

## Assessment of Inventory Management Practices in the Textile Industry: The Case of Algerian Companies

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### **Abstract:**

This study investigates inventory management practices in Algerian textile companies, focusing on how organizational and technological limitations affect efficiency. Using a quantitative approach based on 100 questionnaire responses from professionals across various production units, the research highlights widespread reliance on manual tools such as Excel, limited use of ERP systems, and weak inventory classification and valuation practices. Storage conditions are often inadequate, contributing to significant material losses. The findings also reveal challenges related to poor digitalization, lack of qualified personnel, and inefficient coordination. To improve inventory performance, the study recommends enhancing digital systems, improving storage infrastructure, training staff, and standardizing inventory procedures.

**Keywords:** Inventory management, Textile industry, Digitalization, ERP systems.

**Jel Classification Codes :** M11, M1, M150

## **1. INTRODUCTION**

Inventory management is one of the most critical functions in industrial organizations, as it plays a key role in ensuring production continuity, cost reduction, and overall operational efficiency. This function is particularly important in the textile sector, where the availability of raw materials directly determines the smooth running of production processes. Any deficiency in inventory management may lead to production stoppages, delivery delays, and significant financial losses.

In the Algerian context, many textile companies still face considerable difficulties in adopting modern and efficient inventory management practices. These difficulties are mainly related to organizational and technological constraints, such as limited digitalization, insufficient use of advanced information systems, and weak internal control mechanisms. As a result, companies often struggle with inventory tracking, valuation, and storage, which negatively affects their overall performance and competitiveness.

Within this framework, this study seeks to examine the current state of inventory management practices in Algerian textile companies by analyzing the methods used and identifying the main shortcomings and challenges faced in this area.

Accordingly, the main research problem of this study can be formulated as follows: **“How do Algerian textile companies manage their inventory in a context marked by organizational and technological constraints?”**

To address this problem, the following sub-research questions are raised:

1. How are inventories classified, tracked, and evaluated within the company?
2. Under what conditions are raw materials stored, and how are damaged materials managed?
3. How are orders and material procurement handled?
4. What are the main challenges related to inventory management, and how does the company respond to them?

Based on these questions, the study proposes the following hypotheses:

1. Inventory management mainly relies on manual tools such as paper records and Excel spreadsheets.
2. The lack of digitalization and Enterprise Resource Planning (ERP) systems hinders effective inventory monitoring and control.
3. Poor storage conditions are one of the main causes of inventory losses.
4. The corrective measures implemented remain limited or insufficient to address inventory management problems.

To achieve the objectives of this study, a quantitative research approach was adopted. Data were collected through a structured questionnaire distributed to 100 employees working in Algerian textile companies. The collected data were analyzed using univariate analysis (flat sorting), which involves examining each variable independently by calculating the

frequencies and percentages of responses for each questionnaire item. The objective of this method is to describe and summarize the main characteristics of the data, identify the most common inventory management practices, tools, and challenges, and provide a clear overview of prevailing trends in Algerian textile companies. The analysis of the collected responses provided a comprehensive overview of current inventory management practices and the main challenges faced by companies in this sector.

The main objective of this study is to evaluate inventory management practices in Algerian textile companies in order to identify their limitations and propose improvement measures that can enhance efficiency and organizational performance.

## **2. Theoretical section: Key Concepts, Methods, and Challenges in Inventory Management**

Inventory management is a crucial issue for any business, and it is particularly important to managers. Indeed, business leaders pay close attention to this function, as storage methods can directly affect the quality of finished products. This section will therefore cover the fundamental concepts of inventory management, defining its principles and objectives, as well as the tools used to manage it effectively. In addition, we will present the main methods of inventory valuation, which are essential for good financial and operational control.

### **2.1. Definition of inventory management**

The American Production and Inventory Control Society (APICS) defines inventory management as: “a management discipline concerned with the planning and control of inventories; the role of inventory management is to maintain a desired level of inventory of specific products or items.” (JOHN., 2000, p. 01) Furthermore, inventory management can be defined as: “an activity that ensures control over goods in terms of quantity, quality, cost, and compliance with supply requirements.” (LYONNET, 2019, p. 168)

Inventory management has many definitions and each one looks at it from a different angle. Some define inventory management as the activity by which scientific methods are used to determine the quantity of raw materials, manufactured goods and semi-manufactured goods in a way that ensures meeting the requirements and conditions of operation and customer requests at the lowest possible costs<sup>8</sup>, while others define it as the methods and principles used in preparing the materials plan and coordination, control and reviewing the flow of materials movement within the institution, as it focuses on the financial aspects related to the costs and benefits of maintaining inventory for all its categories. (Khedadmia, 2024, p. 1025)

From the above, inventory management is a management discipline that performs the task of planning, determining, and controlling inventory levels in the company to maintain continuity of production in a manner that suits the company's capabilities and objectives.

### **2.2. Objectives of inventory management**

The purpose of inventory management is to maintain the service level for which the inventory exists at an acceptable threshold. There is no single objective that is valid for all companies, all products, and all categories of inventory. The objective will always correspond to a specific context. (PILLET, 2011, p. 58) Furthermore, it will not be fixed, but will evolve

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over time. Indeed, one of the objectives of inventory management is precisely to achieve increased performance through better inventory control. In addition, the main objective of inventory management is to reduce storage and ordering costs while maintaining the necessary inventory levels to avoid stock shortages that could lead to a loss of market share, thereby improving customer service quality.(NAKHLA., 2006)

### **2.3.The main tools for inventory management**

In this part, we will present the main inventory management tools, focusing particularly on the 20/80 rule and the ABC method. These tools are essential for classifying and prioritizing stock items in order to improve management, reduce costs, and optimize company resources.

#### **✓ The 20/80 method**

The 20/80 method is based on the fact that 20% of quantities represent 80% of value. For these items, inventory tracking will be very rigorous. For the rest of the items, management will be less thorough.(RAGAIGNE & TAHAR, 2015, p. 115)

#### **✓ The ABC method**

Not all products are treated the same way in the warehouse. We observe that most of the time, Pareto's principles apply to the warehouse. 20% of items account for 85% of warehouse activity. It is therefore important to organize storage space around high-turnover products and optimize the management of this product family. Products are classified into three categories : (ROQUES, 2015, pp. 43-44)

- High-turnover products (class A): up to 80% of turnover for approximately 20% of items. Place these products at the front of the racks to reduce movement. Place reserves close to the picking area. Prevent potential shortages by monitoring these products, particularly by setting a replenishment threshold, for example, and by optimizing safety stock.
- Medium-turnover products (class B): approximately 15% of turnover for 30% of items. Place these products behind class A items.
- Low-turnover products (class C): 5% of turnover for 50% of items. Place these products at the back of the picking aisles.

### **2.4.Inventory valuation methods**

For a fair and objective assessment and valuation of inventory costs, the company can choose between the following methods: (GRANDGUILLOT. F, 2020, pp. 25-26)

- Weighted average cost at the end of the period :

The valuation of inventory outflows is only carried out at the end of the period after determining the weighted average cost.

- Weighted average cost after each entry :

The valuation of inventory withdrawals and inventory is carried out on an ongoing basis. It is necessary to calculate a new unit cost each time an entry is made at a different price.

- FIFO (First in, first out) :

Each entry constitutes a batch, and outflows are valued at the price of the oldest item in stock. The principle is to use up the old batch before starting on the new one, calculated as follows: the oldest batches are used up first until they are completely exhausted.

➤ LIFO (Last in, first out) :

Each entry constitutes a batch, and exits are valued at the price of the most recent item in stock. The principle is to use up the new batch before starting on the old one. It is calculated as follows: the most recent batches are the first to exit.

➤ Replacement cost :

Exits are valued at the most current price possible: the theoretical cost is determined based on the market price.

## **2.5.Challenges of Inventory Auditing in Algeria**

Inventory auditing is a critical function to ensure the accuracy and reliability of financial records. However, in Algeria, auditors face specific challenges that complicate the practical implementation of inventory audit procedures. These challenges stem from technological limitations, organizational constraints, and gaps in internal control systems.

First, technological limitations present a major obstacle to efficient inventory auditing. Querini (2019) notes that Algeria suffers from outdated IT systems, limited investment in digital infrastructure, and heavy reliance on foreign technologies. These constraints restrict the adoption of automated inventory management systems and data analytics tools, forcing auditors to rely on manual procedures, which increases the risk of errors and incomplete audits. (Merkhoufi, 2024)

Second, organizational and control weaknesses affect audit quality. The case of GETEX-SPA illustrates that, despite the presence of internal controls, gaps remain, such as the absence of a dedicated purchasing department, poor warehouse organization, and inadequate oversight of sales control procedures (Bensaid&Khelifi, 2022). This highlights the need for robust internal control systems to support proper inventory management and allow auditors to implement procedures in line with international standards. (Bensaid, 2022)

Third, practical challenges in external auditing emerge in cases like BATICIM, where auditors face difficulties verifying inventory due to outdated accounting records, incomplete charts of accounts, and insufficient integration of internal control systems (Lamouri, 2024). Despite these obstacles, external audits remain essential for enhancing the credibility and reliability of financial statements. (Lamouri, 2024)

Inventory auditing in Algeria is hindered by several interrelated factors that impede the application of international auditing standards:

- Technological limitations and reliance on manual procedures.
- Organizational weaknesses and gaps in internal controls.
- Practical difficulties in implementing auditing standards.

Addressing these challenges is crucial to improving the efficiency and effectiveness of inventory audits within the Algerian context.

## **3. Practical section: Analysis of inventory management practices in textile production units in Algeria**

### **3.1 Reminder of the objective of the study**

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The objective of this research is to examine current inventory management practices in textile production units in Algeria, particularly through classification methods, inventory techniques, storage conditions, and the use of digital tools. It aims to identify the challenges faced by production managers, inventory management agents, and procurement departments in the daily management of material flows. This analysis will enable realistic suggestions for improvement to be made in order to optimize inventory management and reduce losses in the Algerian textile sector.

### **3.2. Presentation of the textile production units concerned**

The Algerian textile company, TEXALG SPA, is the result of various restructuring processes that the Algerian textile industry has undergone since the creation of the very first national clothing company, SONAC, on September 3, 1964 (Decree No. 64-272). SONAC became the National Textile Industries Company SONITEX on July 22, 1966 (order No. 66-218, supplemented by order No. 72-47 of October 3, 1972). The textile industry underwent further successive restructuring between 1982 and 1998, culminating in the creation of the TEXMACO Textile Industrial Group with its 24 production units on August 10, 1999. TEXMACO gave rise to TEXALG SPA with 17 production units spread across the country on December 8, 2011. Today, Algerians des Textiles, rich in the group's history and experience, adopts its development strategy through innovation in all its modernity and in all its forms: intangible and technological. It develops and designs a wide range of textiles for sectors as varied as clothing, furnishings, household linens, uniforms, technical fabrics, fabrics for industrial use, and many others. Teams of engineers, technicians, designers, and creators devote a great deal of time to offering products of the highest quality and to ensuring the long-term production of reliable components for the “industrial ethics” label common to textiles and clothing. This aspect incorporates one of the powerful levers of development: responsible consumption. (<https://texalg-dz.weebly.com/presentation.html>, s.d.) . TEXALG's six subsidiaries comprise 17 production units operating in various sectors of the industrial textile industry, including cotton, silk, and wool. Yarn and thread subsidiary: comprises three production units: (<https://texalg-dz.pdf>, s.d.)

Filature teinture de Baraki (FILBA), Algiers spinning and weaving mill (FITAL), Mediterranean yarns of Setif (MEDIFIL), Blanket subsidiary: comprises three production units: Auras Sienne spinning and blanket company (SAFILCO), Heavy goods weaving factory (Mantal), Société de Fabrication de Couvertures (SPOFACT), Textile subsidiary, comprising two production units: Algérienne de Fabrication de Divers Textiles (ALFADITEX), Bejaia Emballage (BEJE), Wool subsidiary, comprising two production units: Draperies de l'Est (DRAPEST), Biskra weaving and finishing (TIFIB), Silk subsidiary, comprising two production units: Silk weaving and printing (SOITINE), Traditional Algerian silks (SOTRADA), Cotton fabric subsidiary, comprising five production units: Eastern cotton mill (COTEST), Southern cotton fabrics (COTOSUD), Textile finishing company (SENTEX), Clothing and furnishing textile company (SOTEKHAM), Algerian cotton and velvet fabrics (ALCOVEL)

### **3.3. Research Approach**

To address the research problem and achieve the study objectives, a quantitative descriptive approach was adopted. This approach is well-suited for analyzing organizational practices, as it allows for the collection of objective data on inventory management practices in textile companies in Algeria

### **3.4.Data Collection Tool**

The primary data collection instrument was a **structured questionnaire**, developed based on a review of the literature on inventory management. The questionnaire covered the following areas: classification and tracking of inventories, valuation methods, storage conditions, procurement and supply processes, loss control, use of information systems and technology, and challenges related to inventory management. The questionnaire was distributed online via Google Forms, which enabled widespread dissemination across multiple textile production units in Algeria.

### **3.5.Population and sample**

The target population included professionals involved in inventory management, such as production managers, inventory staff, procurement managers, and logistics coordinators. All participants were employed in textile production units located in Algeria, regardless of their legal status (private, public, or mixed companies). Due to the absence of a comprehensive official list of professionals in the sector, a non-probabilistic convenience sampling method was used, selecting respondents who were accessible and willing to participate in the study. A total of 110 responses were initially collected. Out of these, 10 questionnaires were excluded due to incomplete or inconsistent answers, resulting in 100 valid questionnaires used for analysis. This sample size is considered sufficient for a reliable descriptive analysis while taking into account field constraints.

### **3.6.Data analysis method**

Data analysis was conducted using **univariate analysis (flat sorting)**, which involves examining each variable independently by calculating the frequencies and percentages of responses for each questionnaire item. The objective of this method is to describe and summarize the main characteristics of the data, identify the most common inventory management practices, tools, and challenges, and provide a clear overview of prevailing trends in Algerian textile companies, without aiming to establish causal relationships.

## **4. Results and discussion**

In this section, we will present the results of the questionnaire sent to professionals in the textile sector. Each aspect of inventory management will be analyzed separately in order to identify the dominant practices, shortcomings, tools used, and challenges encountered. The objective is to validate or invalidate the hypotheses formulated upstream and to answer the various sub-research questions. This analysis will serve as a basis for formulating concrete recommendations tailored to the context of the Algerian textile industry.

### **4.2.Presentation and analysis of respondents' personal data**

Here we present the results relating to the socio-demographic and professional characteristics of the respondents, collected through the questionnaire. The data covers gender, age, professional seniority, marital status, level of education, and professional category. This information, compiled in a summary table, provides a better understanding of the general profile of the survey participants.

#### **Table 1.Respondents' personal data**

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Variable	Category	Frequency	Percentage	Variable	Category	Frequency	Percentage
<b>Genre</b>	Male	70	70	<b>Marital status</b>	Married	50	50
					Single	33	33
	Female	30	30		Other	17	17
<b>Age</b>	Under 25 years old	33	33	<b>Occupational Category (staff)</b>	Operational	36	36
	25 to 40 years old	23	23		Supervisory	38	38
	40 to 50 years old	26	26		Managerial	26	26
	Over 50 years old	18	18				
<b>Seniority</b>	Less than 4 years	41	41	<b>Educational level</b>	Secondary	9	9
	5 to 9 years	27	27		Intermediate	38	38
	More than 9 years	32	32		University	30	30
			Vocational training		23	23	

### Source : SPSS outputs

**Gender of respondents:** The breakdown by gender shows that 70% of participants are male compared to 30% female. This male predominance indicates that men are overrepresented among survey respondents.

**Age range of respondents:** In terms of age, 33% of respondents are under 25, 23% are between 25 and 40, 26% are between 40 and 50, and 18% are over 50. These figures reflect generational diversity, with a majority of young adults, but also a significant presence of older people.

**Professional seniority:** The seniority of participants is distributed as follows: 41% of respondents have less than 4 years of professional experience, 27% have between 5 and 9 years of seniority, and 32% have more than 9 years of experience. This indicates that the surveyed population is composed of both new employees and more staff that are experienced.

**Marital status:** In terms of marital status, half of respondents (50%) are married, 33% are single, and 17% report another status (divorced, widowed, cohabiting, etc.). This reflects a certain diversity in the personal situations of respondents.

**Level of education:** In terms of level of education, 9% of participants have a high school education, 38% have an intermediate level of education, 30% have attended university, and 23% have received vocational training. These data show that the majority of respondents have a medium to high level of education.

**Occupational category:** In terms of occupational category, 36% of respondents hold operational positions, 38% are in supervisory roles, and 26% hold managerial positions. The distribution is relatively balanced across the different categories, with a slight predominance of supervisors.

**4.3. Mean and Standard Deviation Analysis for Each Survey Item**

In this section, the results of the survey are analyzed by calculating the mean and standard deviation for each item. This analysis provides an overview of respondents' opinions and the variability of their responses, helping to identify trends and patterns in the data.

**Table 2. Mean and Standard Deviation Analysis for Each Survey Item**

<b>N°</b>	<b>Survey Questions</b>	<b>Mean</b>	<b>Std.Deviation</b>
01	How are materials classified in your company?	2.99	0.785
02	What inventory method is used?	3.03	1.291
03	What stock flow method is applied?	2.42	0.654
04	Do you use a digital system for inventory management?	2.82	1.086
05	Which method is used for stock cost evaluation?	2.43	0.856
06	How often are stocks evaluated?	2.46	0.958
07	Is the age of materials (degradation, quality change...) considered in the evaluation?	3.43	0.924
08	How are raw materials stored?	3.22	1.040
09	Are proper storage conditions respected (temperature, humidity, safety)?	3.01	0.785
10	What is done with damaged or unusable materials?	2.71	0.729
11	How are quantities to be ordered determined?	2.78	1.040
12	What tool is used to record orders?	2.99	0.823
13	What is the average delay between order and delivery?	3.20	1.092
14	What is the main cause of stock losses in your company?	2.65	0.744
15	How does the company attempt to reduce losses?	2.97	1.291
16	How are losses recorded?	2.50	0.937
17	Do you use an ERP system?	3.01	0.785
18	Is there automated tracking of material movements?	2.47	0.937
19	What type of software is used?	2.95	1.282
20	What is the biggest challenge your company faces in inventory management?	2.74	0.719
21	What is the impact of these challenges on production?	2.65	0.957

**Source: SPSS outputs**

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According to Table 2, the analysis of survey responses shows that most items received moderate mean scores, indicating neutral to slightly positive perceptions of inventory management practices in the companies surveyed. The highest mean (3.43) was recorded for the consideration of material age (degradation and quality changes), suggesting that companies pay some attention to this factor. Conversely, lower mean scores were observed for items such as the stock flow method (2.42) and automated tracking of material movements (2.47), highlighting areas where practices are less developed. Standard deviations range from 0.65 to 1.29, reflecting moderate variability in responses, with some items showing greater differences among respondents, such as the inventory method used (SD = 1.29) and methods to reduce losses (SD = 1.29). Overall, the results indicate that while certain inventory management practices are established, there is considerable variation in implementation, revealing potential areas for improvement and standardization.

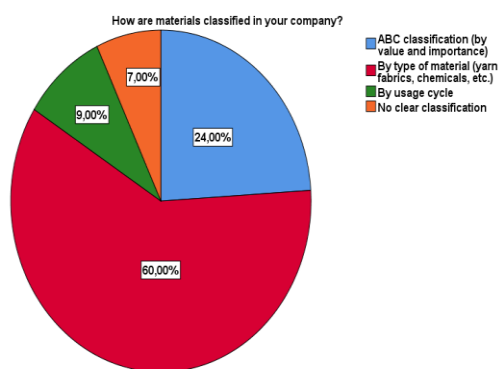
### 4.4. Classification, Monitoring, and Valuation of Inventory in the Company

This section includes two areas: Area 1: Inventory and stock classification methods, Area 2: Stock valuation methods

#### ➤ Inventory and stock classification methods

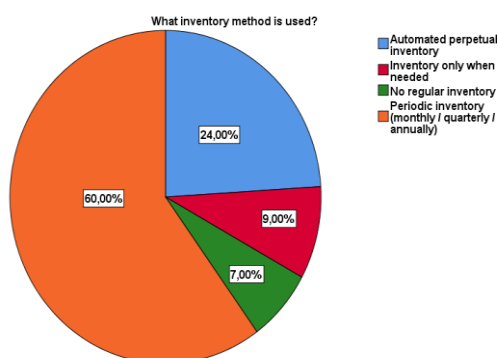
This area focuses on how materials are organized, tracked, and managed within the company. It includes four main questions: material classification, inventory frequency, inventory turnover method, and the tool used for inventory management. These elements are essential for ensuring clear visibility of stock levels and preventing shortages or overstocking.

**Fig 1: Material classification**



The majority of respondents (**60%**) classify materials **by type** (yarns, fabrics, chemicals, etc.), a simple method that facilitates storage and physical stock management, especially in production environments. This approach is suitable when materials have clearly distinct uses. Only **24%** use **ABC classification**, which is more effective for optimizing costs. It is worth noting that **7%** have **no clear classification method**, which can negatively affect stock management.

Source: SPSS outputs



**Fig 2: Inventory frequency**

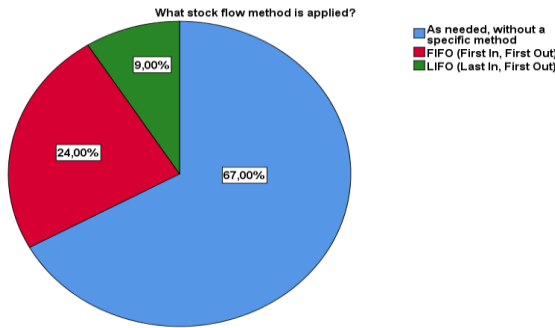
The majority of respondents (**60%**) use a **periodic inventory method** (monthly, quarterly, or annually), which is common in companies with limited digital tools, as it requires fewer resources and less continuous monitoring. Only **24%** have an **automated perpetual inventory system**, indicating a lower level of digital integration. Meanwhile, **9%** perform inventory **only**

when needed, and 7% have no regular inventory, both of which reflect weak control practices and can lead to stock inaccuracies or shortages.

Source: SPSS outputs

Fig 3: inventory turnover method

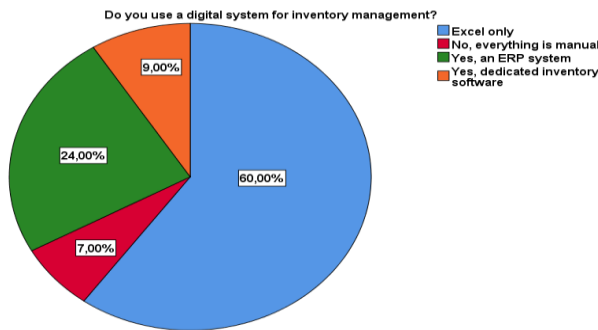
The majority of respondents (67%) manage stock as needed, without a specific method, which suggests a lack of standardized procedures and increases the risk of disorganization or product expiry. Only 24% apply the FIFO method, which is more suitable for perishable or time-sensitive materials for perishable or time-sensitive materials. A small portion (9%) use LIFO, which may be relevant in specific financial or non-perishable contexts but is less common in manufacturing or textile industries.



Source: SPSS outputs

Fig 4: Inventory turnover method

A majority of respondents (60%) use Excel only for inventory management, indicating a basic digital approach that may suffice for small operations but lacks automation and scalability. Only 24% use a more robust ERP system, and 9% rely on dedicated inventory software, showing limited adoption of advanced tools. Notably, 7% still manage inventory manually, which can lead to errors, inefficiencies, and poor data tracking.

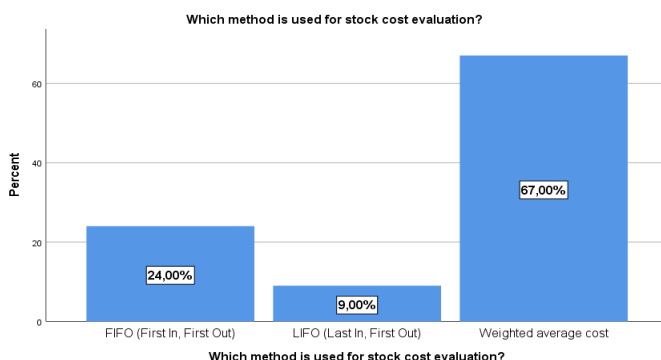


Source : SPSS outputs

➤ Inventory valuation methods

This area covers three questions relating to the methods used to assess the value of inventory, the frequency of this assessment, and the consideration of the age or deterioration of materials. These elements are essential to ensure accurate inventory valuation and reliable financial management.

Fig 5: Method for stock evaluation



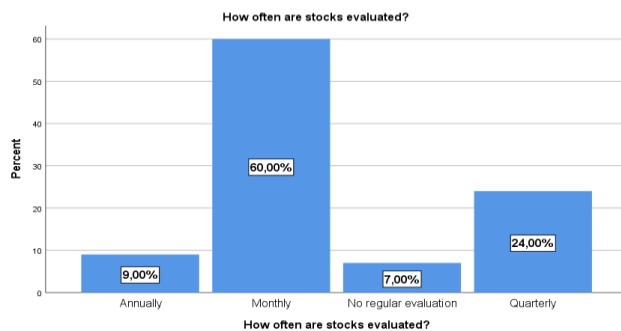
The majority of respondents (67%) use the weighted average cost method for stock evaluation, which smooths out price fluctuations and provides a balanced view of inventory value. Only 24% apply FIFO, suitable when older stock is sold first, and 9% use LIFO, which can reflect recent costs

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but is less common due to accounting standards. The preference for weighted average suggests a focus on simplifying cost management.

Source: SPSS outputs

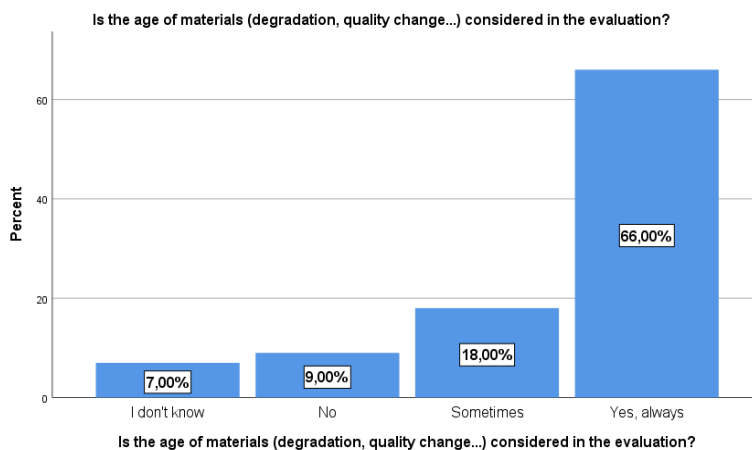
Fig6: Stock evaluated



The majority of respondents (60%) evaluate stocks monthly, which allows for timely adjustments and accurate financial reporting. 24% conduct evaluations quarterly, while only 9% do so annually, which may risk outdated stock data. Notably, 7% have no regular evaluation, potentially leading to poor inventory control and financial inaccuracies.

Source: SPSS outputs

Fig 7: During stock evaluation



A majority of respondents (66%) always consider the age of materials (degradation, quality changes) during stock evaluation, which is crucial for ensuring accurate valuation and avoiding overestimations. 18% do so sometimes, while 9% do not take it into account, potentially risking obsolete or deteriorated stock. The 7% who are unsure highlight a need for clearer procedures.

Source : SPSS outputs

### 4.5.Storage Conditions of Raw Materials and Management of Damaged Materials

#### ➤ Storage conditions

This area covers three issues relating to the storage of raw materials, compliance with environmental conditions (temperature, humidity, safety), and the management of damaged or unusable materials. These aspects are essential for preserving the quality of stocks and limiting losses.

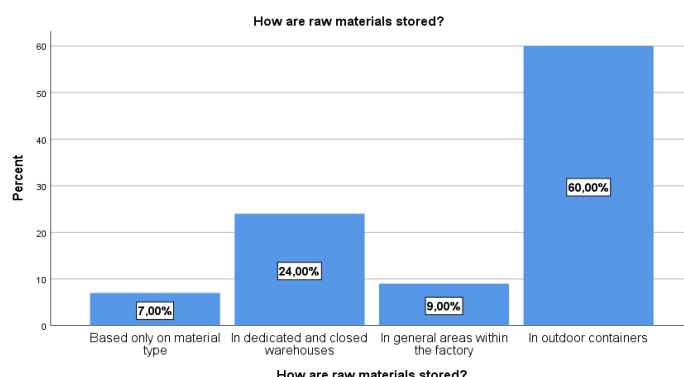


Fig8: Store raw materials

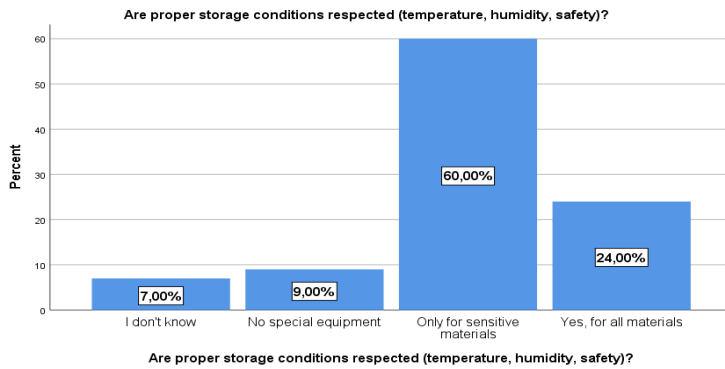
The majority of respondents (60%) store raw materials in outdoor

containers, which may expose stocks to environmental risks but can be due to space constraints or material type. Only 24% use dedicated and

closed warehouses, offering better protection and control. A smaller share stores materials based on type (7%) or in general factory areas (9%), which might not always ensure optimal preservation.

Source: SPSS outputs

Fig 9: Storage conditions

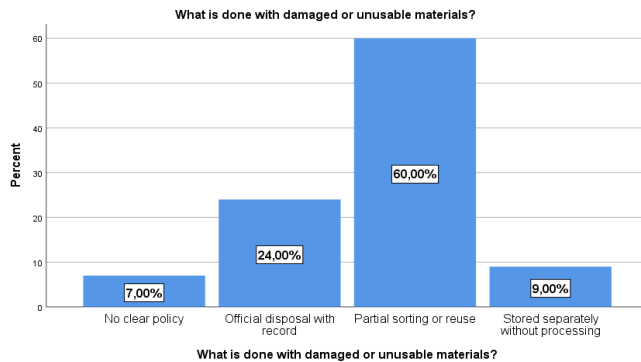


A majority of respondents (60%) report that proper storage conditions (temperature, humidity, safety) are respected **only for sensitive materials**, indicating targeted efforts to protect high-risk stocks. Only 24% apply these conditions **to all materials**, reflecting room for improvement in overall stock preservation. Notably, 9% have

**no special equipment**, which could lead to quality degradation.

Source: SPSS outputs

Fig 10: Damaged or unusable materials



The majority of respondents (60%) practice **partial sorting or reuse** of damaged or unusable materials, which helps reduce waste and recover value. Only 24% follow **official disposal with proper recording**, ensuring traceability and compliance. However, 9% store such materials separately without processing, and 7% report **no clear policy**, both of which may increase

risks of stock confusion or regulatory issues.

Source : SPSS outputs

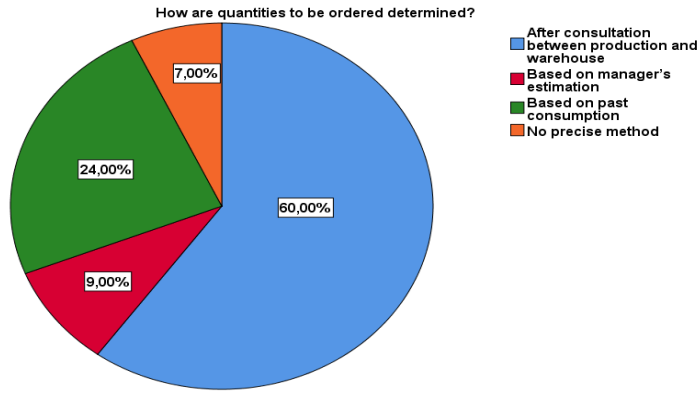
#### 4.6. Ordering and Procurement Process for Materials

##### ➤ Order and supply management

This area covers three issues related to how order quantities are determined, the tools used to record orders, and the average time between order and delivery. These elements are essential to ensuring continuity in production and avoiding stock shortages.

Fig 11: Determine order quantities

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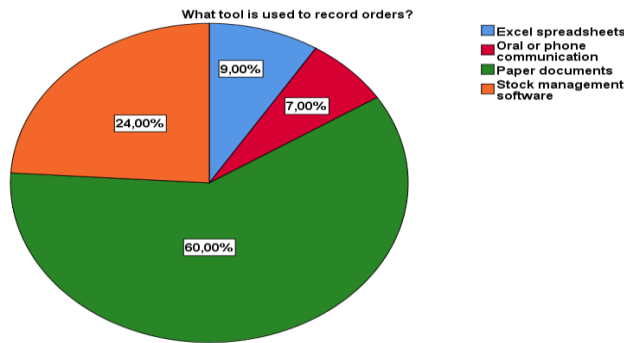


Most respondents (60%) determine order quantities after consultation between production and warehouse, promoting coordination and aligning stock levels with real needs. 24% rely on past consumption, a useful but reactive approach. However, 9% base decisions on manager's estimation, and 7% have no precise method, which can lead

to overstocking or shortages.

Source: SPSS outputs

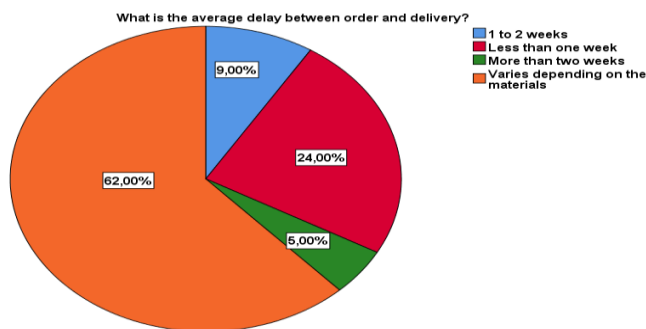
**Fig 12: Record orders**



The majority of respondents (60%) use **paper documents** to record orders, reflecting a traditional but less efficient method prone to errors and delays. Only 24% use **stock management software**, which offers better accuracy and traceability. A small share uses **Excel** (9%) or **oral/phone communication** (7%), indicating a need for more reliable

and centralized systems.

Source: SPSS outputs



**Fig 13: average delay between order and delivery**

Most respondents (62%) report that delivery times **vary depending on the materials**, which suggests a lack of standardized lead times and possible supply chain complexity. Only 24% receive materials in **less than a week**, while 9% wait **1 to 2 weeks**, and 5% experience **longer delays**, which may affect

production planning and responsiveness.

Source : SPSS outputs

### 4.7. Main Inventory Management Challenges and the Company's Responses

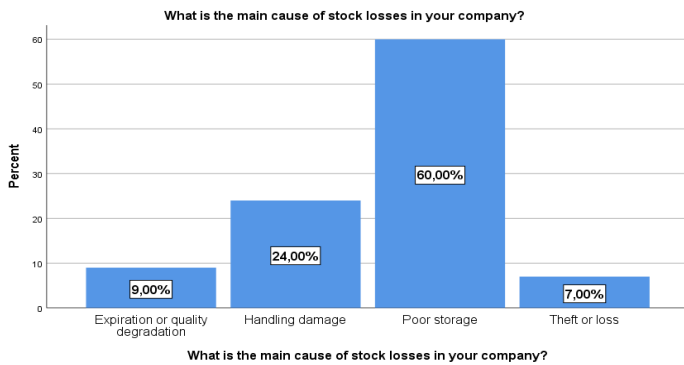
This section covers three areas: Area 5: Inventory control and loss reduction, Area 6: Technology and information systems, Area 7: Challenges related to inventory management

A total of eight questions are addressed in this section, covering the causes of losses, monitoring methods, the technological tools used, and the structural difficulties encountered in inventory management. These elements make it possible to identify the weaknesses in the system and the efforts made to correct them.

➤ Inventory control and loss reduction

This area focuses on the main causes of inventory losses, the measures put in place to limit them, and the methods used to record these losses. It allows for an assessment of the effectiveness of control and prevention practices within the company.

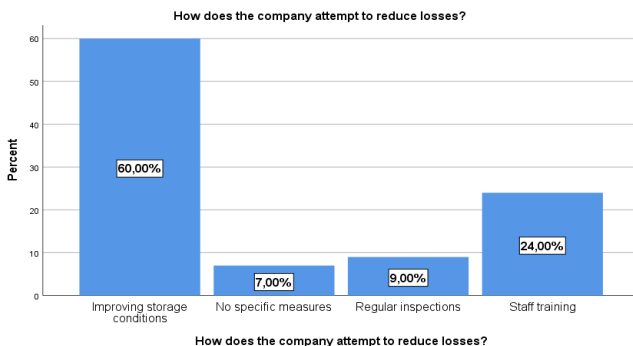
**Fig 14: Main cause of stock losses**



The main cause of stock losses is poor storage (60%), highlighting issues with warehouse conditions or organization. Handling damage (24%) is the second major cause, followed by expiration (9%) and theft or loss (7%). This emphasizes the need to improve storage practices to significantly reduce inventory losses.

Source: SPSS outputs

**Fig 15: Company mainly reduces losses**

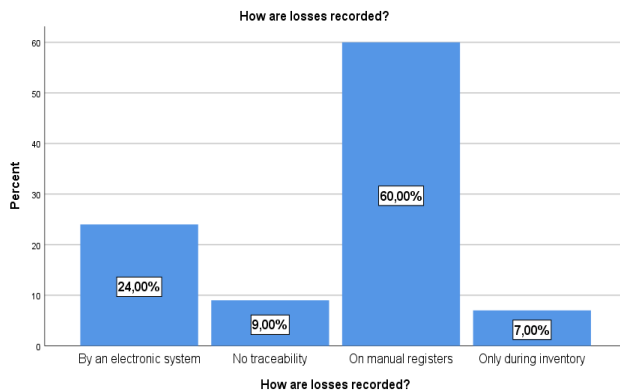


The company mainly reduces losses by improving storage conditions (60%), addressing the leading cause of stock loss. Staff training (24%) and regular inspections (9%) also support loss prevention. However, 7% report no specific measures, suggesting room for improvement in consistent implementation.

Source: SPSS outputs

**Fig 16: Losses recorded**

# Assessment of Inventory Management Practices in the Textile Industry: The Case of Algerian Companies



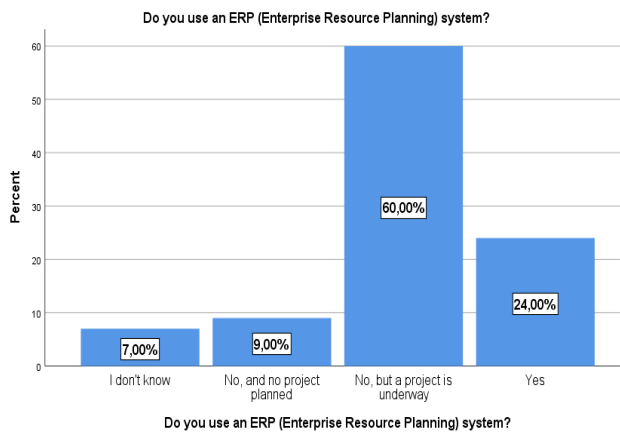
Losses are mostly recorded **manually** (60%), which increases the risk of errors and inefficiency. Only **24%** use an **electronic system**, indicating limited digitalization. The presence of **no traceability** (9%) and recording **only during inventory** (7%) shows a need for better, more consistent tracking methods.

**Source : SPSS outputs**

### ➤ Technology and information systems

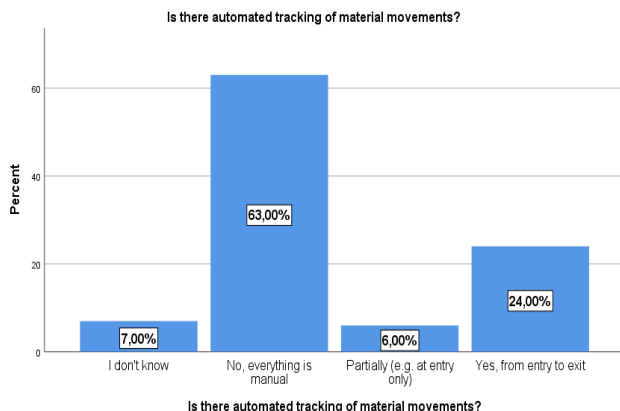
This area explores the level of digitization of inventory management within the company. It focuses on the use of ERP systems, inventory software, and the automation of inventory tracking. The aim is to identify the extent to which technologies support efficient and modern inventory management.

**Fig 17: Use an ERP**



Most companies (**60%**) do not currently use an ERP system but have projects underway, showing a clear intention to improve management processes. Only **24%** have an ERP in place, while **9%** have no plans, and **7%** are unsure, indicating varying levels of awareness and readiness across the company.

**Source: SPSS outputs**

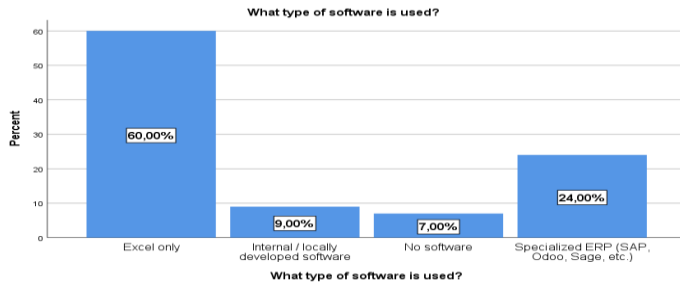


**Fig 18 : Automated tracking of material movements**

Automated tracking of material movements is limited, with **63%** relying entirely on manual processes. Only **24%** have full automation from entry to exit, while **6%** use partial automation. This highlights significant potential for improving efficiency through broader automation.

Source: SPSS outputs

Fig 19: Type of software use



The majority (60%) use **Excel only**, indicating basic digital tools for management. Only 24% use specialized ERP systems, while 9% rely on internal software. 7% have **no software**, showing a need for digital modernization to improve efficiency and accuracy.

Source : SPSS outputs

➤ Challenges related to inventory management

This section highlights the main obstacles encountered by the company in inventory management, such as a lack of tools, qualified personnel, or coordination between departments. It also examines the direct impact of these challenges on production and internal organization..

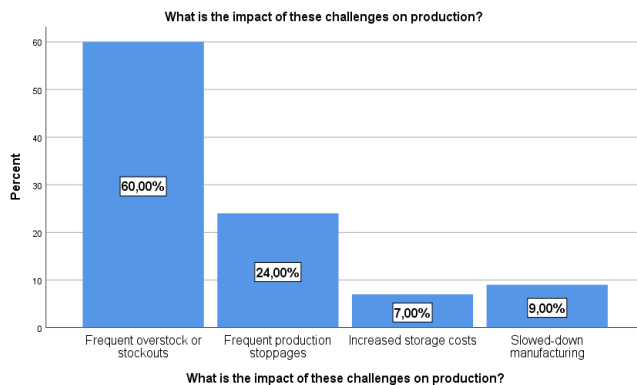
Fig 20: Biggest challenge in inventory management



The main challenge is the **lack of suitable software (63%)**, which strongly affects inventory accuracy and efficiency. **Lack of qualified personnel (21%)** and **supply delays (9%)** also contribute, while **poor coordination (7%)** is less significant. This highlights the urgent need for digital tools and staff training.

Source: SPSS outputs

Fig 21: Main impact of inventory management



The main impact of inventory management challenges is frequent overstock or stockouts (60%), which disrupts production planning and efficiency. Production stoppages (24%) and slowed-down manufacturing (9%) show how poor stock control directly affects operations. Increased storage costs (7%) add financial pressure. This

highlights the need for better inventory systems to stabilize production flow.

**Source : SPSS outputs**

## **5. CONCLUSION**

Inventory management is a fundamental aspect of business operations, particularly in the textile industry, where production continuity and product quality heavily depend on the proper management of raw materials and finished goods. This study focused on Algerian textile production units and aimed to analyze current practices, identify weaknesses, and propose recommendations for improvement.

The results of the study reveal several significant challenges in inventory management: a predominant reliance on manual tools such as Excel, limited use of specialized software or ERP systems, irregular application of inventory classification methods (with only a small proportion using ABC or FIFO methods), and inadequate storage conditions for many materials. These weaknesses lead to stockouts, production delays, overstocking, and increased operational costs. The study also highlighted that the main causes of inventory losses are poor storage practices, handling damage, and limited digitalization, which affect the accuracy of stock records and overall efficiency.

Based on these findings, the following recommendations are proposed:

- Enhance digitalization by adopting an ERP system or specialized inventory management software to automate tracking and improve data accuracy.
- Improve storage conditions across all materials, ensuring appropriate temperature, humidity, and safety measures to preserve quality.
- Train staff on inventory management best practices, including proper classification, valuation, and loss prevention methods.
- Standardize procedures for stock tracking, classification, and valuation to improve consistency and operational efficiency.

Finally, this study opens several **avenues for future research**. Further studies could focus on the impact of advanced technologies, such as AI or IoT, on inventory efficiency, the comparative effectiveness of different stock classification and valuation methods, and the role of staff training and organizational culture in reducing losses and improving inventory performance. These future investigations can provide deeper insights and help optimize inventory management practices in the textile industry.

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