

The Effect of Enterprise Resources Planning Implementation on Supply Chain Management on Micro, Small and Medium Enterprises Performance

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Abstract. Micro, Small and Medium Enterprises play a very large role in the Indonesian economy and indirectly support the Indonesian economy. Supply Chain Management is the process of managing goods, information, and finance from suppliers to end consumers. Enterprise Resource Planning is a system used to manage and automate various business processes in organizations to improve efficiency and data accuracy. This research was made to find out and analyze the application of Supply Chain Management based on Enterprise Resource Planning for Micro, Small and Medium Enterprises. This research uses qualitative methods in the form of journal articles and related books, as well as interviews and observations with several Micro, Small and Medium Enterprises owners in Malang City, East Java, Indonesia. The results of the study show and support that the collaboration of Supply Chain Management and Enterprise Resource Planning applied by several Micro, Small and Medium Enterprises owners has a positive impact on business actors, especially on business development until now consistently producing and distributing products on target.

Keywords: *Supply Chain Management, Enterprise Resources Planning, Micro/Small/Medium Enterprises, Performance.*

Introduction

Indonesia's economy is largely dominated by Micro, Small & Medium Enterprises. Over time, the role of Micro, Small & Medium Enterprises has indirectly become a support for the Indonesian economy in the current era, so a system is needed to create innovation and digital technology to achieve customer satisfaction, achieve business success, and reach a wider market share. ERP systems can be referred to complex enterprise-level information systems. The level of complexity is always based on the need for synchronization of business processes and integration of various applications functioning within the organization. This, in turn, can smoothly automate material movement, information flow, mobilization of financial resources, and access. The use of ERP systems is expected to reduce costs by increasing efficiency through computerization, accurate and realtime information to support decision making, better communication with customers and suppliers, and better business control (Insana and Mayndarto, 2019).

Companies do not need to synchronize information on separate computer systems because the data has been integrated in the ERP system (Wibisono, 2005). The process of implementing a successful ERP system will improve performance in all fields in the company and employees, where this improved performance will have an impact on the effectiveness and efficiency of business processes in achieving business goals (Alvianto et al. 2021). ERP implementation will greatly support direct interaction between customers and sellers, more efficient business arrangements, in more controllable finances. For example, a company has a GF Accounting system which is connected between the accountant and the operational cashier automatically, so every receipt of money from the customer to the cashier, the transaction will be recorded directly into the system controlled by the cashier so that the recording of the transaction is also in the hands of the accountant, suppose there is a loss of data or a shortage of money, but an accountant can show a proof without explanation in the form of assumptions. This is the business function in using the ERP system to produce an effectiveness and efficiency company. (Erwanto and Zusi, 2020)

On the other hand, many have successfully used the ERP system and there are many assumptions that success in using the ERP system, namely, the quality of a system and information, the people who use the system, the people who respond to the system and so on. Some state that the use of the ERP system is also a reflection of the attitude in handling an individual computer that has a relationship with company activities so that it can measure how well their performance is carried out. The more sophisticated technology is today, the more it is developed including information systems which if done systematically and precisely will produce better and tidier results by using a system with a process that uses time efficiency and data that is done effectively so that the IT department can develop and make better innovations to design and connect all departments. The purpose of a company in applying a system to be more efficient, increase productivity in quality, time and satisfaction felt by both employees and respondents or consumers who are said to be actors in using the system.

The use of ERP applications will increase the level of efficiency in the activities of a company with a production base with top-level technology. ERP system is a management resource that is categorized as very important in carrying out future implementations. Usually ERP systems are more suitable for industrial fields such as production, many branch connections, long-term production time and others. ERP by understanding the program structure of the company. Secondly, make a questionnaire for users and interview them whether the system is running smoothly and finally improve improvisation from the mistakes that have been made and accept suggestions from people who answer both through questionnaires and through interviews in order to develop ERP systems in a company.

Methods

This research uses qualitative descriptive methods (Rukajat, 2018) as well as interviews and direct observation to several Micro, Small and Medium Enterprises. In explaining the role of Enterprise Resource Planning on the performance of a Micro, Small and Medium Enterprises, qualitative research tries to understand, explore and penetrate into the symptoms (Echdar, 2017). Then interpret and conclude these symptoms according to their context. So that an objective and natural conclusion is reached in accordance with the symptoms in that context (Dr. Bachtiar, S.H., 2018). The data source of this research comes from secondary data, secondary data is data that is not primary and has been collected in advance and documented. Secondary data in this study include journals, books, to the results of direct observations and interviews.

The type of approach used is descriptive. Descriptive itself is research that tries to tell the solution of current problems based on data, by presenting, analyzing and interpreting the two. The type of descriptive qualitative research used by the author is intended to obtain information about MSMEs in depth. In addition, this method is expected to discuss problems or those that occur in MSMEs. Through this method, the author tries to describe more about what the company is facing.

Result and Discussion

ERP is the latest and most significant development of production planning and control systems for manufacturing companies (Gumanti & Utami, 2019) developed from Material Requirement Planning (MRP) in 1975 and Material Resources Planning II (MRP II) in 1980 ERP was first used as early as 1988 because Dow Chemical Company purchased its first ERP module from SAP AG Germany, but ERP systems have been recognized since 1994 where SAP R/3 was marked as typical evidence of ERP systems (Putra et al., 2021). In the following years, several software vendors such as Oracle, People Soft, Baan, and JD Edwards joined SAP to compete in the ERP consulting and system integration market. ERP is also seen as “the ideology of planning and managing the resources of an entire organization in an efficient, productive, and profitable manner, and is embodied in the form of a package of configurable information systems” ERP integrates all parts of the organization like a “central nervous system” where it gets up-to-date information from various parts of the business and conveys information to other parts of the business in real time (Snideret al., 2009).

Influence Factors of Enterprise Resource Planning System Users on Supply Chain Management

Certainly the influence of factors on this supply chain will be very large because it is related to income and delivery, of course, it needs a record so that the information data can be arranged neatly and sequentially and provide convenience for human resources when they want to trace the records in terms of dates, information, who is responsible for supply, production and delivery time. In addition, when recording activities, both delivery and serial entry, will also be recorded clearly with the person concerned from having a password that is known by several people because it is private so that the system is only controlled and at the same time accounted for by the party concerned and it will certainly be known that each session carried

out will be accounted for by whom later it will be known when there is a loss of data or problems that occur and can be known through the system in the form of information that has been filled in by the person in charge. This is an example of the advantages of using an ERP system in the supply chain.

Human Resource

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In one of the studies, it was found that ERP systems affect supply chain integration in Jordanian pharmaceutical manufacturing organizations, where production and operations management systems have the highest effect on supply chain integration, inventory management systems, financial management systems, and customer relationship management systems. In another study, ERP implementation strategies in Turkey have been identified and an evaluation of their success has been made. Also, the effects of these strategies on SCM performance have been evaluated. The results of this study show that ERP has a positive effect on the overall performance of SCM where it has been found that successful ERP implementations have more performance improvement opportunities. In addition, it is evident that the use of ERP can improve SCM performance further which cannot be achieved individually. Since ERP system implementation is a risky and costly process, this issue is critical for strategic investment decisions. These results provide great insight to supply chain managers who have used or plan to invest in this strategy.

Conclusion

This research reveals that the implementation of Enterprise Resource Planning (ERP) systems has a positive impact on the integration and efficiency of Supply Chain Management (SCM) in Micro, Small and Medium Enterprises (MSMEs). By automating business processes, ERP enables more structured, real-time, and integrated data management, thus improving operational effectiveness and decision-making.

Some key points from the research :

1. Benefit of ERP for SCM

ERP makes it easier to record transactions, information flow, and product distribution more neatly and accurately. It also creates efficiency in recording production, shipping, and inventory management.

2. Influence on Human Resources (HR)

In the context of HR, ERP enables digital recording of employee data, attendance, and important documents. This improves data reliability and administrative efficiency.

3. Business Efficiencies

ERP implementation accelerates production and distribution processes, improves financial management, and enables better collaboration between departments.

4. Risk Factors and Implementation Strategies

Despite its many advantages, ERP implementation requires a large investment and presents significant risks. The right strategy is needed to maximize implementation results and improve SCM performance.

Overall, this study concludes that ERP integration in SCM makes an important contribution to the success of MSMEs, especially in improving operational efficiency and competitiveness in the market. The utilization of this technology also reflects the need for digital innovation in supporting Indonesia's economic growth.

References

- Nugroho Marno, Faranita Refri W. (2021). Implementation on the Enterprise Resources Planning (ERP) System in Micro, Small, and Medium Enterprises (MSMES) Bussiness Actors. *Business Journal: Theory and Implementation*. 12(2).
- Lunarindiah Gatri, Haryanto Astari VJ. (2023). The Effect Of Supply Chain Management Strategies On Operational Performance With Mediation Of Organizational Competencies In Micro, Small And Medium Enterprises. *Trisakti Economic Journal*. 3(1), 1187-1196.
- Silalahi Prayoga I. (2022). The Effect of Enterprise Resource Planning (ERP) on the Performance of Small and Medium Enterprises. *Journal Syntax Admiration*. 3(6).
- Dino, Qadri Aulia Rizni. (2022). The Effect of ERP System-Based Supply Chain Management in Improving the Performance of an Organization/Company. *Journal of Tambusai Education*. 6(2).
- Norawati S, Zulher. (2019). Supply Chain Management Influence On The Performance Of Umkm At The Center Of Processing Fishery Products In Koto Mesjid Village, XII Koto Kampar Sub-district. *Journal of Muhammadiyah University of West Sumatra*. 13(8).
- Yunani Akhmad. (2019). Erp Model and Supply Chain Management for Cooperatives; Literature Review. *Journal of Management Science*. 10(1).

Photo attachment



Figure 1. Attached figure interview with Mr Andika and observation in UMKM Andika Music and Sport

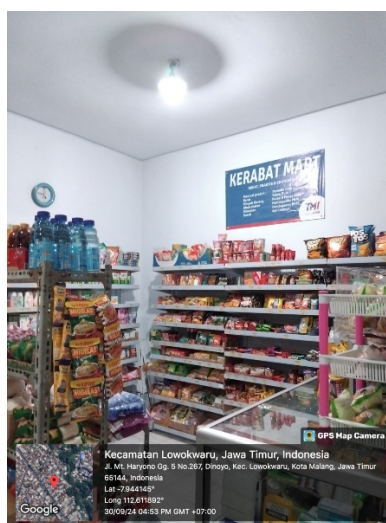


Figure 2. Attached figure observation in UMKM Kerabat Mart



Figure 3. Attached figure interview with Ibu Suwasanah in UMKM Clothes Tailor

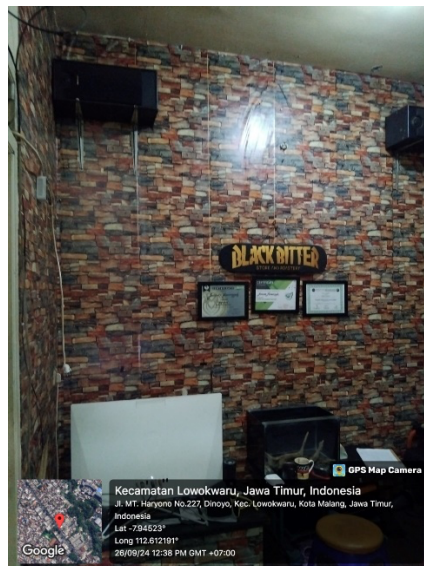


Figure 4. Attached figure observation in UMKM Blackbitter Store and Roastery (Coffee Industry)



Figure 5. Attached figure observation in UMKM Blackbitter Store and Roastery (Coffee Industry)