

EFFICIENT STOCK MANAGEMENT AND TECHNOLOGICAL INNOVATION: KEY FACTORS FOR BUSINESS SUCCESS

GESTÃO EFICIENTE DE ESTOQUES E INOVAÇÃO TECNOLÓGICA: FATORES- CHAVE PARA O SUCESSO EMPRESARIAL

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ABSTRACT: Efficient stock management and the adoption of technological innovations are crucial factors in guaranteeing a company's success in an increasingly competitive and dynamic market. Based on this realisation, this article aims to address the importance of these two elements for excellence in business management. In order to achieve this objective, bibliographical research was carried out, consisting of analysing various articles, books, theses and dissertations related to the topic in question. The bibliographic methodology allows us to obtain up-to-date, scientifically-based information, which contributes to the reliability and relevance of the results presented. By analysing the results obtained, it was possible to see that efficient stock management provides a series of advantages for organisations, such as cost reduction, increased operational efficiency, improved customer service and greater competitiveness in the market. Finally, it can be concluded that the combination of efficient stock management and technological innovation is fundamental to the success and survival of companies in today's business environment. Organisations that manage to implement these practices effectively are able to stand out in an increasingly dynamic and challenging market. It is therefore essential that companies invest in training their managers and in the use of technologies that favour efficient stock management in order to achieve positive and sustainable results.

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Keywords: Inventory management. Technological innovation. Competitiveness.

RESUMO: A gestão eficiente de estoques e a adoção de inovações tecnológicas são fatores cruciais para garantir o sucesso de uma empresa no mercado cada vez mais competitivo e dinâmico. A partir dessa constatação, este artigo tem como objetivo abordar a importância desses dois elementos para a excelência na gestão empresarial. Para alcançar esse objetivo, foi realizada uma pesquisa bibliográfica, que consiste na análise de diversos artigos, livros, teses e dissertações relacionados com o tema em questão. A metodologia bibliográfica permite a obtenção de informações atualizadas e embasadas cientificamente, o que contribui para a confiabilidade e a relevância dos resultados apresentados. Ao analisar os resultados obtidos, foi possível constatar que a gestão eficiente de estoques proporciona uma série de vantagens para as organizações, tais como redução de custos, aumento da eficiência operacional, melhoria do atendimento ao cliente e maior competitividade no mercado. Por fim, conclui-se que a combinação da gestão eficiente de estoques com a inovação tecnológica é fundamental para o sucesso e a sobrevivência das empresas no cenário empresarial contemporâneo. As organizações que conseguem implementar essas práticas de forma eficaz são capazes de se destacar em um mercado cada vez mais dinâmico e desafiador. Portanto, é imprescindível que as empresas invistam na qualificação de seus gestores e no uso de tecnologias que favoreçam a gestão eficiente de seus estoques, a fim de alcançar resultados positivos e sustentáveis.

Palavras-chave: Gestão de estoques. Inovação tecnológica. Competitividade.

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1 INTRODUCTION

Inventory management is one of the fundamental aspects of a company's success, as efficient management of these resources can guarantee the effectiveness of operations and maintain competitiveness in the market. Furthermore, in a scenario characterised by rapid technological evolution, innovation has also become a key factor in driving business growth and sustainability.

In this context, there is a need to study in greater depth how efficient inventory management and technological innovation can contribute to an organisation's success. With this in mind, this article aims to present the main factors related to inventory management and technological innovation that can directly influence company performance.

Throughout the text, questions will be addressed that aim to investigate how efficient stock management can optimise processes and reduce costs, as well as how technological innovation can bring competitive advantages and improve the quality of services provided by companies. In view of the above, the relevance of the topic is evident, since inventories and technological innovation are crucial issues for decision-making and business success.

Furthermore, researching and applying these concepts helps to build a more efficient and innovative management system, capable of meeting the challenges of the market and achieving better results. In order to prepare this work, bibliographical sources were used that deal with the subject of inventory management and technological innovation, as well as case studies of companies that have achieved success in their operations by applying these concepts.

The methodology used was based on a systematic review of the literature, with the aim of presenting a broad and up-to-date view of the subject. Throughout the text, the results obtained from analysing the data collected from bibliographic sources will be presented in order to demonstrate how efficient stock management and technological innovation can be combined to promote effective operations and continuous improvement in a company's processes.

Finally, based on the data and information presented, conclusions will be drawn about the importance of inventory management and technological innovation for business success, as well as recommendations for applying these concepts in an effective and

integrated way, with a view to sustainable development and competitiveness in today's business market.

2 THEORETICAL BACKGROUND

2.1 EFFICIENT STOCK MANAGEMENT: STRATEGIES TO MINIMISE COSTS AND MAXIMISE PROFITS

Inventory management is one of the main challenges faced by companies of different segments and sizes. Whether in retail, industry or services, the efficient management of materials and products is essential to maintain competitiveness and guarantee customer satisfaction. In this sense, the best way to deal with stock is to ensure its efficient management, with strategies aimed at minimising costs and maximising profits.

Initially, it is important to emphasise the importance of stock control and management for a company's success. According to Tigre (2006), excess stock can mean wasted financial resources and physical space, as well as generating costs related to storage, maintenance and the eventual disposal of expired products. On the other hand, insufficient stocks can result in delivery delays and loss of business, causing customer dissatisfaction and affecting the company's reputation.

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Based on this understanding, strategies must be adopted to enable efficient stock management. One of these is the use of demand forecasting tools and methods, which help to anticipate market needs and enable more accurate production and stock planning. In this sense, Petroski (2021) emphasises the importance of carefully analysing sales history, together with data on seasonality, market trends and economic variations, in order to more accurately forecast future demand.

Another fundamental strategy for inventory management is to establish a minimum stock level. According to Fayet et al (2010), minimum stock should be defined based on various factors, such as product replacement times, average monthly demand and the risk of stock-outs. Minimum stock ensures that the company always has a minimum quantity of products in stock, avoiding shortages and delays.

In addition, this control helps to avoid excessive and unnecessary purchases, which have a direct impact on the company's costs. Efficient stock management also involves understanding the profile of the products stored. Falcão (2018) emphasises the importance of classifying items according to their importance and frequency of movement, using the

ABC matrix. This matrix consists of dividing products into three categories: A (products of greater importance and high turnover), B (products of intermediate importance) and C (products of lesser importance and low turnover).

This classification allows for more strategic management, directing efforts towards more critical items and avoiding over-allocation of resources to less important products. To ensure efficient stock management, it is also essential that the company has control over its purchases and agreements with suppliers. According to Tigre (2006), one of the ways to minimise inventory costs is by negotiating with suppliers, seeking better payment terms and conditions. In addition, suppliers' performance must be monitored, assessing the quality of products delivered, delivery times and stock levels available.

This supplier management allows for more strategic adjustments and partnerships, which have a direct impact on the efficiency of stock management. Another strategy that is gaining prominence in inventory management is the use of technology, such as integrated management systems and process automation. Tidd, Bessant and Pavitt (2021) emphasise that technology can be an important ally in all stages of inventory management, from identifying demand to controlling the entry and exit of products. In addition, the use of technology makes it possible to better analyse data and make more assertive decisions, resulting in more efficient management and reduced costs.

An important point in inventory management is managing the physical space for storing products. According to Petroski (2021), it is necessary to ensure an organised and strategic layout that facilitates access to and movement of products. In addition, the available space must be optimised as much as possible in order to avoid waste and increase storage capacity. To do this, the size, shape and weight of the products must be taken into account, as well as their frequency of movement. Another important aspect of stock management is the implementation of stock control policies, such as replenishment methods and safety stock levels.

Fayet et al (2010) emphasise the importance of establishing a clear policy suited to the company's characteristics, taking into account factors such as fluctuating demand and supplier lead times. These policies aim to maintain adequate stock levels to avoid shortages and excesses, ensuring more efficient management and cost reduction. Finally, we must emphasise the importance of constantly analysing stock management results and indicators. According to Tidd, Bessant and Pavitt (2021), measuring and evaluating results is fundamental to identifying possible failures and opportunities for improvement.

This makes it possible to set targets, make adjustments and ensure more efficient and effective inventory management. In short, efficient stock management is essential to ensure a company's competitiveness and maximise profits. By using demand forecasting tools, establishing minimum stocks, analysing product profiles, managing suppliers, using technology, managing physical space, control policies and analysing indicators, it is possible to minimise costs and maximise profits.

2.2 THE IMPORTANCE OF TECHNOLOGICAL INNOVATION FOR BUSINESS COMPETITIVENESS

In recent years, the acceleration of technological development has been a determining factor for companies' competitiveness in the global market. Innovation has ceased to be a differentiator and has become a matter of survival, transforming itself into an indispensable tool for boosting the growth and sustainability of organisations. In this context, it is essential to understand the importance of technological innovation and how it can contribute to companies' competitiveness.

According to Mattos (2021), technological innovation is the process of introducing a new or significantly improved product or process in relation to existing products or processes on the market. This process can be carried out through research, development and the application of new technologies. Technological innovation plays a fundamental role in the competitiveness of companies, as it allows them to adapt to market changes, improve their efficiency and satisfy consumer needs.

Crisp (2016) points out that we live in an era of rapid change, in which technology is constantly evolving and companies that don't adapt to these changes run the risk of becoming obsolete and losing their competitiveness. Technological innovation is essential to ensure that companies remain relevant in the market, as it makes it possible to create new products and services, improve existing ones, reduce costs and optimise processes. Furthermore, technological innovation can be a differentiator in an increasingly competitive market.

According to Gianesi and Biazzi (2011), companies that invest in innovation are able to stand out from the competition, attracting more customers and increasing their market share. This is because consumers are always looking for novelties and solutions that meet their needs more efficiently. Companies that remain stagnant and don't invest

in innovation run the risk of falling behind and losing market share to more innovative companies.

Schumpeter (2012) argues that economic progress is directly linked to companies' capacity for innovation. For him, innovation is the engine of economic and social development. And this capacity to innovate not only refers to new products and processes, but also to different business models and strategies. An example of this is disruptive innovation, which according to Lindegaard (2011), is innovation that radically alters the market and the way companies operate, often creating new markets and enabling small companies to compete with established companies.

An example of disruptive innovation is the emergence of Uber, which revolutionised the transport market, shaking up large traditional taxi companies. However, despite innovation being essential for companies to be competitive, many organisations still find it difficult to invest in new technologies. According to Mattos (2021), this is due to the high costs involved in the innovation process, which range from research and development to implementation and employee training.

In addition, many companies also face internal resistance to change, which can prevent the adoption of new technologies and innovative processes. Another obstacle to innovation is the lack of public investment in research and tax incentives for companies that invest in innovation. According to Crisp (2016), many emerging countries still have low levels of investment in science and technology, which hinders the development of innovative companies and, consequently, their international competitiveness.

It is therefore essential that governments recognise the importance of innovation for economic and social development and create policies that encourage investment in new technologies. In addition, companies need to have a culture of innovation, encouraging creativity and experimentation and investing in training and capacity building for their employees. Another important point is the partnership between universities and companies, which can foster innovation through the transfer of knowledge and technology.

This collaboration can also be beneficial for universities, which can gain access to resources and practical knowledge that complement their research. In addition, companies can benefit from programmes that encourage innovation, such as funding for research and development projects and participation in fairs and events that promote networking and the exchange of experiences between companies in the same sector.

Another way to encourage innovation is through strategic partnerships with suppliers and clients. These partnerships can provide new ideas and technologies, as well as making it possible to reduce costs, improve the production process and develop new markets. As a result, it can be seen that technological innovation is not only important for the competitiveness of companies, but also for the economic and social growth of a country.

An environment favourable to innovation can attract investment and promote the development of new businesses, generating jobs and income. It should also be emphasised that technological innovation is not just about major technological advances, but also about small improvements and adaptations which, over time, can have a major impact on companies' competitiveness. It is important that companies are always on the lookout for new solutions and are open to change and constant learning.

In a world that is constantly evolving, technological innovation is a key factor in companies' competitiveness. As well as making it possible to adapt to market changes and meet consumer demands, innovation can also be a differentiator for companies to stand out in an increasingly competitive market. However, there needs to be a culture of innovation and investment from both the private and public sectors if companies are to remain up-to-date and competitive.

2.3 INTEGRATING STOCK MANAGEMENT SYSTEMS AND TECHNOLOGICAL INNOVATION: BOOSTING BUSINESS EFFICIENCY

Business efficiency is a constant quest for organisations in an increasingly competitive and dynamic market. In this context, the integration of inventory management systems and technological innovation has emerged as an essential tool for boosting process efficiency and maximising results. According to Christensen (2001), technological innovation is an important instrument for creating and improving processes that make it possible to reduce costs and increase productivity.

However, for this integration to be effective, the company needs to have a clear strategy aligned with its business objectives. Moura (2004) emphasises that the integration of inventory management systems must be aligned with the company's strategy in order to achieve a sustainable competitive advantage. Furthermore, the adoption of an integration strategy must take into account the different factors that influence inventory management, such as demand, costs and the availability of resources.

By integrating inventory management systems and technological innovation, companies can achieve faster decision-making and more efficient inventory management, resulting in better customer service and reduced operating costs. Scherer and Carlomagno (2009) state that the integration of inventory management systems and the adoption of appropriate technologies can help to reduce waste, errors and delays in processes, optimising logistics and the flow of products.

The integration of stock management systems also provides a more complete view of the supply chain, as it allows stock to be monitored and managed in real time. This makes it possible to speed up the flow of information between the various sectors of the company and its suppliers, making the purchasing process more efficient and accurate. According to Leonard-Barton (2018), the integration of the supply chain is fundamental to the success of an innovative company, since the exchange of information, collaboration and co-operation between the different players increases efficiency and the ability to respond to possible changes in the market.

Furthermore, the integration of stock management systems, combined with technological innovation, allows for greater flexibility in meeting seasonal variations in demand. With a broader and more accurate view of stocks and the supply chain, it is possible to react quickly to any changes in product demand, without the need for large stocks, which results in a reduction in costs and waste. Carvalho et al (2009) emphasise that the integration of inventory management systems is essential for a flexible and agile company that can adapt to market changes and offer a higher quality service to customers.

Furthermore, the integration of stock management systems and technological innovation also makes it possible to achieve greater product traceability, which is extremely important for guaranteeing product quality and safety. By using technologies such as barcodes, RFID (Radio Frequency Identification) and integrated stock management systems, it is possible to track the origin, expiry date and location of products in real time. This increases the reliability of the products offered to customers and minimises the risk of errors and problems in the production chain.

Furthermore, the integration of stock management systems and technological innovation allows for greater automation of management processes, which reduces the need for human intervention in operational and repetitive tasks. With the use of advanced technologies, it is possible to integrate various stages of the inventory management process, enabling information to be integrated and accessed more quickly and efficiently.

Another important factor is that the integration of inventory management systems and technological innovation enables more efficient time management, as processes become more agile and optimised. By adopting integrated systems, manual tasks and rework can be eliminated, allowing employees to dedicate themselves to activities with greater added value and that contribute to the company's growth.

In addition, the integration of inventory management systems and technological innovation also has a positive impact on the growth and sustainability of companies. With more efficient management of stock and processes, it is possible to reduce losses and waste, increasing the company's profitability. According to Christensen (2001), technological innovation is fundamental to a company's long-term maintenance and growth, as it makes it possible to adapt to market changes and keeps the company competitive in relation to its competitors.

It can therefore be said that the integration of inventory management systems and technological innovation is a strategic tool for increasing business efficiency. With it, companies can reduce costs, increase productivity, optimise logistics, make production more flexible, guarantee product quality and improve time management. It is therefore essential for companies to invest in innovative technologies and the integration of inventory management systems in order to remain competitive and sustainable in today's market.

FINAL CONSIDERATIONS

Considering the analysis carried out throughout this article, and in view of the results obtained, we can conclude that efficient stock management and technological innovation are essential factors for business success. With growing competitiveness in the market and constant changes in consumer behaviour, it is becoming increasingly necessary for companies to look for ways to optimise their production and stock storage processes, as well as investing in innovative technologies that allow for greater agility, efficiency and security in their operations.

The importance of inventory management is closely linked to the need to reduce costs and increase profitability. Keeping excessive and disorganised stock can lead to significant financial losses, while inadequate stocks can result in a lack of products to meet customer demand. Therefore, efficient stock management is fundamental to guaranteeing a balance between supply and demand, avoiding lost sales and wasted resources.

Technological innovation, meanwhile, is proving to be an increasingly decisive factor in the success of companies. Adopting new technologies makes it possible to increase productivity, reduce costs, improve processes and improve the quality of the products and services offered. In addition, technology is a tool that allows companies to remain up-to-date and competitive in the market, keeping up with trends and consumer demands in the digital age.

However, in order for efficient stock management and technological innovation to actually be implemented and bring positive results for companies, there needs to be a change in mentality on the part of managers. This means going beyond investing in new technologies and adopting a stance of constant adaptation and improvement of business processes. This includes training employees, encouraging creativity and the search for innovative solutions, knowledge management and continuous process improvement.

In addition, it is important to emphasise the importance of strategic planning for the success of inventory management and technological innovation in companies. Managers need to analyse the market, identify trends and opportunities, set clear goals and define specific actions to achieve them. Only with well-defined strategic planning can the effectiveness of actions be guaranteed and satisfactory long-term results achieved.

Faced with this scenario, it is essential for companies to be attentive to trends and technological advances, always seeking to adapt to changes and remain up-to-date and competitive. This includes investing in new tools, such as the use of stock management software and the adoption of disruptive technologies, such as artificial intelligence and the internet of things. In addition, there needs to be integration between the inventory management and information technology sectors in companies.

Exchanging information and working together between these areas can generate synergy and maximise the results obtained. This also includes training employees to use technological tools and creating a culture of innovation and knowledge sharing. Another future prospect is investment in partnerships with suppliers and logistics companies, with the aim of creating an efficient and integrated supply chain. Technology can be used to improve communication and the exchange of information between companies, allowing for greater transparency and agility in processes.

Finally, it is important to emphasise that efficient stock management and technological innovation are key factors for business success in an increasingly complex and competitive scenario. Therefore, companies that invest in these aspects and are

attentive to market changes will be better prepared to face the challenges and achieve more positive results in their operations.

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