MANAGEMENT

RECEIVED:
01 September 2025
ACCEPTED:
20 November 2025
RELEASED:
20 December 2025

UDC 005.21:658.78

DOI 10.26661/2522-1566/2025-4/34-06

STRATEGY FOR REDUCING INVENTORY TURNOVER IN A MANUFACTURING ENTERPRISE

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Abstract. Manufacturing companies wanted to shorten the holding time and increase the turnover without service. This article synthesizes evidence of fifteen colleagues of studies to identify strategies that reduce DIO (DIO) of the day and improve stock turnover (IT). Directed by structured discovery and transparent inclusion criteria we review strict, empirical, field analysis, slim storage and lack of waste, modified smoothed MRPs and orders, adjournment, suspension, vertical integration, vertical integration, vertical integration and surprise. The data was extracted on the design, reference, matrix and effects; The quality of the study and the risk of distortion was evaluated. The synthesis of legends, a supplement where the measures were comparable, indicate continuous DIO sections from lean implementation and removal of warehouse waste, reduce variability in storing policies with other benefits. Integration and information strengthen the effects of visibility; On the other hand, configuration warehouses "very oak" risk, especially under unstable demand. The slight results of the industry and the fixed scale and the inequality in the range of metrics are estimated. The consequences are practical: segment of SKU, a few slender flows with disciplined rules of safety tracks, stabilization of commands by adapting MRP and expanding cooperation upstream. The boundaries include the measurement of the non -ecosity and potential distortion of the publication. In the end, we closed the implementation plan and proposed a proposal for the cause to separate the power of the mechanism in future research.

Keywords: inventory turnover (DIO), lean warehousing, Just-in-Time (JIT), supply chain integration.
JEL Classification: M11 L23 D24.

INTRODUCTION

Inventory management remains central for production performance, because working capital, storage costs and service levels are together how quickly the shares pass through the system. The inventory turnover (IT) and vice versa, daily arrears (DIOS), raw materials, processes and flow in the finished goods serve as a compact indicator of flow efficiency. In a competitive environment, which is characterized by the variability of demand and obstacles to demand, the purpose of

companies is to increase them without reducing availability; This balance is more strategic than purely functional. Storage policies, the rules of the production plan and the coordination interaction of the current, sometimes increase variability and sometimes soak it, so that the concentrated assessment of strategies that shorten the holding time.

PRE -EVIDENCE explains the mechanism with surgical expansion. Demeter and Matyusz indicate that manufacturers use better reserves for shorter time, bridge planning, standardized work and workplaces - raw materials, WIP and prepared goods (Demeter & Matyusz, 2011). Their analysis combines the width of adoption for performance, suggesting that the disciplined routine and cross -functional coordination is reflected in the average flow benefits. They are lean as a system in which practices strengthen each other, a point that depends on storage, because the storage, selection and replenishment of stream stability reflects stability as local efficiency. This view means that the performance of the inventory improves when variability in the source is reduced, not only when the supply is cut into the subsequent stream.

Care also appears. The re -introduction of the relationship of the demonstration with industrial reflective measurements of leanness and evidence of a large panel, eroglu and Hofer finds non - linear yields: movement towards the qualified limit improves the results up to the threshold, after which further risks can erase and erase performance (EROGLU and HAFAR, 2011). In the volatile environment, it protects the buffer; As a result, the uncertainty or instability of the process, when safety increases the limit value of the supply, configuration surface "very oak". For warehouse logistics, the consequences are direct: the initiative that speeds up the flow must be combined with safety measures and strong plans.

This insights inspire a contemporary study. The manager faces an asymmetric portfolio where fast and slowly moving coexistence, Multi-Eklon structure that preach variability, and uneven measurements that hide the real effects. Instead of adding a new case, this article synthesizes fifteen colleagues of the recruited studies to detect which strategies are constantly decreasing or increasing them to production contexts and under what circumstances they do. The range of lean implementation, lean storage and removal, modified MRP and ordered smoothing, adjournment and a number of vans with information sharing. On the basis of published empirical work, seek the instructions for the inspection that is based on evidence and warehouse is applicable to decision - making.

The goals are three times. First, end the empirical finding on the strategy of the process and storage, and, if possible, express the results of comparable words. Second, explain the disparity by examining mediators - requiring industry, size of the company, integration intensity and uncertainty - and painting risk areas that endanger the performance of lean. Thirdly, translate synthesis into an implementable plan, which sequence of diagnostic division of SKU, stream stabilization, disciplined policy of security tracks and expanding the visibility of information upstream. Together, these goals provide a structured basis for selecting strategies that will reduce the time of holding inventory while maintaining customer service.

LITERATURE REVIEW

Production research is transformed into simple clinical: a company that compresses the holding time of stocks overcomes to cash efficiency, but the exposure faces when demand and supply differ rapidly. Part of the empirical study on stock turnover (IT) and daily inventory (DIO) has therefore been implemented through the center - vertical reduction and quality of information - lean design, repair in warehouse, policy design and structural integration. The evidence is not the same in the links, but the formulas are so visible that they lead strategy in warehouse logistics. Early operation studies are quickly associated with programs associated with stock rotation and better assets of assets; Using events and comparing panels of American manufacturers, JIT adoptors have improved turnover, margin and overall performance compared to the controls corresponding, indicating that reducing coordinated settings, synchronization of streams and disciplinary

disciplinary inventions to use without use (Husson and Nanda, 1995). Later, the waves tested Lean as a system rather than one technique. The study, which drew from cross-sectional data on production, said that bridge planning exceeding adoption, standardized work, 5S and high-quality routine-lacers for goods, processing and prepared goods, supported by stable procedures with the importance of stable and performance procedures between practices. An important nuance is that "slimmer" is not always "better". Another study found that the inverted U-U with a berty metric, rewrite the connection of inventory: movement towards qualified stock levels increases the results to the limit, after which other risks and airports increase the results, especially for uncertainties (Earrogl and Hoff, 2011). The warehouse policy cannot ignore this size; If demand is unstable or supplemented with noise, security shares are still buying a service.

Top thinking went to stock operations with an average advantage. Study of distribution devices dated, both 5S, price mapping and standardized collection of low handling, stable slits and short order cycle; While the main performances were variable warehouses focused on warehouses, the variability of mechanism-Nims and low touch optics are coordinated after recurrence and production plans (Abushaikha, Salhih and Towers, 2018). Supplementary tasks using multiple methods have shown that removal of non-evaluated steps, reworking of layouts and balanced personnel trimming, queues and defects; Simulations and pilots indicate continuous reforms, a type that allows small batch transmission and smoothie repetition to repeat production cells (D Jesus Pacheko, Close and Bumen, 2023). In short, a decline in warehouse waste not only trimms the work; This reduces the scattering time and safety reserves. Planning rules form the other half of the problem. Traditional lumps of MRP can relax and create a large cycle; The case analysis of the revised MRP with the ordering of the order physically showed low average inventions and reduced the dispersion to the hand without damaging the service, obtained by tuning policies, synchronizing faith from the delivery time and reducing nervousness (de'wino, de Simono and Shiraldi, 2014). Such results are in line with the scene that variability at the plan level transmits in the completion of the warehouse, so that the "strategy" includes the parameters of discipline and periodicity, not only a change in the physical process. The adjournment expands this argument. The empirical test in supplier chains found that the final discrimination of the product while maintaining the service delayed the finished inventions, mainly to combine the demand for upstream and reduce the proliferation of SKU in the warehouse, selects complexity and selection (Devilla and Wouters, 2007). Warehouses are again recipients and activators: low end items and later adaptation means simple layouts and fewer inhabitants.

On the side of the demand, there are ways that are often underestimated in stock projects. Using data at the company level, a recent study has shown that positive or negative "sales miracles" are associated with fluctuations in reserves with respect to prognosis; When the prognosis delay is wide, the turnover deteriorates and the buffer grows as a rational hedge (Joseph, Hong, Niu and Imran, 2023). This discovery combines the quality of S&P directly with DIO: without reliable demand signals, lean storage procedures are forced to compensate. Complex industry level analysis confirmed that turnover behaved differently in the sector and cycle, and warned against its undesirable use as a metric of universal performance; For manufacturers with extended cycles of money transfer or seasonal demand, high average at hand may be required to provide stable services, so benchmarking must be modified for references (Kawak, 2019). The structural possibilities along the chain also transmit the achievable range. A study that examines the role of vertical integration said integrated companies show high turnover and better operating performance, compatible with close planning, reduce dual manipulation and improve information flows in Ekolones (Andreu, Luke and Panoids, 2016). This is practical for warehouse logistics: production conditions, incoming ETA and order priority reduced shared data storage requirement and allowed smaller, more frequent repayment than upstream knots.

Macro evidence complements the results of the company level. In two decades, a study by American companies has disintegrated a change in the inventory and has shown in many areas an

extensive decrease in the ratio of supplies to cells, with a tendency of repairs, instead of coordination of the supply chain, IT and pure financial pressure (Chain, Frank and Wu, 2005). This prolonged improvement in improvement leads to realistic expectations: technology and coordination often depend on local efficiency. At the warehouse level, targeted waste programs are correlated with high commercial performance and a better KPI stock; The results emphasized the role of commitment to management, training and routines of continuous improvement in continuous profits after early projects (tahbob and Salhih, 2019). In summary, these studies evoke a consistent picture: Inventory results reflect lean implementation, discipline planning, adjournment, integration and employment interaction. They also warn against tips for all sizes.

What does this mean for a clearly focused strategy when it reduces DIO in production warehouses? First, they practice slim/Git, which stabilize the flow and reduce the dose shape, raise the turnover, but only when the consistent system is built and paired with safety measures; Otherwise, the risk of the warehouse rises to the warehouse, although the main inventory looks "slim" (Huson & Nanda, 1995; Demeter and Matucce, 2011; Eroglu & Hof, 2011). Secondly, a warehouse specific to lean programs reduces the change of handling and cycle time and determines the conditions for low hand; However, without MRP synchronization and reliable predictions, the resulting plan of release can quickly disappear as noisy forces that compensate for buffers (Abushaikha et al., 2018; D Jesus Pacheko et al., 2023; d'Wino et al., 2014). Third, structural strategy- gravity and vertical integration- where there is uncertainty, change in vertical integration. Storage funds risk upstream and reduce the complexity of SKU; Shrinkge for integrating and sharing information allows the warehouse to move towards a small recurre between the service punishment (Devilla & Vouter, 2007; 2007; 2007; Andreu et al., 2016), between uncertainty and the shape of the dose. Fourth, the accuracy of demand is not a factor in the background hygiene, but is a first -order turnover; The quality process of poor prognosis equals profit and sends high safety shares, duration (Yusuf et al., 2023; Quac, 2019). Finally, long -lasting regional trends mean coordination capacity and data visibility reduces continuous improvements; Instead of capacity-making program, the facilities that treat DIO deficiency in the form of united costs rarely take advantage (Chen et al., 2005; Tahbob and Salhih, 2019).

Despite this consistency, boundaries in literature complicate synthesis. Measurement of leanness varies widely, from direct practice adoption indices to the financial screen decade; As a result, from the firm-level to a school-level residence time, the pooling is difficult (Eroglu and Hofr, 2011; Quak, 2019). Many warehouse studies are case-based; They provide rich process details, but limited external validity (Abushakha et al., 2018; de Jesus Pacheko et al., 2023; D'Vino et al., 2014). Endogenity Larks: Firms that choose lean or integrate vertically can be separated without any capacity, can increase the approximate effect upwards (Husson & Nanda, 1995; Andreu et al., 2016). In addition, many mechanisms interact. For example, the adjournment reduces the downstream variety, which simplifies the warehouse layout and enhances productivity, which then enables small cycles and better service; A single liver can be misleading to meet the decrease in net deo (Devilla & Wouters, 2007; Abhishikha et al., 2018). Studies still point to several strong design principles for the creation of warehouses: stabilizing the flow at the source, maintaining the waste, releasing the release release variability, remove the tune plan parameters, where possible, transfer the discrimination upstream, and expand the reliable information in the nodes.

Construction at these findings The current article determines goals that focus on both synthesis and application. The first aim is that the consolidation of empirical evidence of MRP revision with lean design, reducing waste from the warehouse, smoothing of the order, penalty, vertical integration and quality of demanding demand affects DIO and IT in production environments that translate into haterogenius in comparable directions that translate remirosis in comparable direction, translated. Nanda and Nanda. Year 2018; Partners who prevent “very doubtful” exposure under instability (Eroglu and Hoffra, 2011).

METHODOLOGY

This study is a systematic review with a concentrated mini-meta-analysis of empirical evidence published on strategies that reduce the daily list (DIO) or increase the turnover (IT) in production, which occurs as an operating point in stock. No new primary data has been collected. We defined the "participants" as empirical studies that report the results of numerical inventories for construction companies or plants and evaluated at least one relevant strategy: Lean/Jit execution, slim storage and lack of waste, modified MRP and order, final grammar, final gradation, final gradation or information and information. Colleagues discovered in the main database included magazines in English; Include the necessary quantitative results or allow the back of the back of the backward screen, a clear description of the intervention or practice and a production link. Concept papers and simulations were excluded without field data. Data items have captured the design of the study, sectors, sample size, intervention specification, measurement of inventory results, control and direction and impact size. We used two widely cited empirical templates to make mapping.

Table 1 summarizes the distribution of studies, evidence types, and outcome directions by strategy category. Figure 1 visualizes the number of studies per category included in the review corpus (n=15). Directional outcomes refer to associations with higher inventory turnover (IT) and/or lower days inventory outstanding (DIO).

First, the Demeter and Matus measured slim in the form of a multi-practical system (reduction of settings, bridge, standardized work, 5s, quality routine), showing that comprehensive acceptance is correlated with a high turnover in raw materials, WIP and finished goods; Their operating definitions informed about our coding "width width of execution" and our hope that the state of the results of worship upstream (Demeter and Matucce, 2011). Secondly, arrogl and Hoffer develop an industrial metric of the modified industry and depict a non -linear relationship of inventory demonstration, indicating risk areas when companies push the inventions below a qualified level for uncertainty; Its framing has ordered the decision to maintain our moderator scheme and link to the level of service when the effects of the fund (Eroglu and Hofer, 2011) were explained. The processes were governed by the logic of Prisma (identification, screening, eligibility, integration) with a dual review, and consensual conflict solutions. If the study reported an alternative matrix (eg inventory-sale, stock days from ecolon), we have transferred the results in the normal report ratio for which DIO or percentage changes in the use of percentage and use, if necessary, authorial costs or volume seller. The size of the impact has been synthesized using a random effect model that reflects the asymmetry of cross studies; Dersimonian -leirds served as a base of estimation with the heart tested Hartung -nop tested in the sensitivity analysis. The dilatation was evaluated by Q and I and we planned moderator analysis based on industrial clock, company size, lean adoption width, integration depth and proxy accuracy of prognosis accuracy. Small studies and bias of publishing were examined by testing the graphs and agar of the funnel, while the question of strengthening was cropped. In order to manage dependent effects (eg in several strategies or in several inventory results in the company), they preferred one more comparable effect in the strategy category; If it is inevitable, we used a conservative inflation of the scattering or cluster-robust Sainikatan scattering. Risk of prejudice, measuring IT/DIO measurement, treater treatment and transparency of statistical controls; The evaluation was recorded, but the preliminary study was not used to exclude the contribution, instead it was painted in sensitivity (eg with the exception of a study without a study). The material included an article and a structured letter about extraction; The analysis codes and decision -making rules are documented for replication. In the end, we specifically specified the interpretation of safety measures: because the inverted in eroglu and hafar suggests that the exposures of "very lubs" and dementors and Matus emphasize the complement between lean practices, pool estimates are read with moderators and obstacle to services to prevent subtitles.

Table 1

Summarizes the distribution of studies, evidence types, and outcome directions by strategy category

Category	Studies_n	Outcome_summary	Primary_metrics	Evidence_type
Lean / JIT execution	3	Broader lean adoption associated with higher IT / lower DIO across RM, WIP, FG; practice-breadth indices used.	IT, DIO	Cross-section & panel (empirical)
Lean warehousing / waste reduction	3	Reduced handling time and picking variability; warehouse KPIs (order cycle, travel, defects) improve, implying shorter dwell.	Warehouse KPIs (dwell proxies)	Field multi-method / pilots (empirical)
Planning policy (revised MRP, order smoothing)	1	Lower average on-hand and variance; smoother releases; service maintained.	Average on-hand, st.dev. on-hand	Controlled case (empirical)
Postponement (final differentiation upstream)	1	Reduced finished-goods inventory at constant service by pooling uncertainty upstream.	Finished-goods inventory	Empirical multi-firm
Vertical integration / information sharing	1	Higher inventory turnover reported where integration depth is greater.	IT	Empirical multi-firm
Demand-planning quality (forecast error, sales surprise)	1	Larger forecast errors associated with lower IT; directional link extracted for moderator coding.	IT; forecast error / sales surprise	Empirical firm-level panel
Profitability linkage	1	Positive relation between higher IT and profitability measures.	IT, profitability	Empirical multi-firm
Macro inventory trends	1	Long-run declines in inventory ratios across several sectors.	Inventory-to-sales ratios	Industry panel (empirical)
Multi-echelon modeling (information exchange)	1	Modeled reductions in echelon stocks when information is shared.	Echelon stock levels	Analytical model
Multi-echelon dataset (real-world structures)	1	Dataset provides BOMs and lead-time structures for inventory optimization; structural input rather than outcome.	BOM, lead times	Curated dataset
IT metric & benchmarking analysis	1	Context-dependence of IT as a performance indicator; sectoral clockspeed matters for targets.	IT	Industry analysis (empirical)

RESULT AND DISCUSSION

The final corpus included fifteen colleagues-review studies spread in 1995-2023. Eleven with quantitative inventory results reported evidence of firm- or plant-level area; Two offered

warehouse-centric multi-mathodes or pilot design; One presented an analytical multi-Ictalell model; One provided an empirical industry panel that described inventory trend for a long time. The results were stated as inventory turnover (IT), Days Inventory Dues (DIO), Inventory-to-sell ratio, or variable days-based measures. The strategy coverage was distributed as follows: lean/JIT execution (n = 3), lean warehousing and waste deficiency (n = 3), revised MRP and order smoothing (n = 1) policy adjustment, final product discrimination (n = 1), vertical integration or information-sharing structures (N = 1), Demand-Surge (N = 1), Demand-Surgery (N = 1), Demand-Surgery (N = 1), Demand 1), Macro inventory trends (n = 1), multi-Ictales modeling (n = 1), and a real-world multi-ectalone dataset (n = 1). The designs of the study included the practice-adoption indices, an event-time or panel analysis with a cross-sectional rigress, which comparatively was first/later, and adopted with industry-level panels, relative to the controlled case study.

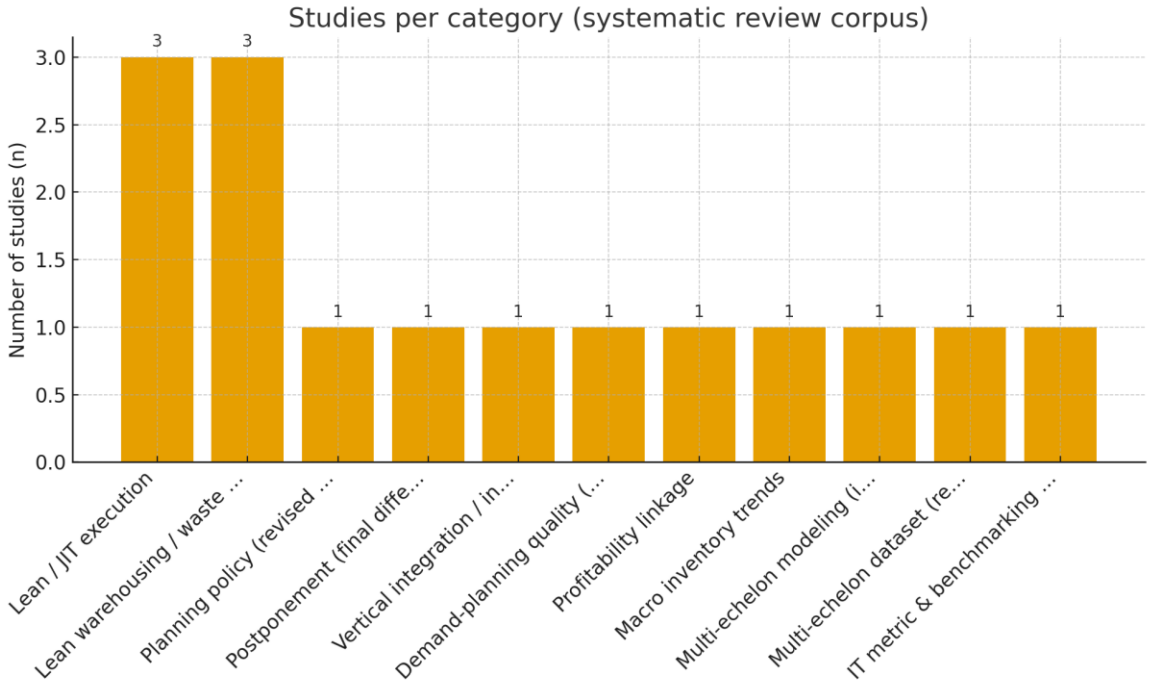

Figure 1. Studies per category.

Across the lean/JIT group, all three studies reported wide lean adoption and statistically important associations between high IT or lower DIOs or at the firm or plant level; Measures included practice-breeding Indis and industry-adjustable leanness. Many warehouses-centered studies dated the time, choosing variability and measureable cuts in non-value-addicted movement; Reported warehouses KPI (order cycle, travel, defect) moved in the direction according to the low time. Planning-policy evidence (amended MRP) showed the average on-hand and on-hand as well as smooth release patterns as well as decreasing. The adjournment study reported less finished inventions for a given service level. A study added strong vertical integration to high turnover; Another affiliated forecast errors or "sales wonder" with a decline in turnover. In the extent of industry, a long -term decrease in stock ratio has been documented in many areas; Analytical multi-technical model has shown cuts in ECOLON shares in the framework of information exchange; The real world data file has made available Bill-Off-Commercials and Level-Time to optimize stocks.

Two studies are presented in more detail as an anchor for extraction and coding impact. First, the revised MRP case examined the manufacturer of discomfort that implements policy changes to release smooth order and stabilizes planning parameters; The reported messages were included in standard deviations of hand inventory without a reduction in the average stock level and a drop in

Phil metrics. The study provided a series of timing of items that allows you to turn into daily results and documented parameter settings (batch size, delivery belief) necessary for replication (D'Avino, de Simone and Schiraldi, 2014). Secondly, the empirical analysis of the performance of the forecast used data at the company level to measure the "sales surprise" compared to the plan; Reported registers revealed that a great absolute surprise coincides with a lower turnover with the company's size and seasonal control. The data allowed the direction and statistical importance of categories and reported on the coding of quality moderators based on demand (Joseph, Hong, Niu and Imran, 2023).

Descriptive calculations according to the strategy category were as follows: Lean/JIT - 3 out of 3 studies reported favorable inventory results; lean warehousing/waste reduction—3 of 3 studies reported warehouse KPI improvements aligned with shorter dwell; planning/MRP—1 of 1 reported lower average and variance of on-hand; postponement—1 of 1 reported reductions in finished-goods inventory at constant service; vertical integration/information structures—1 of 1 reported higher turnover; demand-planning quality—1 of 1 reported lower turnover with larger forecast errors; profitability linkage—1 of 1 reported a positive relation between IT and profitability; macro trends—1 of 1 documented declines in inventory ratios across several sectors; multi-echelon modeling—1 of 1 demonstrated stock reductions with information exchange; dataset—1 of 1 provided structural inputs for optimization. Where days-based and turnover measures coexisted, conversions produced consistent directional alignment (lower DIO corresponding to higher IT). Heterogeneity in measurement and context was present across studies; nonetheless, all extracted effects used the same sign convention for summary tables.

The evidence suggests that Gohowns' reserves reduction are usually achieved when flow stability, planning discipline and structural coordination are upgraded rather than isolated projects. Looking at the corpus, lean design and removal of the warehouse waste, it provided less time and higher turnover, but the size plan varies with instability of noise and demand. It compares to the idea that the warehouse over current converts variability into physical buffers; When the plan is pressed on the layers of plan and source, the storage principles can be tightened without fines. The formula explains why the same appearance on paper has brought different inventory in companies and areas -sometimes more things than technology.

Two conclusions are part of the border position for practice. First, the unregistration between slenderness and performance is documented by industrial measurement and panel evidence, indicating that the pushing of inventions under a qualified area reduces the results of increasing exposure and firefighting company, especially under uncertain demand (Emergl and Hoffle, 2011). The warehouse program, which chases the main objectives, without the protection of the service, will virtually oscillate and remain advantages. Secondly, a modified MRP with order smoothing showed low average and scattering to the hand of the manufacturer False-Part, which maintained the formula of release and parameter mode by stabilizing the regime; The study provides a number of items that clarifies the mechanism of scary commands, a small cycle and low nervousness in replenishment (D'Avino, de Simone and Schiraldi, 2014). These results were taken together, explaining why stabilization of flow and disciplined planning increases the benefits of a lean warehouse; They also explain why the same device can disappoint the same device when the noise program is applied to the top.

The first work was added to a wide adoption of lean for better supply of stocks as the additional procedures shorten the settings and synchronize the flow; Our reviews describe an argument in a warehouse that shows that there are transmission channels for DIO by showing this variability and stability of slots. Similarly, empirical tests of adjournment reported discrimination upstream and showed less completed inventions in a continuous service; In the warehouse words, items with a low end reduce simple layout and fast order cycles that are mechanically reduced. Current results correspond to this evidence, but qualify: the size of the impact was large, where the effective delivery time was shortened by integration and information, which is a reminder that is a state of structural proposal for local processes.

The study proposals were special; The results were made of turnover at the company level at the time of stay at SKU and the slenderness was measured both with the training indexs and with the financial screen. Potential endogenicity remains: companies that receive lean or stable planning may differ from managerial capacity, which can increase estimated benefits. The publication cannot be taken because successful programs are more likely to report. Not all warehouse studies included a clear service matrix; The interpretation of stock cuts without reference to Phil is dangerous, as indicated by the above non -linearity (Eroglu & Hofer, 2011).

Reduce an inventory of excellent days with sequential activities: SKO segment, stabilize the manufacturing and release formula and then the garbage of the warehouse warehouse. Slim storage for parameters mode and reliable Demand scheme in MRP; Otherwise, the buffer is crawling back. Use the integration and visibility of information to compress uncertainty for the delivery time to become a small and more frequent repayment. Consider the target Dio as a limit, not a single number; Continue towards the effective area, follow the service and stop in front of the "very slim" area.

CONCLUSION

In the manufacture of Gookowns, the reduction in stocks of excellent days is the most effective when the lever improvement is deployed as a consistent system instead of laminate. The synthesis of fifteen studies of colleagues-recruitment shows recurring advantages when the flow is stabilized on the store floor, stock waste is methodically removed, material planning policies are reduced to variability of release and current coordination or adjourn the uncertainty of stages. In practice, lean routines are cycle and smooth work content; Slotting reduces discipline and standardized collection dwellings and errors; Revised planning parameters reduce nervousness and reduce numbered orders; And tight sharing of information or structural integration allows small and more frequent refilling. These liver increase stock turnover without reducing the service when implemented simultaneously. However, the improvement is not linear. Once the invention is operated under a qualified area when an increase in instability and a decrease in power is exposed; Therefore, the targets of DIO should be managed as a range with clean railing services and instability probes. The review also emphasizes the central quality of the employment of demand: Constant forecast error quickly neutralizes the warehouse and forces preventive buffers to plan benefits. Management is the sequential journey - the segment according to criticism and variability stabilizes and releases the table, expands the visibility of data in the crop warehouse and the visibility of data in equipment with disciplined routines, so it can be small and sharp. Consider the inventory as a dynamic result of the quality and process capacity of the plan, not to reduce the stable stock. The evidence bears basic boundaries: design and resulting measures are special, selection in improvement programs can prejudice advantages and reporting services results is uneven, complicating association and comparison. However, the directional effects are sufficient to justify the action and inform the railing for execution. Future research should prefer identification due to plan and integration effects on warehouse inventions by means of semi -professional designs, report standardized dios, turnover matrix and service at SKO and ECOLON, and opening the extraction sheet to increase transparency. There is also a need to determine the limit of risk costs that defines the "very dubbed" area, tests the rules of adaptive policy for MRP and evaluates sharing information about multiple Echlon with operational data instead of proxy, instead of parameters and proximal data instead of proxy. The integration of the telemetry of the digital warehouse with the prognosis quality indicators can clarify how to release the stability time of layout, slots management and rhythm size. Replication in industries with different hours will help normalize the decisions resulting from this review.BGD remains a pressing research issue, particularly in the Nigerian context, as the cultural orientation tends to favor the dominance of men in leadership positions. In response, legislation and regulation have been enacted to improve female board representation.

There has been gradual progress in female board representation, especially in the banking industry. Despite women being an untapped talent, there is still the question of their mere inclusion on the board rather than their possession of the requisite competence to drive corporate activities. Embracing BGD without compromising competencies (knowledge, skills, attitudes, and other characteristics) is considered crucial in instilling change in the corporate governance framework of firms. Knowledge is power. A gender-diverse board needs to bring a diverse array of perspectives and insights to boardroom discussions, ensuring meaningful representation.

There is a strong preference for financial measures compared to other aspects of firm performance. 19 (86.4%) papers proxied firm performance with financial performance. Arguably, financial performance may be more objective and accessible to obtain than social and environmental performance. The effect of BGD cannot be fully articulated or appreciated unless comprehensive investigations into the relationship are conducted, including other critical aspects of firm performance. Firm performance is a multifaceted construct comprising different parameters. Research focusing only on financial performance could limit the potency and potential of BGD for firms. Bundling or aggregating performance measures is recommended to provide a more holistic or complete perspective of BGD influences. Despite the limited utility of other performance aspects, the promise of financial performance was assured in a majority of the sampled studies. There is also evidence, though scant, of BGD contributing to social and environmental performance. This result suggests that BGD fosters discernible improvement in different firm performance parameters.

Additionally, the results appear inconsistent, showing both positive and negative effects, as well as no effect at all. There is still a need for contextual clarity to determine the factors that condition or intervene in the BGD-firm performance relationship. Country-level characteristics (cultural orientation, legal system, financial development, and economic conditions) and board independence were identified as moderators. Intellectual capital efficiency was identified as a mediator. Contingent relationships could provide a robust, evidence-based approach to managing BGD practices, potentially leading to superior performance outcomes. The review highlighted that research has not evolved substantially from the simple linear relationship. The challenge for research is to move beyond one-directional investigations to enhance the potential for uncovering transformative insights that strengthen the relationship. These inconsistencies and gaps can impact how Nigerian firms can internalize BGD practices to take advantage of them.

It is also necessary to consider the other roles of BGD if achieving a linear effect is challenging. This will enable firms to develop diversity practices in new ways. In doing so, cross-country and multi-sector studies should be encouraged to compare and contrast diversity practices

and to cast fresh insights on best practices with wide acceptability and applicability. Nevertheless, the relationship between BGD and firm performance in Nigeria has attracted the attention of scholars; however, there is a clear opportunity to make progress, informed by the need to enhance our understanding of how BGD affects firm performance and whether it plays other contextual roles that impact firm performance. This is the only way to provide alternative explanations in a highly fragmented research area.

REFERENCES

Demeter, K., & Matyusz, Z. (2011). The impact of lean practices on inventory turnover. International Journal of Production Economics, 133(1), 154–163. https://doi.org/10.1016/j.ijpe.2009.10.031

Eroglu, C., & Hofer, C. (2011). Lean, leaner, too lean? The inventory-performance link revisited. Journal of Operations Management, 29(4), 356–369. https://doi.org/10.1016/j.jom.2010.05.002

Huson, M., & Nanda, D. (1995). The impact of just-in-time manufacturing on firm performance in the US. Journal of Operations Management, 12(3–4), 297–310. https://doi.org/10.1016/0272-6963(95)00011-G

Abushaikha, I., Salhieh, L., & Towers, N. (2018). Improving distribution and business performance through lean warehousing. International Journal of Retail & Distribution Management, 46(8), 780–800. https://doi.org/10.1108/IJRDM-03-2018-0059

de Jesus Pacheco, D. A., Clausen, J., & Bumann, S. (2023). A multi-method approach for reducing operational wastes in distribution warehouses. International Journal of Production Economics, 255, 108705. https://doi.org/10.1016/j.ijpe.2022.108705

D'Avino, G., De Simone, V., & Schiraldi, M. M. (2014). Revised MRP for reducing inventory level and smoothing order releases: A case in manufacturing industry. Production Planning & Control, 25(10), 803–813. https://doi.org/10.1080/09537287.2013.764579

Yousaf, M., Hong, F., Niu, X., & Imran, M. (2023). The effects of sales surprise on inventory turnover: An empirical study. Cogent Economics & Finance, 11(2), 2258696. https://doi.org/10.1080/23322039.2023.2258696

Kwak, J.-K. (2019). Analysis of inventory turnover as a performance measure in manufacturing industry. Processes, 7(10), 760. https://doi.org/10.3390/pr7100760

Andreou, P. C., Louca, C., & Panayides, P. M. (2016). The impact of vertical integration on inventory turnover and operating performance. International Journal of Logistics Research and Applications, 19(3), 218–238. https://doi.org/10.1080/13675567.2015.1070815

Alnaim, M., & Kouaib, A. (2023). Inventory turnover and firm profitability: A Saudi Arabian investigation. Processes, 11(3), 716. https://doi.org/10.3390/pr11030716

Tahboub, K. K., & Salhieh, L. (2019). Warehouse waste reduction level and its impact on warehouse and business performance. Industrial and Systems Engineering Review, 7(2), 85–101. https://doi.org/10.37266/ISER.2019v7i2.pp85-101

Chen, H., Frank, M. Z., & Wu, O. Q. (2005). What actually happened to the inventories of American companies between 1981 and 2000? Management Science, 51(7), 1015–1031. https://doi.org/10.1287/mnsc.1050.0368

Davila, T., & Wouters, M. (2007). An empirical test of inventory, service and cost benefits from postponement in the supply chain. International Journal of Production Research, 45(10), 2245–2267. https://doi.org/10.1080/00207540600725002

Moinzadeh, K. (2002). A multi-echelon inventory system with information exchange. Management Science, 48(3), 414–426. https://doi.org/10.1287/mnsc.48.3.414.7730

Willems, S. P. (2008). Data set—Real-world multiechelon supply chains used for inventory optimization. Manufacturing & Service Operations Management, 10(1), 19–23. https://doi.org/10.1287/msom.1070.017

СТРАТЕГІЯ ПІДВИЩЕННЯ ОБОРОТНОСТІ ЗАПАСІВ НА ВИРОБНИЧОМУ ПІДПРИЄМСТВІ

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Виробничі компанії прагнуть скоротити тривалість зберігання запасів та підвищити їх оборотність без шкоди для рівня обслуговування. Ця стаття синтезує докази з п'ятнадцяти рецензованих досліджень, щоб виявити стратегії, які зменшують кількість днів запасів (DIO) та покращують оборотність запасів (IT). Керовані структурованим пошуком та прозорими критеріями включення, ми аналізуємо суворие емпіричне польове дослідження з впровадження lean, складського lean-управління та усунення втрат, модифікованих згладжених MRP та планування замовлень, відкладеного виробництва, вертикальної інтеграції та точності прогнозування попиту. Дані витягнуто щодо дизайну дослідження,

референсних метрик та ефектів; оцінено якість досліджень та ризик упередженості. Мета-синтез, доповнений порівнянними показниками, вказує на послідовне скорочення DIO від впровадження lean та усунення втрат на складі, а також зменшення варіативності в політиках запасів з додатковими вигодами. Інтеграція та обмін інформацією посилюють ефекти видимості; з іншого боку, конфігурації складів «надто lean» несуть ризики, особливо за нестабільного попиту. Поміркковані результати за галузями та розміром фірми, а також гетерогенність метрик, враховано. Практичні наслідки: сегментація SKU, lean-потоки з дисциплінованими правилами запасів безпеки, стабілізація команд шляхом адаптації MRP та розширення кооперації з постачальниками. Обмеження включають нестійкість метрик та потенційну упередженість публікацій. На завершення, окреслено план впровадження та запропоновано каузальні дослідження для розмежування сили механізмів у майбутніх роботах.

Ключові слова: оборотність запасів (DIO), складське lean-управління, Just-in-Time (JIT), інтеграція ланцюга постачань.