textile production processes often remain underutilized due to the lack of integration between manufacturing and retail operations, resulting in idle inventory, unrecorded transactions, and lost sales opportunities. This study aims to improve sales performance and inventory utilization in textile SMEs through the implementation of Odoo ERP with intercompany and e-commerce integration. The study was conducted in a textile SME consisting of a production unit and a retail unit operating under separate business entities. The System Development Life Cycle (SDLC) using the waterfall model was employed to analyze requirements, design the system, configure Odoo modules, and perform functional testing and user acceptance evaluation. The proposed solution enables the automatic generation of intercompany transactions, including Sales Orders, Purchase Orders, and Vendor Bills, while synchronizing inventory, sales, and accounting information in real time. In addition, the e-commerce module provides a digital sales channel for surplus materials that were previously marketed through conventional methods. The results indicate that the integrated system improves transaction traceability, reduces manual data entry, and enhances inventory visibility across business units. Furthermore, the utilization rate of surplus materials increased from 17% prior to implementation to full absorption through the integrated digital channel during the evaluation period, eliminating idle inventory and creating additional economic value. These findings demonstrate that ERP-enabled intercompany integration can support operational efficiency and strengthen sales performance in textile SMEs.

1. Introduction

Small and Medium Enterprises (SMEs) play a crucial role in economic development by contributing to employment creation, value-added production, and industrial resilience across various sectors. Despite their importance, SMEs are often required to continuously improve operational efficiency in order to remain competitive in dynamic market environments, particularly due to limitations in financial, technological, and human resources [1]. As a result, the adoption of digital technologies has become an essential strategy for SMEs to enhance operational performance and sustainability. as well as benefit research , and values Renewability study about study literature from study a type that has been conducted by researchers previous and explanation about the concept used [2]. The main activities in the textile industry focus on the production process, starting from the processing of raw materials into ready-to-use final products. In practice, the efficiency of production processes is often closely related to a company's ability to manage raw materials and production leftovers. Globally, approximately 92 million tons of textile waste accumulate at various stages of their life cycle, of which more than 80% ends up in landfills or is incinerated due to not being promptly utilized [3]. This condition indicates that a large amount of residual material that actually still has potential economic value is wasted. Therefore, the challenges faced by the textile industry are not only related to controlling inventory levels, but also to how to optimize the utilization of leftover stock so that it continues to provide added value to the company.

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Email: cindy_himawan@ithb.ac.id (Himawan, C), ti-22001@students.ithb.ac.id (Aurellia, D)*

* Writer correspondence

Ranjan et al. [4] in their research, show that inventory stock issues are one of the challenges frequently faced by business actors, especially when inventory management is still carried out manually [4]. Discrepancies between incoming and outgoing goods often lead to the accumulation of unused stock, which in turn results in increased storage costs and operational inefficiencies. This condition indicates that suboptimal inventory management can cause the buildup of materials that do not provide added value to the company.

Similar challenges are commonly encountered by textile SMEs operating under a Make-to-Order (MTO) production strategy. Under this approach, production volumes and raw material requirements fluctuate based on customer orders, prompting firms to apply production tolerances to avoid order shortages. Consequently, surplus textile materials are generated at the end of each production cycle. Although these materials remain in good condition and retain economic value, their utilization must be carefully managed to avoid disrupting core production activities or violating business ethics related to customer-specific orders.

To address this issue, textile SMEs often channel surplus materials through internal retail branches that serve end consumers. However, in many cases, operational processes between production units and retail branches are not fully integrated. This lack of integration results in limited inventory visibility, inefficient material transfers, and constrained opportunities for sales expansion. Furthermore, retail sales activities are frequently conducted through conventional physical channels, limiting SMEs' ability to capitalize on digital market opportunities.

Enterprise Resource Planning (ERP) systems have been widely recognized as effective tools for integrating business processes, improving inventory management, and supporting data-driven decision-making. Prior research demonstrates that ERP implementation can enhance production planning, stock control, transaction recording, and financial reporting efficiency [5]. Sarno et al. also demonstrate that the implementation of an Odoo-based ERP system is able to resolve business issues that were previously handled manually, such as stock calculations, transaction recording, and the preparation of financial reports [6]. Meanwhile, in her research, Himawan implemented the Odoo ERP system in a textile company that outsourced the dyeing process of raw fabric to partners [7]. In addition, several studies highlight the use of e-commerce modules as a digital distribution channel that can expand market reach and improve sales performance, especially for small and medium-sized companies [8].

Despite these advantages, existing literature predominantly emphasizes intra-company ERP integration, while limited attention has been given to intercompany or inter-unit integration within the same business group. In particular, research examining ERP-based intercompany integration for managing and commercializing surplus production materials remains scarce. This gap indicates the need for further investigation into integrated digital models that simultaneously support inventory optimization and sales enhancement.

Therefore, this study aims to design and implement an ERP Odoo-based intercompany integration model that connects production units and retail branches within textile SMEs through intercompany transaction features and e-commerce modules. With this implementation, the management process of leftover materials is expected to become more transparent, well-controlled, and able to expand sales reach. To ensure a structured system development process, this study adopts the Software Development Life Cycle (SDLC) using the waterfall model. Based on the identified challenges, this study addresses the following research question:

RQ1: How can ERP Odoo-based intercompany and e-commerce integration improve sales performance and information synchronization in textile SMEs?

RQ2: To what extent can the proposed integration model automate order processing and support business growth in textile SMEs?

2. Research methods

The research method used in this study is the System Development Life Cycle (SDLC) with the waterfall model. This model was chosen because it aligns with the characteristics of research focused on developing a system in a structured and systematic manner. The waterfall model emphasizes a sequential workflow, starting from the planning stage, requirements analysis, system design, implementation, and culminating in a fully operational system [9]. This approach is considered appropriate for the development and implementation of an Odoo-based ERP system, as it enables clear documentation of system requirements at each stage, minimizes the risk of uncontrolled changes during development, and ensures that the resulting system aligns with the predefined research objectives. By applying the waterfall model, each development phase can be completed and validated before proceeding to the next stage, thereby enhancing process transparency and system reliability. The stages of the SDLC Waterfall method used in this study can be seen in Figure 1.

The planning stage begins with data collection activities aimed at understanding the initial condition of the company and the requirements of the system to be designed [10]. Data were obtained through interviews with management, observations of production and inventory management processes, as well as the review of internal documents related to leftover materials. This stage involves three main steps; System Request, Feasibility Analysis, and the identification of the Actual Business Process [11]. The analysis stage focuses on designing the proposed business processes. The outputs of this stage are used to ensure that the system to be developed addresses the issues identified during the planning stage and aligns with the objectives of enhancing inter-unit integration and overall business efficiency within the organization. The design stage is the translation of the results of the requirements analysis into the system design to be implemented [12]. This stage is carried out to design the system structure that will be configured in the Odoo ERP based on the results of the requirements analysis, so that the developed system can fully support intercompany business processes [13]. The implementation stage is the final phase of the SDLC Waterfall method, where the system design begins to be realized into a functional system. In this stage, functional testing is also conducted to ensure that each module operates according to the requirements and can be well integrated with one another [14].

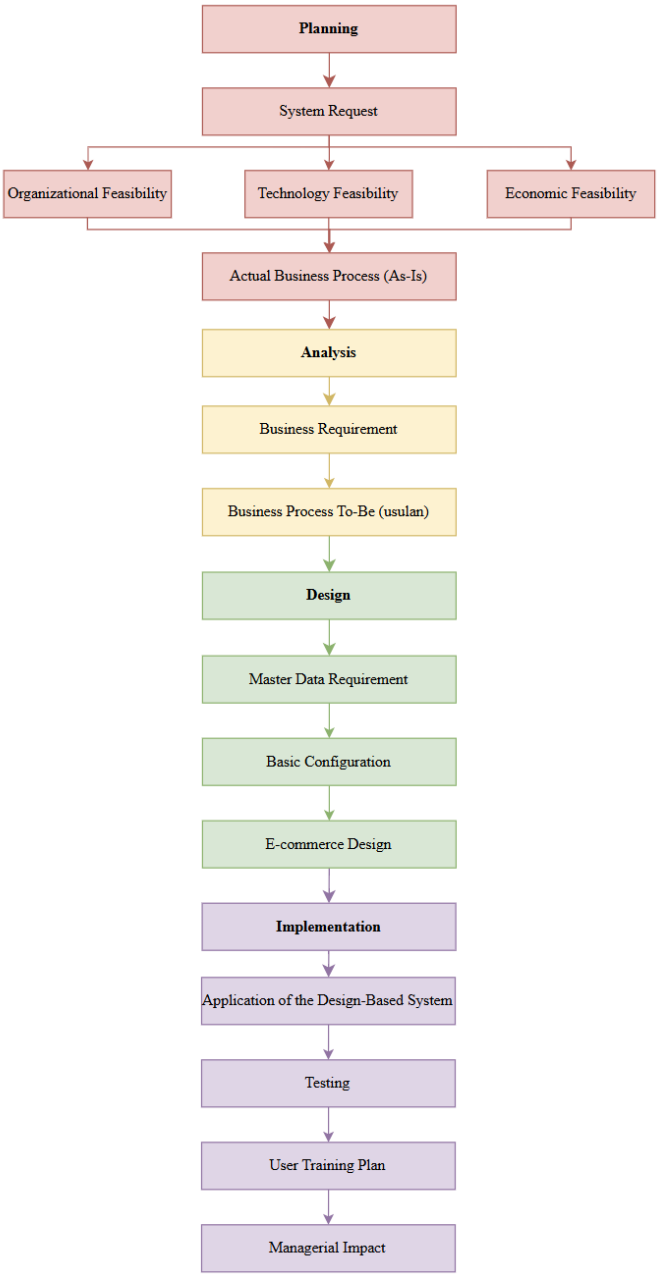

Figure 1. SDLC waterfall

Unlike previous studies that primarily focus on ERP implementation within a single organizational entity, this research proposes and implements an ERP-based intercompany integration model specifically designed to manage and commercialize surplus production materials in textile SMEs. The originality of this study lies in the combination of three elements: (1) the utilization of Odoo intercompany transaction features to automate transactions between production and retail units within the same business group, (2) the integration of an e-commerce module as a digital channel for surplus material sales, and (3) the application of this model in a customize textile environment where leftover materials are generated as a consequence of production tolerance policies. This integrated approach extends the existing body of knowledge by demonstrating how digital technologies can simultaneously support inventory optimization and sales expansion where resource become big constrained for SMEs.

3. Results and Discussion

As first step, the System Request was developed to identify the organizational objectives, functional requirements, and expected business benefits associated with the implementation of the Odoo ERP system. The primary focus of this initiative was to establish intercompany integration between the production unit and the retail branch, while simultaneously expanding sales opportunities through the utilization of the e-commerce module. The preparation of the System Request served as an important foundation for the system development process because it ensured that the proposed solution directly addressed the operational issues identified during the preliminary investigation. In the existing environment, surplus fabrics generated from production activities were transferred manually to the retail branch, resulting in fragmented transaction records, limited inventory visibility, and difficulties in monitoring the movement of goods between organizational units. In addition, the absence of digital sales channels constrained the ability of the retail branch to maximize the commercial value of these surplus materials.

The System Request is prepared to identify the objectives, requirements, and benefits of developing the Odoo ERP system, focusing on intercompany integration and sales expansion through the e-commerce module. Meanwhile the feasibility analysis was conducted to evaluate the organization's preparedness to implement the proposed intercompany integration model from organizational, technological, and economic perspectives. This assessment was essential to determine whether the implementation could be realistically executed within the company's existing capabilities and resource constraints. From an organizational perspective, the analysis examined the availability of personnel capable of operating the ERP system, the degree of familiarity with digital tools, and the organization's readiness to adopt modified business processes resulting from the implementation. Since employees at the production unit had prior experience using Odoo ERP in their daily activities, the anticipated resistance to change was considered relatively low. However, additional training was identified as necessary to ensure users understood the newly introduced intercompany transaction mechanisms and e-commerce functionalities.

The technological feasibility assessment focused on evaluating the adequacy of the company's existing hardware and software infrastructure to support the integrated system. Because Odoo ERP had already been implemented within the production unit, no substantial investment in new technological infrastructure was required. Instead, the implementation primarily involved extending system functionalities and configuring additional modules to support integration with the retail branch. Economic feasibility considered the financial implications associated with implementation, including costs related to system configuration, employee training, user manual preparation, and adjustments to accounting structures supporting intercompany transactions. Given that Odoo is an open-source ERP platform, the organization was able to leverage its existing investment while minimizing additional

expenditures. The findings of the feasibility analysis indicate that the proposed implementation was practical and achievable within the company's operational and financial capabilities.

A summary of the system request and the feasibility analysis can be seen in Table 1. Although this study focuses on a textile SME, the proposed architecture is not industry-specific. The integration mechanism between ERP Odoo, intercompany transactions, and e-commerce platforms can be replicated in other SMEs that manage multiple business entities and online sales channels. However, the transferability of the model may be influenced by differences in business complexity, transaction volume, and organizational readiness for digital transformation. Therefore, customization may be required when applying the framework to other sectors.

Table 1.
System Request and Feasibility Analysis

Business Needs	1. Ensuring the smooth operation of processes between the production unit and the retail branch, so that the product availability at the retail branch is consistently maintained to support sales activities. 2. Increasing the sales of surplus production materials through the e-commerce channel.
Business Requirements	1. Activating the intercompany transaction feature in the Odoo ERP system to facilitate stock transfers from the production unit to the retail branch. 2. Providing integrated synchronization of stock data and transaction history across companies between the inventory, accounting, and sales modules. 3. Configuring the e-commerce module at the retail branch as a sales platform for sellable surplus materials from the production unit.
Business Value	1. Reducing material accumulation in the warehouse by increasing sales. 2. Ensuring stock availability at the retail branch so that sales activities are not disrupted. 3. Increasing the economic value of leftover materials and expanding market access.
Organizational Feasibility	1. Adequate human resources are available to operate the ERP system. 2. Staff are familiar with basic ERP functionalities and digital tools. 3. Implementation support is provided through user manuals and training session.
Technology Feasibility	1. The company already has computer equipment with specifications adequate to run the system.
Economic Feasibility	1. Capital Expenditure (CAPEX) 2. Operational Expenditure (OPEX) 3. Training Costs

The Actual Business Process (as-is) describes the operational conditions prior to the implementation of intercompany integration and e-commerce development, as illustrated in Figure 2. Mapping the existing business process was a crucial step in understanding the root causes of operational inefficiencies and identifying opportunities for improvement through system integration. At the time of the study, the production unit had already adopted Odoo ERP to support core operational activities, including procurement, production planning, inventory control, and business-to-business sales transactions. In contrast, the retail branch, which was responsible for selling surplus fabrics to end consumers, had not implemented the ERP system and relied predominantly on manual procedures and physical store operations.

The production process began with the procurement of raw materials, followed by manufacturing activities that generated finished textile products. Due to the Make-to-Order production strategy and the application of production tolerances to mitigate shortages, surplus materials were frequently produced at the end of manufacturing cycles. These materials retained economic value and were subsequently transferred to the retail branch for resale. However, the transfer process was performed manually without automated support from the ERP system. Inventory movements between the production unit and the retail branch were documented separately, creating inconsistencies in stock records and limiting visibility across organizational units. Furthermore, retail transactions were recorded using conventional methods and were not integrated with the company's inventory or accounting systems. The absence of an e-commerce platform further restricted the retail branch's ability to expand its customer base beyond physical store visitors. These findings demonstrate that the existing business process lacked the level of integration necessary to effectively manage surplus inventory and optimize its economic potential. Therefore, the development of an integrated intercompany ERP solution emerged as a strategic initiative to improve operational transparency, transaction accuracy, and sales performance. The comparison between current and proposed processes is summarized in Table 2. The analysis stage focused on examining the discrepancies between the existing business processes (as-is) and the desired future processes (to-be) that would support intercompany integration and digital sales expansion. The objective of this phase was to ensure that the proposed ERP configuration adequately addressed the operational challenges identified during the planning stage. The as-is analysis revealed several critical limitations, including the absence of automated stock transfers between business units, fragmented transaction records, limited inventory visibility, and the lack of digital sales capabilities at the retail branch. These limitations contributed to inefficient utilization of surplus materials and restricted opportunities to generate additional revenue from residual inventory.

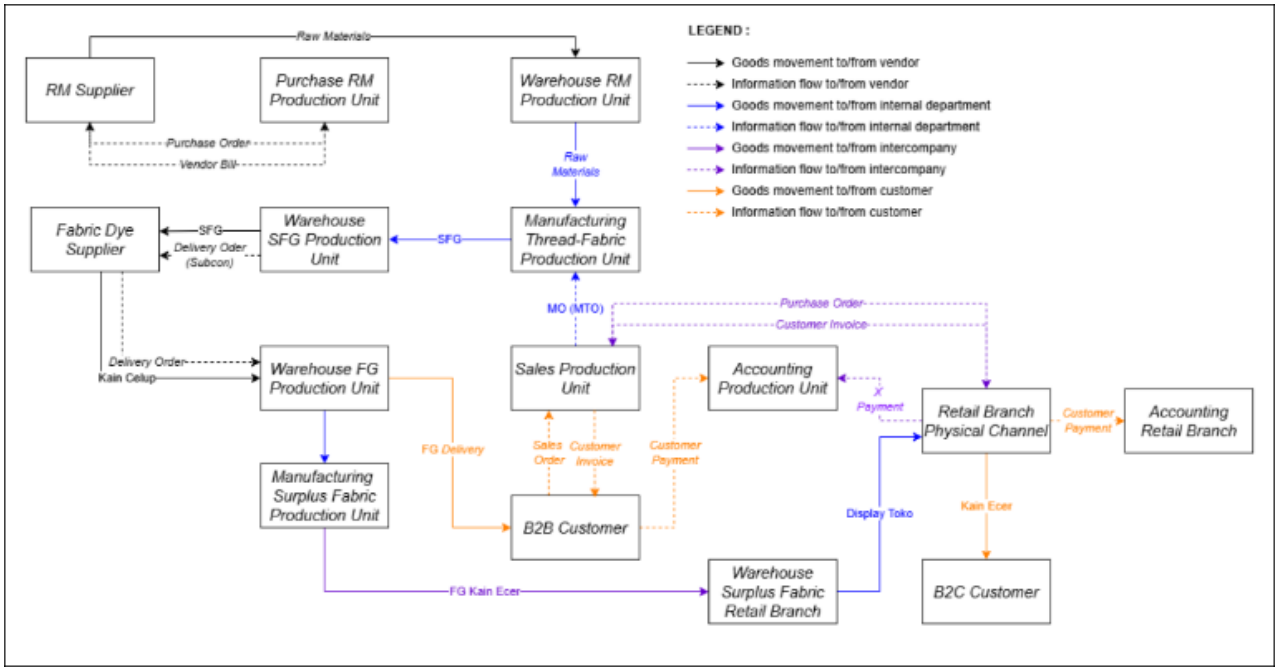

Figure 2. Actual business process (as-is)

Table 2.
Business Requirement

No.	Business Requirement
1	Automatic recording of intercompany transactions • As-Is: The intercompany transaction feature has not been utilized. • To-Be: The Odoo ERP system automatically generates a Sales Order (SO) at the production unit whenever a Purchase Order (PO) is created by the retail branch through the intercompany transaction feature, eliminating manual sending. Additionally, a Manufacturing Order (MO) is generated at the production unit for surplus materials allocated to the retail branch.
2	Automation of intercompany billing • As-Is: The intercompany transaction feature has not been utilized. • To-Be: When the production unit creates a Customer Invoice for an intercompany transaction, the Odoo ERP system automatically generates a corresponding Vendor Bill at the retail branch.
3	E-commerce module configuration for the retail branch digital sales • As-Is: The retail branch does not yet have an e-commerce platform, and sales activities are limited to the physical store. • To-Be: Implement the e-commerce module at the retail branch to automatically display surplus products from the production unit, including real-time updates on pricing, variants, and stock availability.

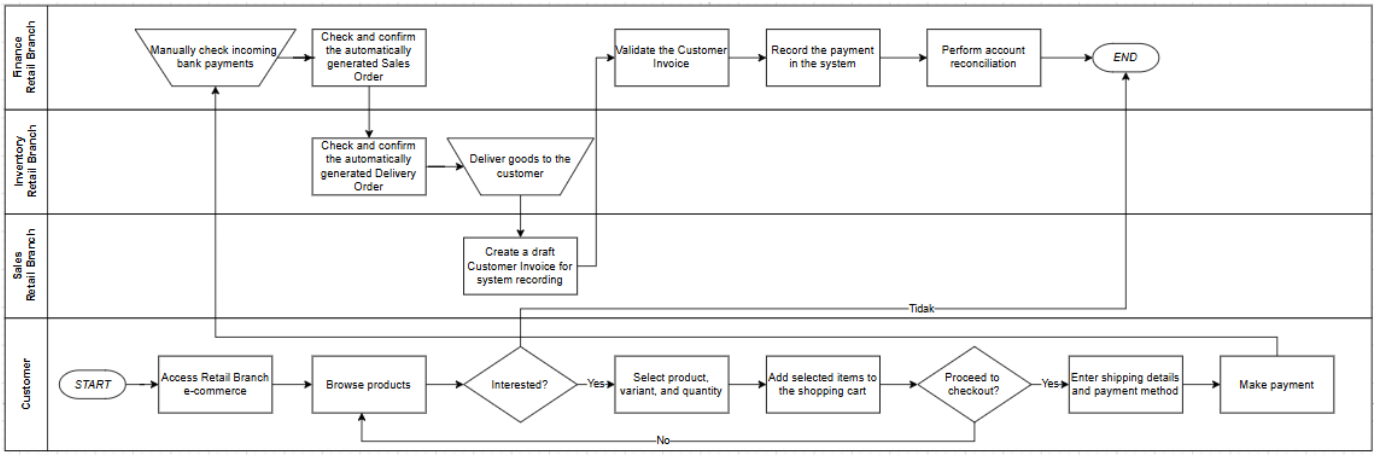

Figure 3. Business process to be (from customer order in e-commerce and retail branch)

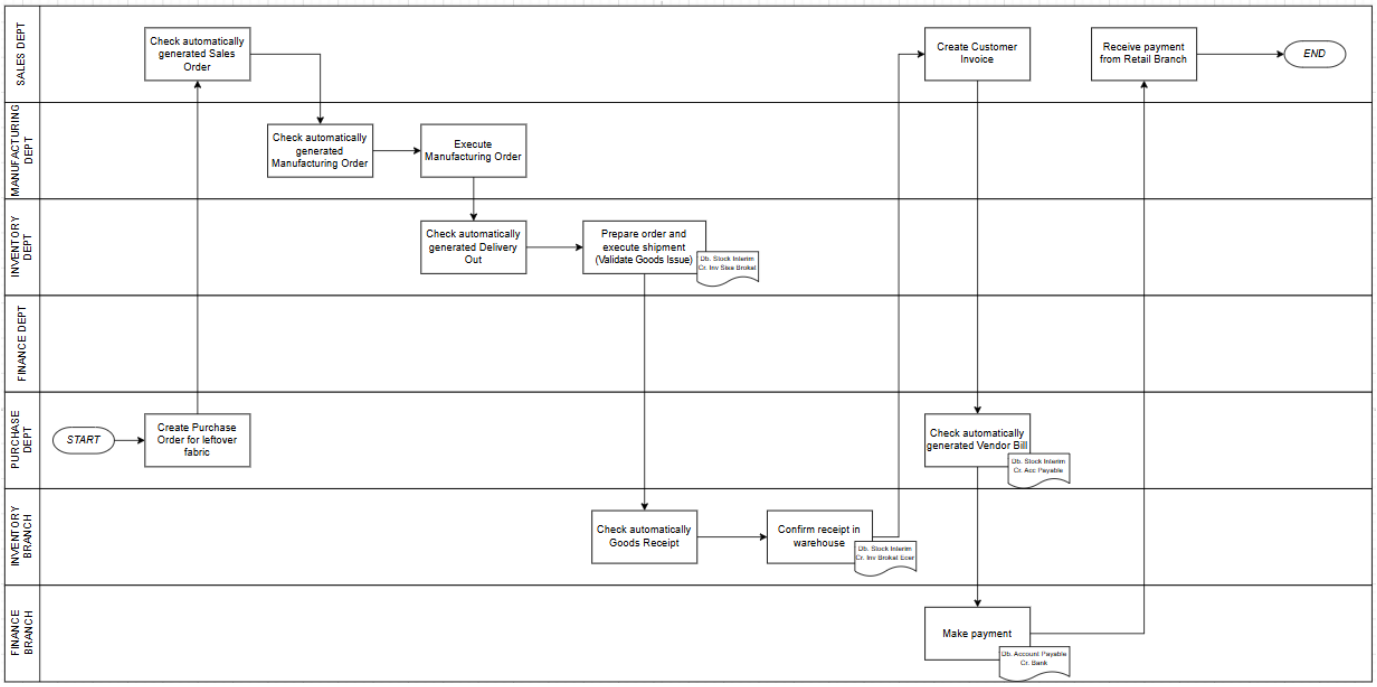

Figure 4. Business process to be (retail branch order processed in the production unit)

Based on these findings, a to-be business process was designed to establish seamless information flow between the production unit and the retail branch. The detailed to-be process flows are illustrated in Figure 3 and Figure 4. The proposed process incorporated automated intercompany transactions, synchronized inventory updates, integrated accounting records, and e-commerce-enabled sales activities. Through this integrated approach, surplus materials could be systematically transferred, monitored, and commercialized using a unified digital platform. The gap analysis performed during this stage provided a clear basis for defining the functional requirements of the system and ensured that the subsequent configuration activities aligned with organizational objectives.

The master data preparation stage involved identifying and adjusting the information required to support the newly developed intercompany business processes. Since the production unit had already implemented Odoo ERP, the existing master data infrastructure remained largely intact. Consequently, this stage focused primarily on extending and refining the available data to accommodate the integration requirements. Several additions and modifications were required, including the creation of product records specifically associated with surplus materials, the establishment of stock locations representing each organizational unit, and the configuration of data elements supporting intercompany transactions. These adjustments ensured consistency of information across companies and enabled the automated generation of transactional documents within the integrated environment. The accuracy and completeness of master data were considered critical success factors because they directly influenced the reliability of inventory records, transaction processing, and reporting outcomes generated by the system.

The basic configuration stage translated the business requirements identified during the analysis phase into specific ERP settings within Odoo. The purpose of this activity was to align the technical configuration of the system with the proposed business process design. For the production unit, configuration activities focused on adapting the existing ERP environment to support intercompany operations. This included verifying accounting structures, reviewing inventory parameters, and ensuring compatibility with automated transaction flows. Meanwhile, the retail branch required initial system setup activities, such as establishing company records and defining purchase and sales accounts necessary for recording intercompany transactions.

Furthermore, the Intercompany Transactions feature available within Odoo was activated and configured through the system settings. Adjustments were also made within the Inventory, Sales, and Purchase modules to ensure that purchase orders generated by the retail branch could trigger the appropriate intercompany processes, including stock transfers and related accounting entries. These configurations formed the technical foundation enabling the seamless exchange of information between organizational units. As a result, the system was capable of supporting automated transaction processing, enhancing traceability, improving inventory visibility, and reducing manual intervention throughout the surplus material management process.

The e-commerce interface developed in this study is illustrated in Figure 5. The e-commerce interface was designed to facilitate the commercialization of surplus textile materials through an integrated digital sales channel. The interface design encompasses the main landing page, product catalogue structure, product descriptions, stock availability information, pricing details, and the ordering and payment mechanisms required to support customer transactions. Particular emphasis was placed on ensuring that the e-commerce module operates seamlessly with the Inventory and Sales modules within the

Odoo ERP environment. Through this integration, every customer transaction performed through the online platform automatically updates inventory records and generates the corresponding sales documents in real time. This capability reduces the risk of stock discrepancies between the digital storefront and the actual inventory available at the retail branch, thereby improving transaction accuracy and enhancing customer experience. Beyond functioning as a sales platform, the e-commerce module serves as a strategic mechanism for transforming surplus production materials into revenue-generating assets. By extending market reach beyond conventional physical store visitors, the organization gains greater opportunities to improve inventory turnover and reduce idle stock accumulation.

The implementation stage represents the realization of the proposed system design into an operational environment. In this phase, the configured Odoo ERP system was deployed to support intercompany transactions and digital sales activities. To ensure that the developed system fulfilled organizational requirements, several implementation activities were conducted, including system testing, user preparation, and an assessment of the managerial implications associated with the adoption of the new business processes.

The detailed results of the functional testing are presented in Table 3. The testing stage was conducted to verify that the developed system operated according to the defined business requirements and adequately supported the intended intercompany integration processes. Functional testing focused on validating whether each configured feature performed as expected, including company setup, product synchronization, automated intercompany transactions, invoice generation, and the publication of products through the e-commerce platform.

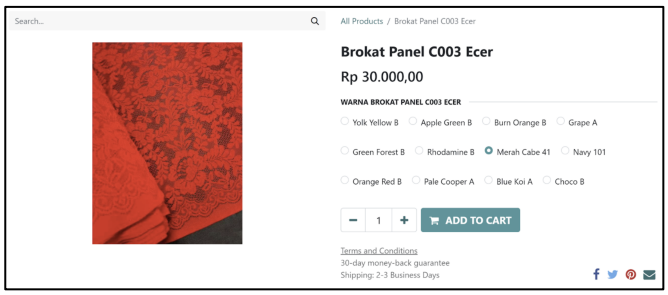

Figure 5. E-commerce design

Table 3.
Functional Test Result

No.	Test Name	Expected Result	Actual Result	Status
1	Configuration of company record for the retail branch	Retail branch is successfully added to the Odoo system and connected with the production unit.	Company data successfully saved and accessible across companies.	Pass
2	Addition of intercompany transaction accounts	Intercompany sales and purchase accounts are successfully created and appear in the relevant journals.	Accounts are well integrated in the accounting module.	Pass
3	Addition of product master data for leftover materials for intercompany transactions	Leftover products are successfully added and appear in the product lists of both companies.	Product data appears and can be selected in intercompany transactions.	Pass
4	Validation of Purchase Orders from the retail branch generating automatic Sales Orders and Manufacturing Orders at the production unit	Each PO from the retail branch generates automatic SO and MO at production unit.	SO and PO are automatically created, as shown in Figure 6.	Pass
5	Validation of Customer Invoice at the production unit generating automatic Vendor Bill at the retail branch	When a Customer Invoice is created at the production unit, the system automatically generates a Vendor Bill at the retail branch.	Vendor Bill is automatically created according to the transaction value, as shown in Figure 7.	Pass
6	Addition of surplus products to the retail branch e-commerce catalog	Surplus products appear in the e-commerce catalog and are ready for sale.	Products appear with descriptions, stock, and prices according to settings.	Pass

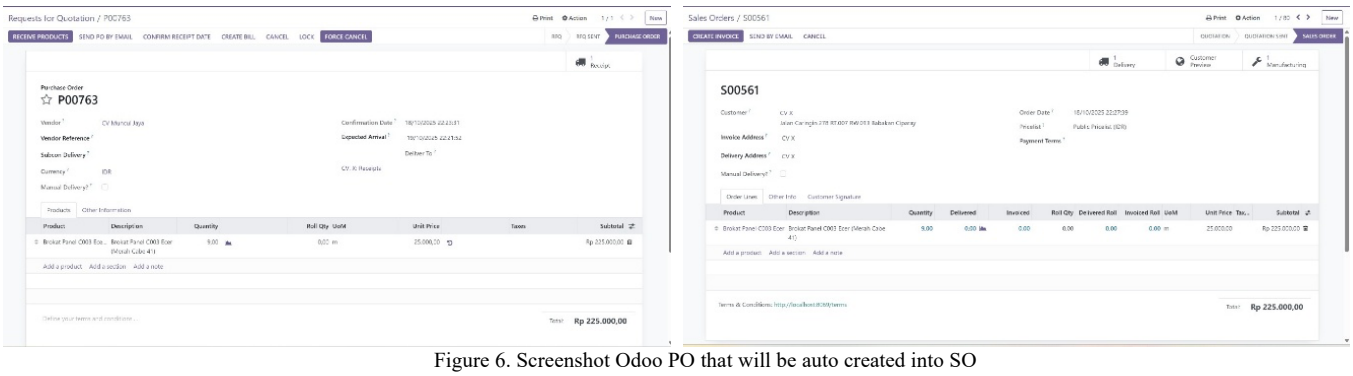

Figure 6. Screenshot Odoo PO that will be auto created into SO

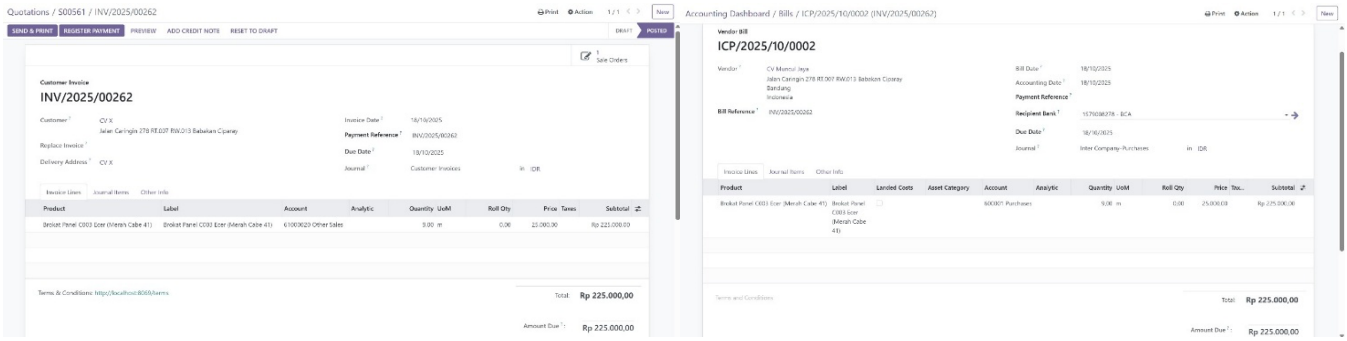

Figure 7. Screenshot Odoo where customer invoice will be auto created into vendor bill

To complement the technical validation process, User Acceptance Testing (UAT) was also performed to assess the suitability of the system from the perspective of end users. Representatives from the sales, inventory, accounting, and management functions participated in the evaluation process. Participants were instructed to execute several predefined operational scenarios, including creating intercompany purchase transactions, validating invoices, and managing surplus product listings through the e-commerce module.

Table 4.
UAT Result

No.	Respondent Dept	Accuracy of Transaction Processing	Ease of Use	Perceived Usefulness	Average Score
1	Sales	5	4.3	4.4	4.6
2	Inventory	5	4.5	4.6	4.7
3	Accounting	5	4.1	4.3	4.5
4	Manufacturing	4.7	4.6	4.4	4.6
5	Purchase	5	4.4	4.3	4.6
Overall Average		4.9	4.4	4.4	4.6

Rating Scale:
1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree.

The UAT evaluation focused on three key dimensions: transaction accuracy, ease of system use, and perceived usefulness in supporting daily operational activities. Five users participated in the assessment, resulting in an overall average score of 4.6 out of 5. The result shown in table 4 indicates a high level of user acceptance and suggests that the developed system aligns well with organizational needs and user expectations. The inclusion of UAT strengthens the validity of the implementation outcomes by demonstrating that the proposed solution is not only technically functional but also practically applicable within the organizational context.

Based on the organizational feasibility analysis, employees at the production unit were already familiar with the use of Odoo ERP for activities related to production, procurement, sales, and accounting. Consequently, the training strategy focused primarily on facilitating users' transition toward the newly introduced functionalities rather than providing basic ERP instruction. The training program emphasized the configuration and operational utilization of intercompany transaction features and the management of sales activities through the e-commerce module implemented at the retail branch. Training materials included procedures for processing automated intercompany transactions, validating system-generated documents, monitoring inventory movements across companies, and maintaining online product catalogues. Through this targeted approach, the organization sought to minimize user resistance, accelerate system adoption, and ensure the effective utilization of the newly implemented digital capabilities.

The implementation of intercompany integration and e-commerce functionality has implications extending beyond technological changes and influences several managerial dimensions within the organization. First, effective coordination between management and system consultants is required to establish a shared understanding of the redesigned intercompany transaction flows and digital sales processes. Such collaboration is essential to ensure that system configurations accurately reflect organizational policies and operational requirements.

Second, employees involved in sales, inventory management, and accounting functions require additional competency development to adapt to the automated processes introduced by the system. The shift from manual procedures toward integrated digital workflows necessitates continuous learning and organizational support. Third, existing Standard Operating Procedures (SOPs) must be revised and documented to accommodate the newly established business processes. These revisions include procedures governing surplus material transfers, validation activities related to Sales Orders, Purchase Orders, and Vendor Bills, as illustrated in Figure 8. Updated SOPs contribute to process standardization and help maintain consistency in operational execution.

Fourth, supporting documentation, including system user manuals and process guidelines, should be provided to facilitate user understanding and promote consistent system utilization across departments. Fifth, although the use of an open-source ERP platform reduces licensing expenses, organizations should allocate additional resources for user training, documentation development, and accounting adjustments associated with intercompany transactions.

Finally, from an operational perspective, the implemented model changes the role of surplus materials within the organization. Instead of remaining as idle inventory that incurs storage costs, surplus fabrics become marketable products distributed through the retail branch using both physical and digital channels. This transformation contributes to improved resource utilization and enhances the economic value derived from production activities.

Standard Operating Procedure for Intercompany Transfer of Surplus Materials

1. **Objective**
   To ensure that the transfer of surplus materials from the production unit to the retail branch is conducted in a planned, documented manner and automatically recorded in the Odoo ERP system through the Intercompany Transaction feature.

2. **Scope**
   This SOP covers all activities related to the transfer of surplus production materials from the production unit warehouse to the retail branch, starting from the creation of a Purchase Order (PO) by the retail branch, automatic generation of a Sales Order (SO) by the production unit, to the receipt of goods at the retail branch warehouse and recording of intercompany transactions.

3. **Responsibilities**
   Retail Branch Administrative Staff:
   - Create POs in Odoo for leftover materials to be purchased from the production unit..
   - Ensure product data, quantities, and prices match the production unit's product catalog.

   Production Unit Administrative Staff:
   - Verify the automatic Sales Orders generated from the retail branch's POs.
   - Create Customer Invoices for the retail branch.

   Production Unit Warehouse Staff:
   - Prepare and package leftover materials according to the order.
   - Create and validate Delivery Orders for shipment to the retail branch.

   Retail Branch Warehouse Staff:
   - Receive goods in the system and verify the quantity and condition of the materials received.

   Retail Branch Accounting Staff:
   - Validate Vendor Bills automatically generated when the production unit creates Customer Invoices.
   - Process payments to the production unit.
   - Reconcile accounts to ensure financial reports are synchronized.

   Production Unit Accounting Staff:
   - Verify payments made by the retail branch.
   - Reconcile accounts to ensure financial reports are synchronized.

4. **Execution Procedure**
   Request Process
   1. Retail branch administrative staff creates a PO for surplus materials through the Odoo system.
   2. The system automatically generates a SO at the production unit.
   3. Production unit administrative staff verifies the SO and creates a Customer Invoice.

   Goods Delivery Process
   4. Production unit warehouse staff prepare and ship goods to the retail branch.
   5. Retail branch warehouse staff conduct physical inspection and record the receipt in the system.

   Goods Receipt Process
   6. The retail branch warehouse staff conduct a physical inspection and record the receipt in the system.
   7. Accounting staff validate the automatically generated Vendor Bill and process the payment.

   Final Process
   8. Accounting staff of both companies verify and reconcile transactions.
   9. Retail branch administrative staff ensures surplus material stock appears in the e-commerce catalog and is ready for sale to end customers.

Figure 8. SOP for intercompany transaction

To assess the potential business implications of the proposed system, a comparative analysis was conducted between pre-implementation conditions and post-implementation projections using an inventory-based performance perspective. The analysis focused on evaluating changes in surplus material absorption and idle inventory levels resulting from the integration of intercompany transactions and e-commerce functionalities within the Odoo ERP environment. Prior to implementation, only 17% of the available surplus fabric inventory was absorbed through conventional physical store sales. Consequently, approximately 83% of the leftover inventory remained idle, generating storage inefficiencies and limiting the organization's ability to realize the economic value embedded within these materials.

Following implementation, the ERP-integrated e-commerce channel is projected to potentially absorb up to 100% of the available surplus inventory, provided that all eligible products are actively listed and marketed through the digital platform. This projection is derived from the system's enhanced capabilities, including real-time inventory visibility, improved coordination between organizational units, broader customer reach through online channels, and integrated transaction processing. Therefore, the reported performance improvement should be interpreted as an estimate of the system's operational capacity rather than an empirically observed outcome obtained through longitudinal post-implementation measurement.

As illustrated in Figure 9, the projected transition from high levels of idle inventory toward complete inventory utilization demonstrates the potential strategic value of combining intercompany integration with digital sales enablement. The findings suggest that the proposed model may support improvements in inventory turnover and sales effectiveness by converting surplus materials into revenue-generating assets. A summary of the comparative performance analysis is presented in Table 5.

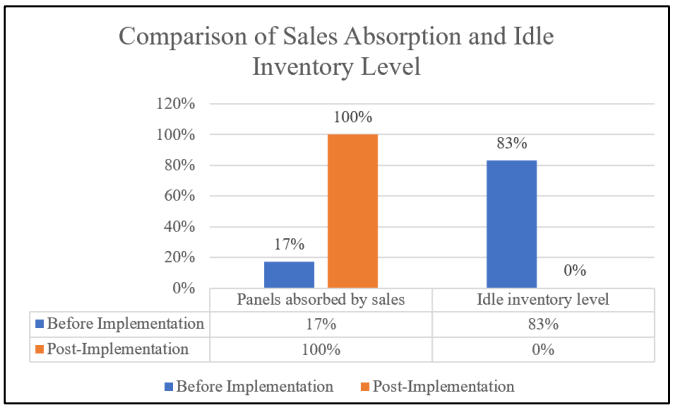

Figure 9. Comparative bar chart

Table 5.
Sales Performance Projection

Description	Before	Post-Implementation
Average leftover fabric available	100%	100%
Panels absorbed by sales	17%	Up to 100%
Sales volume increase	-	Up to +83%
Sales channel	Physical store	ERP-integrated e-commerce
Idle inventory level	83%	Potentially reduced to 0%
Inventory turnover performance	Limited	Expected to improved

4. Conclusion

This study successfully developed and implemented an Odoo ERP-based intercompany integration model to support the distribution of surplus textile materials between production and retail units within a textile SME. The implementation of the Intercompany Transaction feature enabled stock transfers to be executed automatically, recorded systematically, and monitored in real time. Consequently, product availability at the retail branch could be maintained more effectively, providing a reliable foundation for subsequent sales activities. The study also demonstrated the successful implementation of the e-commerce module as a digital sales platform for surplus production materials. Through integration with inventory and sales functionalities, the system provides real-time updates of stock availability and transaction information, thereby enhancing process efficiency, improving data transparency, and expanding market access beyond conventional physical stores. From an inventory management perspective, post-implementation projections indicate that the proposed system has the potential to substantially improve the absorption of surplus materials. Based on the analysed scenario, sales absorption could increase from 17% under conventional sales practices to up to 100% through the integrated digital channel, potentially eliminating idle inventory and reducing the operational inefficiencies associated with excess stock.

However, these findings represent projected outcomes derived from system capabilities and historical business conditions rather than empirically validated long-term performance measurements.

This study is subject to several limitations. First, the research employed a single-case study approach involving one textile SME, which may limit the transferability of the findings to organizations with different operational characteristics. Second, the projected business benefits were estimated using simulation assumptions and historical transaction patterns rather than longitudinal post-implementation observations. Future research is therefore encouraged to involve multiple organizations across different industrial sectors and incorporate long-term performance evaluations to validate the sustained impact of the proposed integration model. Overall, the findings suggest that ERP-enabled intercompany integration, supported by digital sales capabilities, offers a promising approach for improving inventory utilization and enhancing operational transparency within SMEs. Although developed within a textile context, the proposed framework may provide valuable insights for other organizations seeking to leverage open-source ERP technologies to strengthen competitiveness and support sustainable business growth through more effective resource management.

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