American International Journal of Business Management (AIJBM)
ISSN- 2379-106X, www.aijbm.com Volume 08, Issue 01 (January- 2025), PP 36-41

Corporate Logistics of Stocks in Smart Companies

Melchionda Mariano
[1](Independent Researcher, Italy)
*Corresponding Author: Mariano Melchionda[1]

ABSTRACT:- Inventory management, like purchasing and transport management, have been included in a broader context called "Corporate Logistics". Corporate logistics management is the main connecting factor between the different entities that govern the company and the element that determines the development of the value chain, as well as the force that governs the physical flows within the warehouse. Four critical elements, namely information and communication technologies (ICT), infrastructure, people and government policy making, have been consistently proposed to explain the success of smart logistics. In the last decade, corporate smart logistics has brought to the attention of almost all company managers : especially medium or large-sized companies, have recently created a new role at the management level: that of the Logistics Director, "follows the flow of materials from their origins at the suppliers to the delivery of the finished product to the customer.". The purpose of the article is to analyze the social aspect that affect a smart logistics and the techniques used to manage the stocks for the competitiveness and balance sheets of a company among the various competitors.

KEYWORDS:- inventory, logistics, stocks, transports, warehouse.

I. INTRODUCTION

Logistics is a crucial sector that not only enhances a firm's competitiveness but also promotes a country's national economic performance and development. Effective logistics drives economic growth by producing and distributing goods at lower costs through reliable mechanisms, resulting in increased customer demands, (Nikseresht, et al., 2024). Effective logistics management allows producers to access distant markets, reduce firms' inventories (Domagała J., et al., 2022), attract foreign direct investment, enhance business management efficiency, achieve sustainable competitiveness, and create numerous jobs in the sector.

Recognizing the crucial role of effective logistics in shaping competition within industries and markets, scholars, managers, and policymakers have devoted significant attention to this critical issue (Sandberg E., Abrahamsson M., 2011). Optimizing the flow of goods, finances, and information along the value chain through digital technologies has led to the development of "corporate logistics' or 'logistics 4.0'. This concept has emerged as a vital paradigm (Kemendi A., et al., 2022), referring to a dynamic logistics management process that involves planning, managing, and smartly controlling operations using emerging IT-based technologies, that enable participants to swiftly and effectively respond to new environmental changes (Ding Y., et al., 2021).
With the advent of new logistics modes, many scholars and practitioners have examined the significance and challenges of smart logistics.

For instance, some researchers focusing on the technological aspects of smart logistics, studied the relationship, (Shee H.K., Miah S.J., T. De Vass, 2021) between smart logistics-related technologies and organizational performance, and the positive relationship between them was supported.

Conversely, other studies, J. Pincay Nieves, (2022) and W. Liu, et al., (2020), examined whether factors such as human capital and governmental policies could play key roles in improving organizational performance within the context of utilizing smart logistics.

Four critical elements— Information and Communication Technology (ICT), infrastructure, people, and government policy-making—have been consistently proposed in explaining the success of smart logistics).
Governmental policies affect not only the success of individual firms but also the development of national economies, (Asongu, S.A. 2012). Specifically, governmental policies may have significant impacts on the expected outcomes of smart logistics implementation (W. Liu W., et al., 2020).

To address this limitation, this study measures firm performance in two dimensions: corporate responsibility performance (non-financial performance) and management techniques of the stocks (financial performance), providing a comprehensive examination of the impact of smart logistics policies. The results of our study have significant practical implications for firms, stakeholders, shareholders, and policymakers, to better introduce policies in the era of Smart Logistics 5.0.

II. LITERATURE REVIEW AND HYPHOTESIS

Considering that different policies have varying effects on firm performance, this paper interprets the theoretical mechanism of how policy of management stocks affects enterprise performance from the perspectives of institutional theory, stakeholder theory, and resource cost-effectiveness.

The institutional environment has been considered to have a significant impact on an organization's decision-making and development. According to institutional theory, firms' behaviors and decisions are influenced not only by their resources and organizational goals but also by imitation and convergence resulting from pressures related to "legitimacy"**.** Enhancing social legitimacy will strengthen an organization's ability to acquire resources and gain support from the external environment**.**

Therefore, for an organization to survive and thrive in society, it must seek and obtain social legitimacy by adhering to rules and social norms (Jay J., 2013**),** organizations are compelled to seek recognition and legitimacy due to external sources, such as policy and institutional environments**.**

Thus, as a form of institutional pressure, the implementation of a smart logistics policy compels firms to seek legitimacy, leading to corresponding adjustments in their decision-making, behavior, and structure.

Stakeholder theory can "point the direction" for corporate social responsibility and serves as the theoretical foundation for the study of corporate social responsibility. Enterprises need to consider the conflicting interests of their numerous stakeholders, including managers, employees, shareholders, suppliers, and distributors, comprehensively and balance them during their business operations (Kujala J., 2022).

The primary goal of the government is to mitigate the environmental impact of logistics activities by encouraging companies to adopt intelligent logistics technology and implement smart management processes. Improper logistics management can escalate waste, energy consumption, and greenhouse gas emissions, leading to excessive pollution. It is widely agreed that pollution and waste from manufacturing enterprises threaten life on Earth (Malik M., 2015).

Consequently, the environmental performance of the manufacturing industry has garnered significant attention. The response behavior of enterprises to policies is constrained by their interests and influenced by government policies and supervision. However, due to businesses seeking to maximize value, most companies are unwilling to bear excessive environmental costs or pay for pollution caused by traditional technologies.

Hence, the conflict between corporate interests and public interests revolves around balancing environmental responsibility with adverse environmental consequences (Wan-hong L., et al). The game between the government and enterprises revolves around balancing environmental regulation or technology encouragement with corporate economic benefits (Hoen K., 2014). In other words, the improvement in a company's environmental responsibility performance results from a dynamic interaction among the company, the government, and the public. Additionally, whether this dynamic will lead companies to assume more social responsibility is influenced by the constraints on resources and costs faced by the companies.

From a business perspective, the primary focus of enterprise management is economic objectives, guiding organizations to make decisions and allocate resources based on cost-effectiveness (Lasrado F., 2018).

When enterprises pursue intelligent managerial practices and social responsibility, they often face a situation where these practices compete for limited internal resources Hull and Rothenberg (2008), pointed out that trying to improve social performance may drain corporate resources that could be used in core business areas, thus inhibiting corporate innovation. Similarly, increasing investment in technological innovation limits the internal resources available for socially responsible behaviors (Mithani M.A., 2017). Therefore, enterprises face the dilemma of balancing resource allocation between innovation and social responsibility, given a highly competitive market and internal resource constraints.

III. METHODS

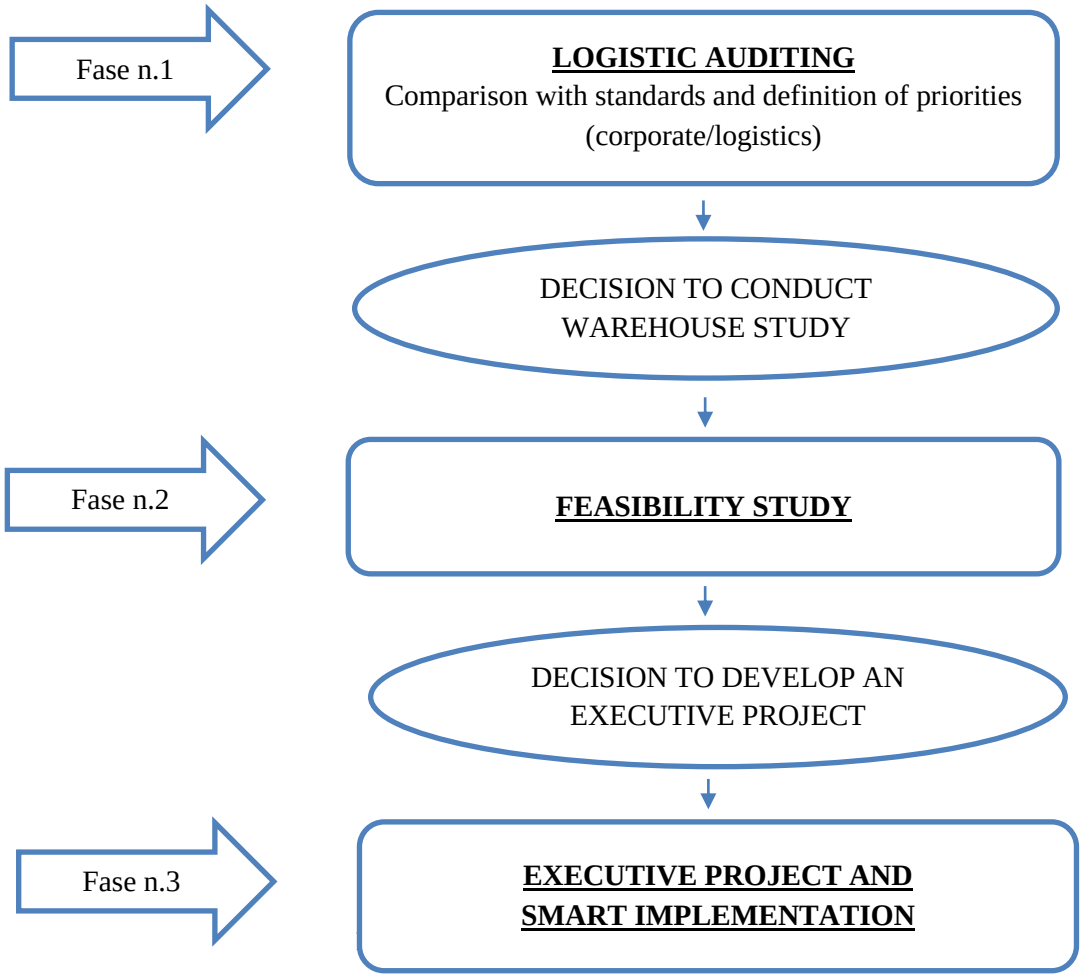
In a company, efficient inventory logistics management cannot ignore accurate management of the distribution chain (or SCM, from the English Supply Chain Management), and continuous supervision of the warehouse, with the aim of controlling its performance and improving its efficiency. On average, distribution costs account for approximately 8.3% of turnover. It should also be highlighted that normally small and medium-sized companies have a higher cost incidence than the average values and for this reason they must be much more attentive to warehouse management than large companies (Urgeletti Tinarelli G., 1992).

Inventory management, in addition to depending on the incoming and outgoing flow, also depends on the ability to predict the behavior of the environment, i.e. in practice regulating supply and demand, and to appropriately adapt purchases, which is revealed by the manager's ability, in relation to his constraints, according to (Hall R.W., 1985) these depends on:

- Regarding income, you will need to know how many and which are the possible suppliers and, above all, know their habits regarding deliveries, how much time elapses between the issuing of an order and the

arrival of the goods, know whether the price is fixed or variable and whether this interval is constant or varies based on the quantity.

- Regarding expenditure, you must first be able to estimate the future demand for the product.
- Regarding constraints, in addition to those related to space, you must consider those related to the availability of workers and resources for storage and picking operations and financial constraints.
-



The efficiency of the logistics function depends on its organization essentially for two reasons: by the physical distribution (the result of multiple activities that must be integrated), and the responsibilities of the different operation dispersed in the organizational structure.

The organizational structures that can be used for inventory management are:

- Functional structure: physical distribution is assigned an autonomous position in the company organization. Although it allows this function to be managed directly, it does not ensure its perfect integration within the company structure since those responsible for physical distribution cannot directly influence the operations that are typical of production and marketing.
- Project structure: physical distribution takes on an important particularity, being placed with autonomous management under the direct responsibility of the general management. All the other functions participate in the management of the project directly with their own collaborators. This structure has the advantage of supporting the project since the general management deals with it directly and of ensuring coordination.

In the context of inventory management, it is appropriate to distinguish the management of raw material stocks, linked to the problem of supplying the production process, from that of finished products linked to the sales process, highlighting the particular sensitivity of the problem of determining "how much" and "when" to order basic materials, semi-finished products or components to be used in production (Sciarelli S., 2014). With reference to raw material stocks, we can now describe two different methods

The first is the traditional one according to which the height of the stocks to be kept in the warehouse depends on the absorption times of the materials and the times of replenishment of the same; the second is, instead, linked to the trend of demand from which the size and frequency of the supply in the warehouse derives.

In other words, in the first case the logic of stock control is followed (that is, the level of stock is controlled without taking into account the progress of the production and sales processes), while in the second the perspective is that of flow control (that is, stocks are determined based on the flow of sales orders to be fulfilled. According to author Sciarelli S. (2014), The best-known techniques linked to stock control are the separate stock technique and the ordering cycle technique. Instead, the techniques specific to flow control procedures fall within Material Requirements Planning (MRP). Furthermore, for the optimization of material flows within the company, in some situations the Just In Time (JIT) technique is widespread. The separate stock techniques (two bin system) and the ordering cycle system are respectively classified as fixed quantity and fixed time techniques; in the first case the amount to order is determined based on a certain level of stock; vice versa, it is when to order that condition the definition of the quantity to be chosen from time to time.

The separate stock technique is based, in fact, on the replenishment of constant quantities when the stock reaches a certain minimum value (reorder level), while the ordering cycle technique is based on the replenishment at the end of each cycle for variable quantities in relation to the stock present in the warehouse. In the separate stock method, the first problem to be solved is, therefore, represented by the determination of the reorder level, i.e. the quantity upon reaching which the replenishment procedure must be started.

The reorder level essentially derives from the sum of three times (Sciarelli S., 2014),

- the time necessary to issue the order (start of the administrative procedure, consultation of suppliers, authorization to purchase, issuing the order);
- the time required for the arrival of the goods;
- the time needed to make the goods available (acts of receipt, control and delivery).

The reorder level is therefore calculated by multiplying the time units needed for the supply (days, weeks) by the consumption in the time unit. After that, there is the safety stock that will be able to remedy any deficiencies (delays in supply, lower quantities delivered, higher percentage of waste, etc.) or possible increases in absorption.

IV. THE RESULT OF RESEARCH DISCUSSIONS

A careful management of warehouse stocks would allow the company significant advantages not only in terms of cost containment through benefits in economies of scale, but also better efficiency in the various processes in general.

According to the logistics management of stocks in the company, the warehouse must not be interpreted only as a physical entity (the company premises where the goods are stored) but as an important segment of the supply chain that is conditioned and conditions the company strategies and operations.

For example, when the lack of space is highlighted among the sufferings of a warehouse, the answer to the problem must not only be identified by trying to adopt more efficient storage/handling technologies or by providing for the expansion of the premises, but also by evaluating, for example, whether:

- A different management of the stocks (for example, improving the methods of making forecasts, speeding up the rotation of the products, activating collaborative relationships with suppliers and so on) cannot produce benefits by reducing the volumes of goods be stored.
- A different relationship with customers, based for example on delivery policies, can free up internal spaces.
- Direct delivery or cross-docking activities can be implemented so that certain products can bypass the stock area.
- Packaging redesign can improve the efficiency of Load Unit occupancy.

Tackling a warehouse reorganization project that does not broaden the horizon from the purely physical sphere to the organizational and management one is therefore a partial approach, which almost always produces non-optimal results.

The more a management project involves different sectors/functions, inside and outside the company, the more complex it becomes and, consequently, it needs to be developed with adequate levels of expertise; companies that intend to tackle a warehouse reorganization project should always ask themselves, with modesty and critical sense, whether they have adequate professional skills and advanced and specific design tools within them that are able to appropriately implement the warehouse improvement process.

Improving the logistics performance of the warehouse is possible, in addition to continuous improvement actions, also through other methods. We can identify two ways, in addition to that of continuous improvement, complementary to each other, to improve the performance, efficiency and service of our warehouses:

In the first case, typically of a "botton up" approach, it is necessary to intervene preliminarily on Human Resources to generate a sensitive environment to intercept, but above all to resolve, the small problems that inevitably arise during daily activities and to propose improvement solutions; this activity, which must be

systematic and continuous over time, can be facilitated if performance indicators (KPI) are managed such as productivity, accuracy, lead time.

In the second case, of a "top down" approach, the company management must foresee and promote more radical interventions that can range from the decision to outsource the warehouse to that of investing significantly in technology to reorganize the existing one or to create a new one. The ways to solve the operational needs of warehouses are extremely diversified, being able to take advantage of a very large number of technological solutions, even if, as we have already said, we must not rely solely on those and also take into consideration the operational and management aspects.

This type of approach requires a slightly higher investment in the design phase (which is also the least expensive of all the phases of a reorganization intervention; generally a firm can commit economic resources that are worth only a few percentage points of the total investment) which however translates into a subsequent measurable advantage, not only in terms of the operational results of the implementation (reduction of the risk of malfunctions or, even worse, of fundamental errors), but also with the reduction of the amount of overall investments and implementation times, amply repaying the cost of the resources employed, whether internal or external to the company.

V. CONCLUSION

This paper shows how accurate management and accounting planning can affect the efficient organization and evaluation of company stocks for future research and government and corporate policy making. Based on institutional theory, smart logistics policies influence firms' strategic decision-making behaviors through three forms of legitimacy, then firms will choose the ways that are beneficial to themselves to react to the policies.

The stakeholder theory and the perspective of resource cost-effectiveness provide a theoretical lens for firms to determine which one is more beneficial to them.

On average, distribution costs account for approximately 8.3% of turnover and that small and medium-sized have a higher cost incidence than the average values and for this reason they must be much more careful about warehouse management than large companies.

This study provides managers with guidelines on how intelligent logistics contributes to effective management and long-term profitability for firms.

First, it encourages corporate managers to actively respond to intelligent logistics policies to achieve technological leadership and improve financial performance, which could then be used for other strategies such as, for example, in the field of sales processes with a reduction in product costs to occupy a stable position in the market in which the company decides to enter.

Second, furthermore, managers should seek more policy subsidies to mitigate the financial pressures resulting from their greater investment in intelligent equipment and technologies compared to other enterprises.
The considerations provided can be used as a starting point for a more in-depth examination both by those who work at the top of the company, adopting strategies that then transform into objectives, and by those who draw up the balance sheet entries in light of the increasingly pressing adjustments to international accounting principles and the opportunities that the legislator grants to the taxpayer for a possible regularization of the warehouse itself.

REFERENCES

[1]. Nikseresht A., Golmohammadi D., Zandieh M., (2024). *Sustainable green logistics and remanufacturing: a bibliometric analysis and future research directions*, Int. J. Logist. Manag. 35 (3) 755–803.

[2]. Domagała el al., (2022). *Sustainable Logistics: How to Address and Overcome the Major Issues and Challenges*, CRC Press.

[3]. Sandberg E., Abrahamsson M., (2011). *Logistics capabilities for sustainable competitive advantage*, Int. J. Logist. Res. Appl. 14 (1) 61–75.

[4]. Kemendi A., Michelberger P., Mesjasz-Lech A., (2022). *Industry 4.0 and 5.0–organizational and competency challenges of enterprises*, Polish Journal of Management Studies 26 (2), 209–232.

[5]. Ding Y. et al., (2021). *Smart logistics based on the internet of things technology: an overview*, Int. J. Logist. Res. Appl. 24 (4), 323–345.

[6]. Shee H.K., Miah S.J., De Vass T., (2021). *Impact of smart logistics on smart city sustainable performance: an empirical investigation*, Int. J. Logist. Manag. 32 (3), 821–845.

[7]. Pincay Nieves J., (2022*). Insights into smart cities and smart logistics, in: Smart Urban Logistics: Improving Delivery Services by Computational Intelligence*, Springer, pp. 17–31.

[8]. Bag S., Gupta S., Luo Z., (2020). *Examining the role of logistics 4.0 enabled dynamic capabilities on firm performance*, Int. J. Logist. Manag. 31 (3), 607–628.

[9]. Chen. D.Q., D.S. Preston, M. Swink, (2015). *How the use of big data analytics affects value creation in supply chain management*, J. Manag. Inf. Syst. 32 (4) 4–39.
[10]. Asongu S.A., (2012). *Government quality determinants of stock market performance in African countries*, J. Afr. Bus. 13 (3),183–199.
[11]. Liu W., et al., (2020). *Effect of intelligent logistics policy on shareholder value: evidence from Chinese logistics companies*, Transport. Res. E Logist. Transport. Rev. 137, 101928.
[12]. Jay J., (2013). *Navigating paradox as a mechanism of change and innovation in hybrid organizations*, Acad. Manag. J. 56 (1) 137–159.
[13]. Kujala J. et al., (2022). *Stakeholder engagement: past, present, and future*, Bus. Soc. 61 (5) 1136–1196.
[14]. Malik M. (2015), *Value-enhancing capabilities of CSR: a brief review of contemporary literature*, J. Bus. Ethics 127 419–438.
[15]. Wan-hong L., Na L., Fang L., (2021). *Three parties' evolutionary game of stakeholders in green technology innovation and their simulation*, Oper. Res. Manag. Sci. 30 (9) 216.
[16]. Hoen K., et al., (2014). *Effect of carbon emission regulations on transport mode selection under stochastic demand*, Flex. Serv. Manuf. J. 26 170–195.
[17]. Lasrado F., Pereira V., (2018). *Achieving Sustainable Business Excellence*: Tkhe Role of Human Capital, Springer.
[18]. Hull C.E., Rothenberg S., (2008). *Firm performance: the interactions of corporate social performance with innovation and industry differentiation*, Strat. Manag. J. 29 (7) 781–789.
[19]. Mithani M.A., (2017). *Innovation and CSR—do they go well together*? Long. Range Plan. 50 (6) 699–711.
[20]. Urgeletti Tinarelli G., (1992). *La gestione delle scorte nelle imprese commerciali e di produzione*, Etaslibri, Milano. 352, (220 – 235).
[21]. Sciarelli S., (2014). *La gestione delle imprese tra teoria e pratica aziendale*, CEDAM, Napoli. 480, (320 – 334).

Corresponding Author: Mariano Melchionda[1]
[1]IIndependent Researcher, Italy