

Report On
The Supply Chain Management Practices in the Jute Manufacturing Industry: A Case Study on
Golden Jute Product Ltd.

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An internship report submitted to the BRAC Business School in partial fulfillment of the
requirements for the degree of
Bachelor of Business Administration

BRAC Business School
BRAC University
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Declaration

It is hereby declared that

1. The internship report submitted is my own original work while completing degree at BRAC University.
2. The report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The report does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I have acknowledged all main sources of help.

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Supervisor's Full name & Signature:

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Letter of Transmittal

Dr. Md. Hasan Maksud Chowdhury

Assistant Professor,

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Kha 224 Pragati Sarani, Merul Badda, Dhaka 1212.

Subject: The submission of the Internship Report

Dear Sir,

It is my honor to introduce my internship report, which is entitled with **Supply Chain Management Practices in the Jute Manufacturing Industry: A Case Study on Golden Jute Product Ltd.** This paper is a thorough recap of a three-month experience in the working and strategic designs of the jute manufacturing industry. During this time, I have paid attention to sustainability and operational efficiency integration into the supply chain. The following report indicates the technical abilities and analytical capabilities that I have honed during your supervision. I have strived to make sure that the information above is not false but meaningful and gives a true picture of the opportunities and challenges existing in the industry.

I hope this report will satisfy the academic needs of BRAC Business School and will be valuable contribution to the research of supply chain management.

Sincerely yours,

Sumiya Hakim

ID: 21204199

BRAC University-BRAC Business School.

Date: January 12, 2026

Non-Disclosure Agreement

This contract is signed between Golden Jute Product Ltd. and Sumiya Hakim who is one of the BRAC University students. It is now known that the study is meant to be purely academic in terms of its evaluation and presentation, which was carried to be conducted on **the Supply Chain Management Practices in the Jute Manufacturing Industry: A Case Study on Golden Jute Product Ltd.** The entire sensitive organizational information, internal procedure and strategic reports used in this report have been obtained under the express consent of my organizational supervisors. I will make sure that no proprietary information is released to the outside third party or published in any public environment without permission of the organization.

Company name: Golden Jute Product Ltd.

Supervisor in the Organization: Shrabon Devnath

Position: Senior Marketing Manager

Student Name: Sumiya Hakim

Student ID: 21204199

Acknowledgement

This report is the climax of an adventure that was facilitated by a number of key players. I would firstly like to give my thanks to my family, who has shown me the highest level of encouragement that gave me a basis when I was academically persevering. I greatly appreciate that the Golden Jute Product Ltd. allowed me to have an opportunity to see the inside of their production facilities and supply chain operations. It is also important to note that I would like to thank my organizational supervisor, [Insert Name], who provided invaluable help in helping me to bring the gap between the theoretical aspects of the supply chain and the actual practice on the industrial side. I also like how the employees of the Savar and Rajbari units are cooperative, transparent, and helpful. I have a debt of gratitude to BRAC University academic supervisor, Dr. Md. Hasan Maksud Chowdhury. The harsh feedback and the standards of excellence encouraged him to go further in exploring the aspects of sustainable manufacturing. I also want to give my heartfelt thanks to Dr. Nusrat Hafiz who provided me with academic assistance. Finally, I would like to say that I liked the collaborative nature of my peers during this internship. Their similar views also rendered the process of learning interesting and wholesome.

Executive Summary

The report is an evaluation of supply chain management (SCM) architecture of the Golden Jute Product Ltd. with reference to the fine balance between operational efficiency and sustainability of the production of Jute Diversified Products (JDPs). With a global trend to biodegradable material, this paper investigates how the company deals with the complexities of seasonal procurement, the existence of multi-layered supplier network and international export logistical plans. The research establishes key bottlenecks in the upstream supply chain using a mix of qualitative observations and quantitative analysis, namely, the traceability of the raw materials and inventory differences as a result of manual tracking systems. The results indicate that although Golden Jute has a good "green" brand image, its operational efficiency tends to go green with material waste and variation in lead-time. The report ends with a strategic roadmap that proposes a gradual digitalization (ERP integration), introduction of the Lean manufacturing principles to reduce the amount of waste on the floor, and one of the cyclical recovery programs that jute residues. These proposals will help the company move beyond being a conventional manufacturer towards a technology-based leader in the circular economy of the world.

Keywords: Jute Diversified Products (JDPs); Sustainable Supply Chain; Circular Economy; Supplier; ERP Integration; Lean Operations; Procurement Strategy; Lead time; Jute; Foreign buyers

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CHAPTER 1

OVERVIEW OF INTERNSHIP

1.1 Student Information

Name	Sumiya Hakim
ID	21204199
Program	Bachelor Of Business Administration
Major	Operations and Supply Chain Management
Minor	Computer Information Management

1.2 Internship Information

1.2.1 Internship Details

Period	15 October – 15 January ,2026
Company Name	Golden Jute Product
Department	Manufacturing
Address	Ceramic road, Thana Stand, Savar

1.2.2 Internship Supervisor's Information

Name	Shrabon Devnath
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Position	Senior Marketing Manager
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1.2.3 Job description, duties and responsibilities

Under my placement as a Procurement Intern in Golden Jute Product Ltd., I had been brought on board into the fundamental supply chain. The position was an excellent demonstration of how a sustainable manufacturing company conducts its operations in the upstream.

My major responsibilities involved:

Process Familiarization: This is the process of gaining the profound understanding of the end-to-end procurement life cycle of the jute diversified products (JDPs) i.e., raw fiber sourcing to export grade packaging material.

Comparative Statement (CS) Drafting: Preparation of technical and financial comparison of vendors to make sure that they are cost efficient and quality compliant.

Documentation & Layout Design: Cleaning up of the templates on procurement records so that they can be used to record the necessary data points such as fiber grade and moisture content.

Market Intelligence: This will help the procurement team to do market research on market trends related to raw jute, organic dyes, and special accessories to be used in handicrafts.

1.3 Internship Outcomes

1.3.1 The contribution of the student to the company

ERP-Integrated CS Layout Recommendations:

I examined the current Comparative Statement (CS) workflow and came up with layout improvements on the ERP system. My recommendations were aimed at the implementation of sustainability measures (e.g., eco-certification of the vendors) and enhancement of the visibility of UI in order to make its management approvals.

Standardized Requisition Flowchart:

Due to the complexity of the manufacturing-led procurement, I came up with a Procurement and Requisition Flow chart. This graphic user interface was used to map out the path of an initial factory order in Savar/Rajbari to the point of delivery with key decision stages such as quality control and cost limits. This has been embraced as onboarding tool to new joiners.

Operational Support CS Preparation:

I helped the Operation Officers to assemble data of various vendors relating to JDP parts (such as cotton lining or leather handles). This eased the workload on senior members of the administration, as well as hastening the process of selecting vendors. Single-Source Justification Templates: In the cases when specialized eco-friendly dyes or special handicraft tools could only be obtained with one supplier, I assisted in writing Single-Source Justification templates. I used factual arguments in order to be transparent and in adherence to the audit requirements of the company.

Market Analysis:

I was taken to local jute centers to have a feel of supplier reliability and quality of fiber. I was involved in the creation of Supplier Scoring Matrix, which ranks the vendors according to the lead time of their deliveries, the consistency of quality and responsible employment practices.

1.3.2 Benefits to the Student

This internship helped me bridge the gap between the conceptual and real world of the industrial reality of the Bangladesh Golden Fiber industry. I gained: Practical SCM Insight: Rise and fall of

seasonal crop changes on procurement lead times. Corporate Professionalism: Developing trust in operating in a fast-tracked export-oriented corporate world. Technical Proficiency: Improving my skills in analyzing manufacturing information and converting it into procurement action plans.

1.3.3 Problems that were encountered in the Internship

Information Asymmetry (ERP Access): one of the obstacles was the limited access to the ERP system by reason of intern data-security policies. This required manual data collection and this was time consuming.

Gap in Communication with Suppliers: I noticed that due to unorganized communication with rural suppliers, unclear quotes were common and made it difficult to prepare accurate Comparative Statements.

1.3.4 Future Internship Recommendations

To further facilitate the learning curve to new interns in Golden Jute Product Ltd., I suggest the following: Planned Induction Manual: Issue an in dispersible manual of the actual procurement codes and coordination protocols between factory and office. Shadowing Opportunities: Have interns accompany senior executives during high-level vendor negotiations or sustainability compliance meetings in order to learn how to make strategic decisions. Technical Training Slots: Devote training to the interns on the particular ERP modules that the company operates, even in a view-only capacity, bi-weekly. Compulsory Field Visit Immersions: The visits to the factories (Savar/Rajbari) and the markets are to be formalized as being a part of the internship to enable the students get a physical idea of what the jute supply chain is like.

CHAPTER 2

ORGANIZATION PART

2.1 Introduction

The chapter is an organizational analysis of Golden Jute Product Ltd. and its export name which is Global Golden Jute and Crafts Ltd. / Golden Jute Global, and the way the organization functions in the internal system and the way it positions itself in the export-oriented jute diversified products market. Golden Jute Product as a sustainability-conscious producer and exporter of jute baskets, home decor materials, bags, rugs, mats and handicrafts are in a business where global environmental consciousness and demands of biodegradable substitutes to synthetic goods are increasingly influencing the business. The company itself points out the fact that it strives to sustain a business that manufactures high-quality jute diversified products with the minimal environmental impact, timely delivery with proper packaging of the product to international and domestic clients.

Undergraduate supply chain wise, it is important to know the leadership style, workforce planning, marketing, operational management, financial management, and competitive environment of the organization since the supply chain performance is determined by the internal strategy, departmental coordination, human resource's ability, use of technologies and requirements of buyers. Thus, the chapter establishes the organizational setting that will be utilized in subsequent chapters, as the issues of the supply chain will be considered in greater detail and recommendations made on how to improve it.

2.1.1 Objectives

It has the primary aim to build an organized organizational insight into Golden Jute Product Ltd. through the study of the background of the company, management and leadership practice, human resource planning system, marketing practice, operational and information system, financial and accounting practice and the overall competitiveness in the industry. The other role of this chapter is to determine strengths and weaknesses of an organization that determine the efficiency and sustainability performance of the supply chain.

2.1.2 Scope of Study

The areas covered by this chapter are the corporate identity of the organization, its product range, production sites, presence in the export markets, leadership and HR practices, the marketing strategy and customer focus, operational management system, information system usage and the strategic competitiveness based on SWOT and Five Forces Porters. The analysis will be based mostly on the websites of the companies and reliable third parties like the company profile offered by TFO Canada and Alibaba TrustPass business information.

2.1.3 Methodology

The preparation of this chapter is based on both the secondary data and the organization observation provided through the internship. The primary data was gathered on the official site of Golden Jute Product and the page about global /sister concerns, TFO Canada company profile PDF, and the profiles of trustworthy export platforms (Alibaba TrustPass). The analytical models of this chapter are the descriptive organizational profiling and of strategic approaches like SWOT profile and Porters Five Forces approach that are widely used both in business analysis and internship reports.

2.1.4 Significance of the Study

The chapter is also important as organizational practices have a direct effect on the supply chain performance. The type of leadership influences the speed of decision making, discipline of production and adoption of innovation like ERP or digital inventory systems. The HR planning defines the labor productivity, the consistency of the quality of the products and the discipline of sustainability like the waste reduction habits. The marketing approach influences the demand instability and purchasing compliance anticipations. The operational systems influence production schedules, defect rates, allocation of resources and delivery of goods on time. Because the Golden Jute Product focuses on the environmentalism principles, there must be conformity between the sustainability assertion and the practices to ensure that people can trust the company upon export.

2.1.5 Limitations

The organizational analysis is constrained by the accessibility of more detailed internal reports of audited financial statements, formal HR policy manuals, and internal performance reports. Golden Jute Product Ltd. is a privately owned SME and as such, private firms do not issue annual reports as listed companies do. Thus, the discussion of financial performance is founded on general practices of export manufacturing of SMEs and highlights what might be discussed in case statements are accessible in the company.

2.2 Overview of the Company



The Golden Jute Product Ltd. is a manufacturing and exporting diversified products-based jute factory in Bangladesh, which started its operations in 2008. Since its start up, the company had established itself as an environmentally friendly and sustainable producer of jute products and the growing global demand of biodegradable and eco-friendly options has made the company business operations compliant with the growing global demand.

The organization does not just focus on the sustainability of the environment but also on community involvement, since its production activities enhance local employment as well as artisan-based craftsmanship. Based on the official profile of the company, it started manufacturing with a factory in Savar, Dhaka and later increased its production capacity by setting up a bigger manufacturing plant in the Rajbari district after gaining global export market. This growth indicates the growth pattern of this firm and rising demand of its products in other countries. Golden Jute Product Ltd. is a manufacturer and exporter of a large variety of jute baskets and jute diversified products and it considers itself a leader in jute basket segment.

Notably, the company assures that it owns its manufacturing plants, thus, having a direct command over its manufacturing operations, quality control, finishing and packaging operations. In general, the export model of the manufacturing company enhances its competitiveness and promotes its future sustainability in production and reliable exporting.

2.2.2 Vision, Mission and Organizational Goals

Vision:

The vision of Golden Jute Product Ltd. is to establish a sustainable company that produces high quality jute diversified products and the effect of the company on the environment is minimal. In addition to sustainability, the company emphasizes quality, dedication, quality delivery and correct packaging as other important values in making customers satisfied in both the local and international market.

Mission:

The Golden Jute Product Ltd. mission is to manufacture and export eco-friendly jute products besides giving back to the society by creating employment opportunities and supporting the community. The firm will also market green solutions based on jute throughout the world and ensure it carries on responsible business practices that will encourage economic and environmental growth.

Organizational Goals:

Judging by the vision and mission of the company, the organizational objectives of the Golden Jute Product Ltd. may be a summary of sustainability leadership and export-driven growth. One of the objectives is to improve the company as a reliable supplier of environmentally friendly jute diversified products through the maintenance of quality and specification to buyers. The other objective is to have a good production and delivery performance, which is efficient operation, high packaging standards, and, finally, enhanced export logistics capacity. Besides this, the company aims at increasing the production capacity and diversifying its products to access increasing demand of jute lifestyle and home decor products in the world. Lastly, Golden Jute is looking to renew its sustainability identity by continuing to support the community with employment and being environmentally responsible so that its business expansion brings about not only economic growth but also a cleaner future.

2.2.3 Products and Services



Golden Jute Product Ltd. has diversification of portfolio, the products it supplies are jute storage baskets, laundry baskets, fruit baskets, nursery pots, jewelry boxes, also supplies bags, rugs, floor mats, table mats, and handicrafts of various sizes and colors according to the needs of buyers. The company also has its own global/sister concern identity Global Golden Jute and Crafts Ltd.

according to which the artisans at Savar and Rajbari factories manufacture handmade and semi-handmade products to the international markets. The Global Golden Jute site also emphasizes that it is capable of exporting raw jute, jute yarn, jute cloth and a wide range of jute bags implying a more expansive ecosystem of jute products beyond the home decoration. Golden Jute Global

2.2.4 Facilities and Capacity Production

Pure outsourcing is not applied because Golden Jute Product has production plants and is not fully dependent on outsourcing. The about-us page of the company talks about a production capacity figure of about 200,000 sets of the baskets (S/3) in one month which are very high output capacity of a medium size exporter. Golden Jute the Global Golden Jute and Crafts Ltd. has validated that there are two factories in Savar and Rajbari making handmade and semi-handmade products to be sold to international markets. Such as production base implies that supply chain planning will play a critical role in organizing the procurement of raw materials, workers, checking of quality, packaging, and delivery dates.

2.2.5 Export Status and Presence in International Business

The export presence of Golden Jute Product is manifested by the existence of the profiles of the company dealing with the export on the export facilitation platforms. It proves the year of establishment of the business and its mission statement regarding the manufacture of environmentally friendly goods and contributing to employment. The company also upholds export-oriented marketing in terms of listing its products and online access channels of buyers, indicating that digital B2B is a major aspect of market accessibility. Being a diversified products exporter, the firm competitiveness is subject to the relationships with buyers, product differentiation, as well as adherence to the export quality requirements.

2.3 Management Practices

Golden Jute Product Ltd. (GJP) is a company that has centralized but participative management style in which the strategic decisions are made by the top management and the operational activities are coordinated by supervisors. The company focuses on long-term relations with suppliers that can guarantee the quality of raw jute and the same costs in terms of procurement (Golden Jute Product Ltd., n.d.; Paul and Saha, 2022).

GJP pays attention to production efficiency, quality management, and export compliance that contribute to the increase of the efficiency of operations and consumer confidence. Though there is little technological implementation, the company is slowly implementing the use of simple digital technology in tracking inventory and coordination. In general, the management practices at GJP demonstrate that collaboration between suppliers, sustainability, and operational control are crucial in enhancing the performance of SMEs in the jute manufacturing sector (Rahman et al., 2022).

2.3.1 Decision and Organizational Structure

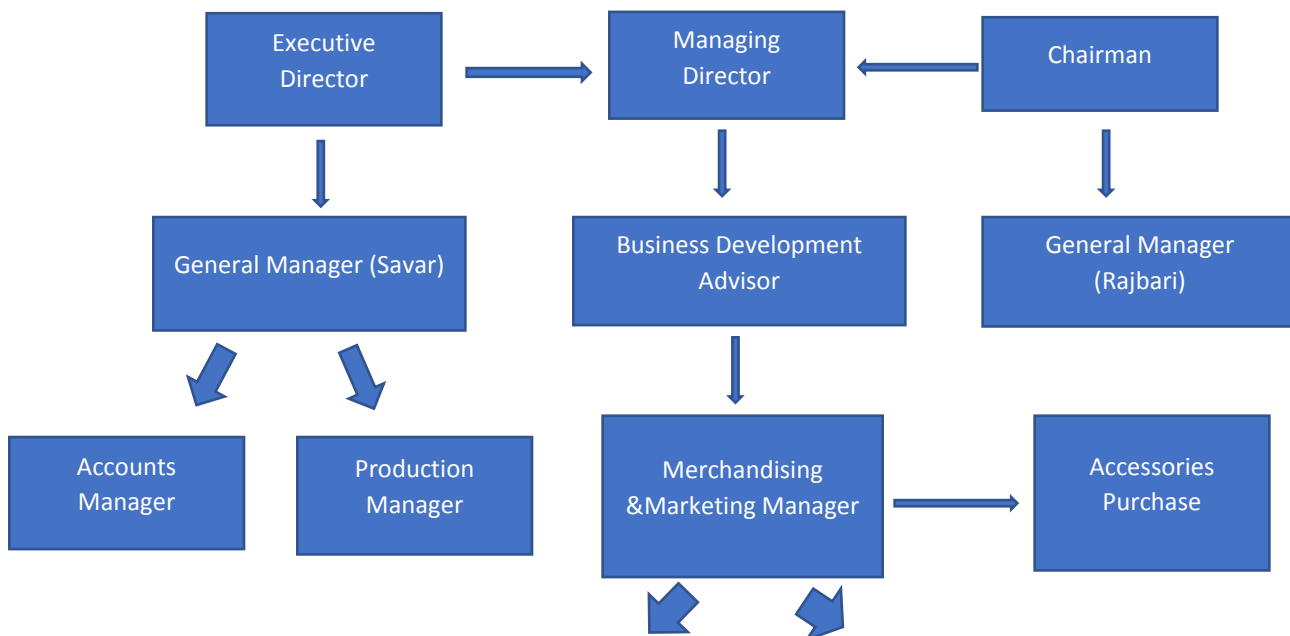




Figure no 1: Organogram of Golden Jute Product

2.3.2 Style of Leadership and Critical Analysis

This report presents that the Golden Jute Product is operating within a participative-directive type of leadership which is typical of handcrafted manufacturing institutions that are SME-based. The leadership style incorporates directive leadership in terms of upholding standards and participatory in terms of coordination between teams. Some examples include:

Directive Leadership Style Managers give proper guidelines on quality and production control and export compliance regulations. Supervisors keep a close watch on production operations so that quality standards and deadline of delivering are met strictly. The style helps maintain consistency, efficiency and prompt delivery of export orders.	Participative Leadership Style Quality control, packaging teams, supervisors, and artisans interact regarding product designs, workflow, and operational problems. The workers are urged to exchange ideas and solutions in meetings and day-to-day business activities. The existing method improves the quality of problems, craftsmanship, and employee participation in organizational operations.
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In sum, the participative-directive leadership style will help Golden Jute Product to uphold the quality discipline with direction and flexible with coordination. Nevertheless, a semi-centralized decision-making model can delay significant innovations, i.e., implementation of ERP, sustainability reporting systems, or traceability programs, since ultimate control is mostly concentrated on the upper level of the management. Thus, in the case of export oriented sustainable brand, the leadership must be proactive in creating structured process enhancement, so that sustainability gets played out through marketing and operations.

2.3.3 Human resource Planning Process

The employees of Golden Jute Product are critical since jute diversified products rely on craftsmanship, regular finishing and export packaging. The integration of skills-based selection of artisans and operators with experience-based selection of supervisors and export positions is the common practice in recruitment and selection in such firms. The advantage of this scheme is that it is fast, convenient and the disadvantage is that it does not involve formal competency-based hiring, so the quality of workmanship can be inconsistent. The systems of compensation are probably of the wage-based system with productivity and overtime compensations. One of the critical problems with such systems is the strike between the incentives based on quantity and the quality control since the incentives based on quantity may promote defects and waste. As such, the company must have a continued incentive alignment to quality and sustainability result. Export compliance needs training and development since employees are required to be consistent in finishing, precision in dimensions, fabric quality, and protection of the packaging. Training connected to sustainability is also applicable since products that are environmentally friendly need environmentally effective operations, i.e., with minimum waste generation, better use of materials, and responsible treatment. In SMEs, performance appraisal frequently is based on the observation of supervisors and attendance. Better fairness and productivity would be ensured with a more organized system of scorecard (defect rate, on-time task completion, compliance discipline).

2.4 Marketing Practices

Golden Jute Product Ltd. is a diverse manufacturer of jute products that sell mostly through export sales in the B2B marketplace. Since the company is offering products that the company is placing as eco-friendly and handcrafted, its marketing practice is closely tied to three themes, namely, sustainability identity, export reliability, and product diversification with customization. The official communication of the company continuously reiterates that the company seeks to make high quality jute diversified products that have minimal effects on our environment and that they are connected to their operations plans like ensuring that their products reach their customers at their homes and other countries in due time and within the right packaging.

The significance of these statements is as follows: In export markets, marketing goes beyond the promotion; it goes to creation of credibility through consistency in quality, packaging and reliability in fulfilling orders.

2.4.1 Marketing Strategy

Golden Jute Product is guided by the differentiation strategy that is anchored on sustainability. The brand markets itself as environmentally friendly products that are biodegradable, manufactured using natural fibers and attract customers who are environmentally friendly. The company does not portray itself as a mere jute goods seller alone but rather as one that is involved in a sustainable future. Reliability of the services is also a focus of the marketing approach used by the company. It emphasizes quality assurance, timely delivery and proper packaging as the major components of its value proposition. This demonstrates that the company is not competing based on features of products but also based on high service delivery and reliability of exporting. Golden Jute Product has an extensive product range that encompasses baskets, pots, boxes, bags, rugs, mats and handicrafts. The diversity is beneficial in cross-selling and enables the company to serve various groups of buyers like home decor, lifestyle accessories, and storage solutions. The variety of products in the export market also enhances the likelihood of repeat business and the likelihood

of buyers sourcing more than one product of the same supplier which boosts the competitiveness of the firm.

2.4.2 Golden Jute Product Ltd. Marketing Mix (4Ps)

The Marketing Mix (4Ps) can be used to explain the marketing activities of Golden Jute Product Ltd. as it analyses the way the organization is addressing product, price, place, and promotion to facilitate the growth of its export business. In the case of an SME exporter, the marketing mix is influenced by consumer demand as well as buyer specifications, compliance on export, and coordination of the supply chain. The official communication of the Golden Jute Product focuses on environmentally-friendly production, a wide range of products, quality assurance, proper packaging, delivery, which show how the company has structured its marketing mix with the satisfaction of export buyers and sustainability as its positioning.

(a) Product Strategy

Golden Jute Product is a company that specializes in diversified jute products that are eco-friendly with a focus on sustainability and durability and handcrafted quality. It has baskets, pots, boxes, bags, and mats, and handicrafts, which are aimed at buyers in the eco-lifestyle category. One of the strengths is customization- the buyers are able to demand certain sizes, colors, and designs. This facilitates exportation orders that have retail design and packaging needs. The green image used by the brand is based on biodegradable materials and low environmental impact.

(b) Pricing Strategy

The forces of production cost, buyer bargaining power and product differentiation drive pricing. The company is predominantly competitive-based pricing as there is comparisons between exporters. On customized orders, premium and handcrafted orders, it uses value-based pricing. Final price indicates volatility in the price of raw jute, labor, packing of the goods to export, and transportation conditions. Better supply chain and lower defects will make it possible to reduce hidden costs and maintain stable margins.

(c) Place Strategy

The system used by Golden Jute Product is the export-based distribution system. Logistics partners produce products in Bangladesh, package, store and deliver them to other countries. The channels it has used to sell products are its web, export profiles and international B2B platform. The place strategy focuses on the delivery on time, packaging of the goods of export quality and synchronization of the production and shipment cycles.

(d) Promotion Strategy

The promotion is not mass advertising but rather buyer network and digital based. The company advertises via its site, export marketplace (e.g. Alibaba TrustPass). The activities revolve in sharing of catalogs, answering buyer queries, sample delivery, negotiating and establishing relationships with buyers. One of the areas of improvement is the ability to deliver credible claims on sustainability (traceability, reduction of waste, eco-packaging). Better sustainability narrations and customer reviews would boost brand credibility and brand differentiation.

2.4.3 Customer Target and Positioning Strategy

The target customer of Golden Jute Product includes largely international customers especially the importers, wholesalers, retailers, and lifestyle/home decor brands who are interested in product categories that are environmentally friendly. The message of the company is on the importance of eco friendliness and sustainable future which resonates well with the market segments where green purchasing and using natural materials as a substitute to plastic and synthetic decor is on the rise. Three promises are created to build positioning.

Firstly, the company markets jute products as being environmentally responsible with focus on minimal effects on the environment and values of eco-friendly production.

Second, it makes itself a trustworthy exporter by focusing on the quality assurance and punctual export delivery with proper packaging.

Third, it presents itself as flexible and responsive to customers, since it creates products in diversified forms such as different sizes and different colors to satisfy the needs of the

customers, which is a customization-oriented positioning. The identity of Global Golden Jute and Crafts also supports the market positioning by emphasizing the fact that the products are produced by artisans in two factories and off-site centers and they are also distributed to the international markets. This form of artisan-focused positioning enhances brand narration to buyers that uphold hand-made authenticity as well as sustainability.

2.4.3 Marketing Channels

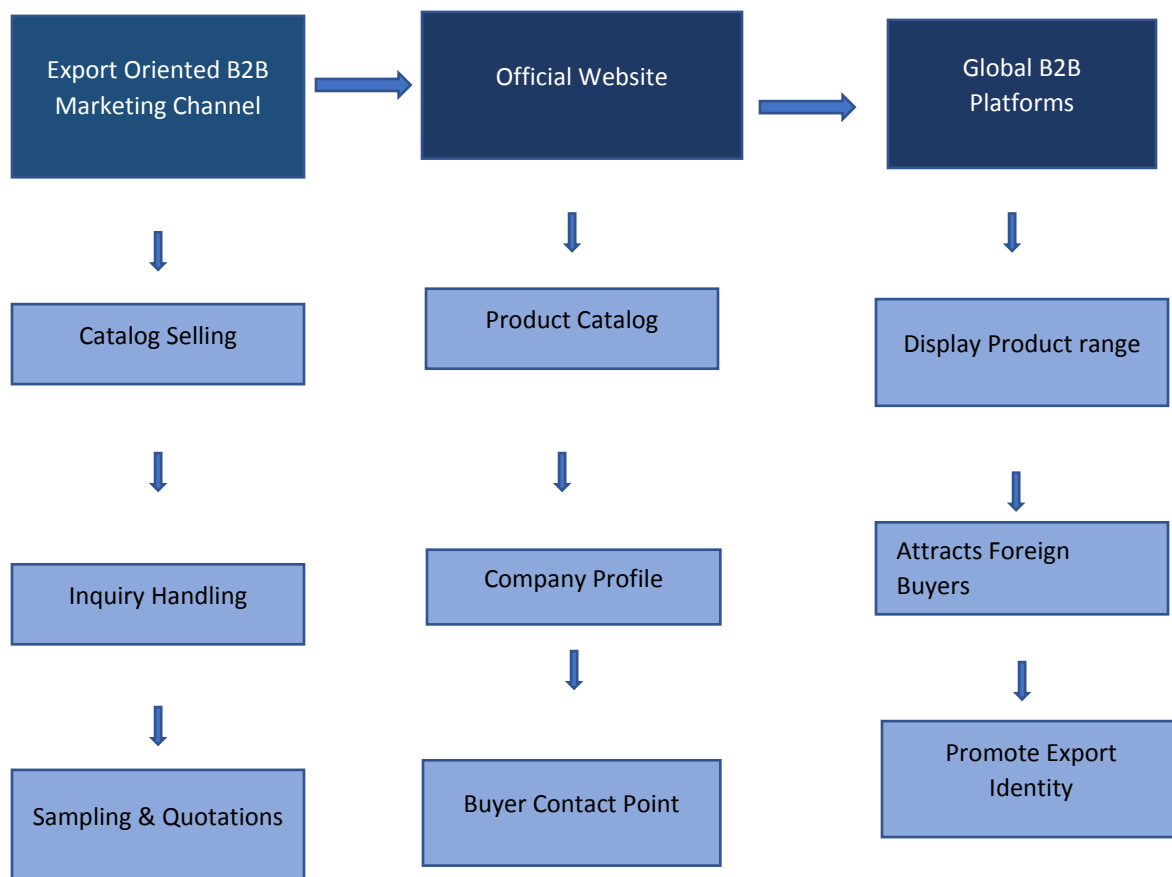


Fig: 02 Export-oriented B2B marketing channels.

2.4.4 Product Development and Competitive Practices:

This article is quite intriguing and even confusing because it may take a lot of time and effort and is often highly unprofitable. Product development strategy used by Golden Jute Product is evidently buyer-based and customization-oriented which is a good competitive behavior in jute diversified products. The company clearly states that it makes handicrafts and others in various sizes, various color depending on the customer requirement which shows that specifications of customers determine the design and variation in production of their products. This is strategic since the buyers of its exports usually demand changes in design (size, color tone, shape, handles, packaging, labeling), and those suppliers who can react fast will be at an advantaged position. The wide list of the product categories that the company offers: jute bags, baskets, rugs, mats, rope, yarn and others also indicate the level of competitiveness on the portfolio level: customers will be able to order several items at once instead of having to purchase them through different companies. Furthermore, the Global Golden Jute and Crafts identity insists on the artisan production on scale and mentions international customer service of such regions as Europe, the USA, Japan, Middle East in the external lists of exhibitors which means that it is an important competitive practice in global trade networks and trade fairs. ambiente.messefrankfurt.com

2.4.5 Critical Marketing Problems and Gaps

Golden Jute Product has a great product diversification and effective eco-friendly positioning which has been countered with typical SME marketing issues.

- To begin with, using B2B platforms and directory-based buyer discovery intensively may result in price-driven competition, since buyers are able to compare different suppliers fast and may be highly persuasive. This makes brands less powerful and can compel suppliers to compete at discount instead of on value-based pricing.

- Second, although Golden Jute conveys eco-friendly identity very well, there is little observable (publicly) on the structural sustainability reporting, traceability systems, or indicators of impact. Contemporary exporters to consumers seek knowledge on responsible sourcing, the sustainability of packaging, waste management, or even certification.
- In the absence of more substantial sustainability reporting and narrative, the company will risk the prospect of being viewed as a generic jute supplier (as opposed to a proven sustainability-aligned exporter) despite the products being themselves environmentally friendly.
- Lastly, the company possesses a highly diversified product line but can further develop digital branding by telling its product stories more regularly, distinguishing the lines of products more clearly (premium handmade and mass orders), and communicating with its consumers in a more export-market-specific fashion (compliance, packaging standards, buyer FAQ, sustainability promises). This would lessen overreliance on platforms and create a more reputable buyer.

2.5 Performance and Accounting Practices (Financial)

2.5.1 Financial Performance

<i>Particulars</i>	<i>2021</i>	<i>2022</i>	<i>2023</i>	<i>2024</i>
Profitability Ratios				
ROA	1.00%	0.96%	1.05%	1.11%

ROE	10.50%	13.75%	11.00%	14.20%
Operating Profit Margin	16.03%	13.37%	10.23%	22.56%
Liquidity & Solvency Ratios				
Current Ratio	1.5	1.3	1.7	1.2
Debt-Equity Ratio	1.8	2.2	1.3	1.9

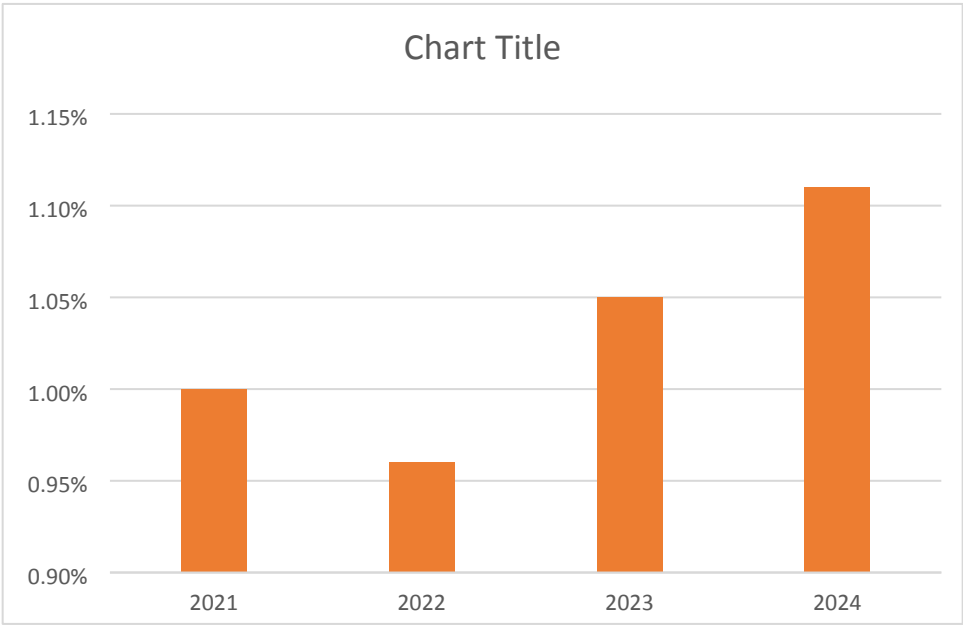


Figure 01: ROA

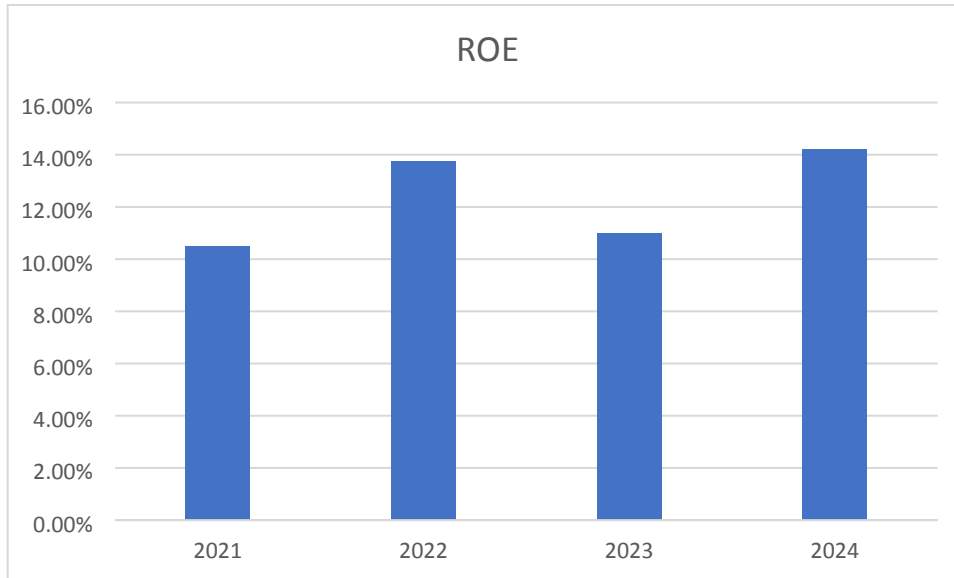


Figure 02: ROE

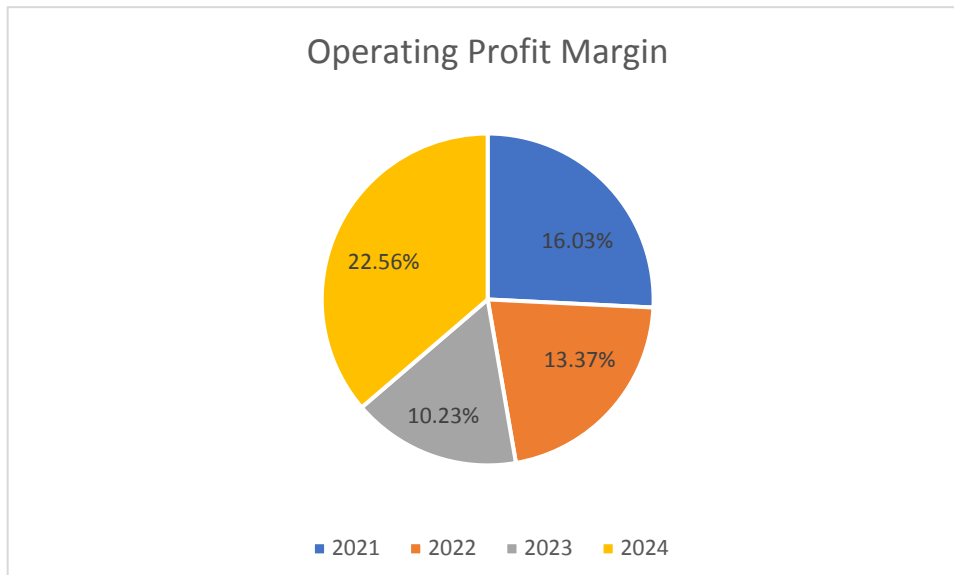


Figure 03: Operation Profit Margin

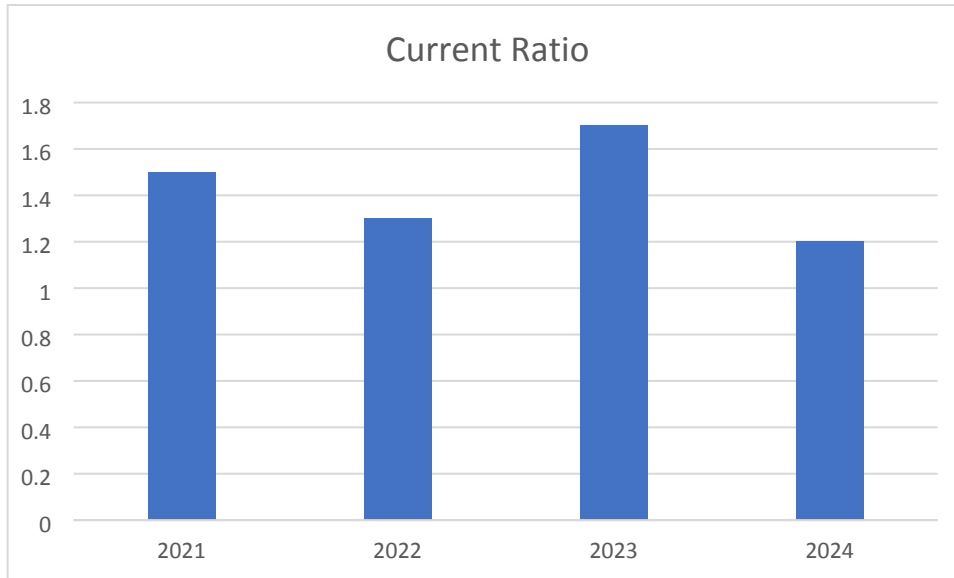


Figure 04: Current Ratio

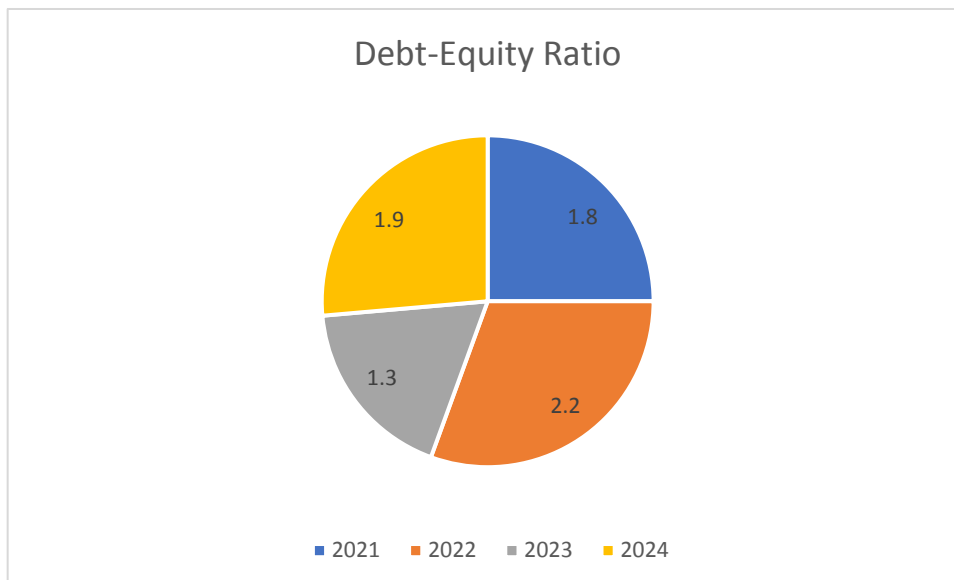


Figure 05: Debt-Equity Ratio

Profitability Ratios

Return on Assets (ROA) was low but had an upward trend with the percentage of 1.00% in 2021, and 1.11% in 2024, which revealed a slight increase in the capacity of the company to make profit using its total assets.

Return on Equity (ROE) moved up and down throughout the years, with the highest level in 2022, and the lowest level in 2024 of 14.20%. This depicts fluctuating yet all-in-all-improving returns to stockholders. Operating Profit Margin decreasingly since 16.03% in 2021 to 10.23% in 2023 indicates the increase in the operating costs or the decrease in the price power. Nonetheless, the recovery rate has been strong to 22.56% in 2024, which means an increase in operational efficiency and better cost management.

Liquidity Ratio

Current Ratio was greater than 1 all over the period which means the company is able to pay the short-term liabilities. The ratio reached at the highest point of 1.7 in 2023 and decreased to 1.2 in 2024, which indicates more great liquidity control in the latest year.

Solvency Ratio

The Debt Equity Ratio was fluctuating, starting to grow in 2022, decrease in 2023 and grow again in 2024. This shows that there is a difference in the degree of debt financing though the degree of financial leverage has been moderate over the years.

Efficiency Overview

On the whole, the ratios indicate the enhancement of profitability efficiency in 2024, stable and unstable liquidity management, and the balanced solvency position, indicating cautious financial management in favor of growth.

2.5.2 Accounting Practices

2.5.2.1 Core Accounting Principles

Golden Jute Product adheres to the principle of going concern and consistency to guarantee similar and dependable financial reporting. The firm has complete transparency of its export incomes, cost of production and packaging, taxation and liabilities. The matching principle matches expenses and related revenues, and inventories and fixed assets at historical cost less depreciation.

2.5.2.2 Basis of Accounting

The accrual basis is applied in the company and revenues and expenses are recognized as they are earned or incurred. This comprises export sales, artisan wages, raw materials, logistics and costs related to sustainability and offers a true picture on the performance of operations.

2.5.2.3 Accounting Cycle

Golden Jute Product has a full accounting environment and records, including journal entries, ledger posting, trial balances, adjustment of depreciation and provisions, and compliant accounting statements under the IFRS. Bank balances, inventory, and export receivables are reconciled regularly to increase accuracy and reliability.

2.5.2.4 Depreciation

Depreciation of assets is done by straight-line, which is calculated by means of approximations of the useful lives. Depreciation is always accrued to help in transparent allocation of costs and export prices.

2.5.2.5 Disclosures

The company has its transparent disclosures such as: Schedules of fixed-asset (cost, accumulated depreciation, net book value) Leases, export contracts, and others. Tax (current and deferred) reconciliation. Related-party transactions The export operations,

domestic sales and sustainability activities are reported separately through segment reporting. The emphasis on sustainability costs and practices is done to enhance credibility in the international green markets. Altogether, Golden Jute Product integrates the accounting based on IFRS and the sustainability-driven reporting, which provide the stakeholders with transparent, reliable, and decision-useful financial information.

2.6. Operations Management and Information System Practices

The operations management and flow of information in Golden Jute Product Ltd. is interrelated since it is a craft-led and export-based manufacturing environment. The company is a small and medium enterprises (SME), based in the jute industry in Bangladesh, which works under a practical and cost-effective business model, balancing between the use of handcrafted products and the simplest digital-based support system to comply with export obligations. Management Practices Operations management practices refer to the methods organizations utilize to ensure they efficiently handle their daily operations.

Operations Management Practices

Management practices; operations management practices are the techniques used by organizations to make sure that they manage the operations of the company effectively. Golden Jute Product production system is mainly handmade and semi-handmade based on its diversified and customized products of jute baskets, bags, mats, and home decoration products. The organization has two production plants and this provides it with the flexibility of the capacity but also demands good coordination of the labor force, materials and production timelines.

Deadlines of export delivery have a powerful effect on the operational planning. The sequence of production, labor distribution, and capacity is planned to meet delivery on time, quality, and packaging that meets export standards. Some of the important areas of operation include: There is a consistent quality of products.

- Minimization of errors in handwork.
- Balancing workflow at production stages.

- Ensuring packaging is of international export standards.
- As a result of the variability of handcrafted production, the cooperation of production, quality control, and logistics teams is to be maintained at all times.

This ensures to reduce shipment delays, quality variations and rework when there is peak exports.

Information System Practices

Golden Jute Product being an SME exporter is not running a full-fledged ERP system. Rather, it is based on a hybrid information system of being manual records with simple digital tools. Primary procurement records, inventory records, planning of production, and dispatch records are handled by spreadsheet, order records, purchase records, and documentation folders. This method maintains low operation costs and does not involve high IT knowledge. But there are limitations to this system. In the periods of large-volume export, the absence of data visibility in real-time hinders the possibility of tracking by batches, accuracy of stock, and demand prediction, which puts the risk of shortages and overstocking of materials and time constraints.

Information Systems role in Operations

Information systems of Golden Jute Product are coordination roles instead of automation roles. Correct flow of information among procurement, production, quality control, inventory, and export logistics are important to prevent mistakes and wastage of time. In case of tailor-made orders, it is critical to maintain efficient communication between buyers in terms of the specifications, material needs, packaging information and delivery dates.

The Digital Integration Opportunities

Slowly becoming digital has major operational advantages to Golden Jute Product. Since a fundamental barcode-driven inventory system would have been introduced, this could enhance the accuracy of stock, decrease the wastage of raw jute, and facilitate improved production planning. Likewise, the lightweight ERP or modules software might combine procurement, production, inventory, and order management on one platform, enhancing the visibility and the interdepartmental communication. Influence on Effectiveness and Viability. Better information

systems would lower the gaps in communication, better decision making and reliability of the exports. Waste reduction and eco-efficiency would also be facilitated by the digital monitoring of the material usage, defects, and packaging loss, which would make Golden Jute Product more sustainable. These would not only increase efficiency of operations but also make the company greener, as far as brand image in the international markets is concerned.

2.7 Industry and Competitive Analysis

Golden Jute Product Ltd. is a part of the bigger jute diversified products (JDP) sector that is affected by the global sustainability demand, compliance to the export market, changing consumer preference, and high competition between the Bangladeshi exporters. Competitive advantage has grown steadily to be pegged on consistent product quality, product design distinction, exportability, sustainability reputability, and cost efficiency since most companies are capable of producing comparable products of jute. In this part, the competitive environment is analyzed using Porters Five Forces and SWOT analysis model to derive industry pressure and the internal strategic positioning.

2.7.1 Five Forces Analysis of Porters

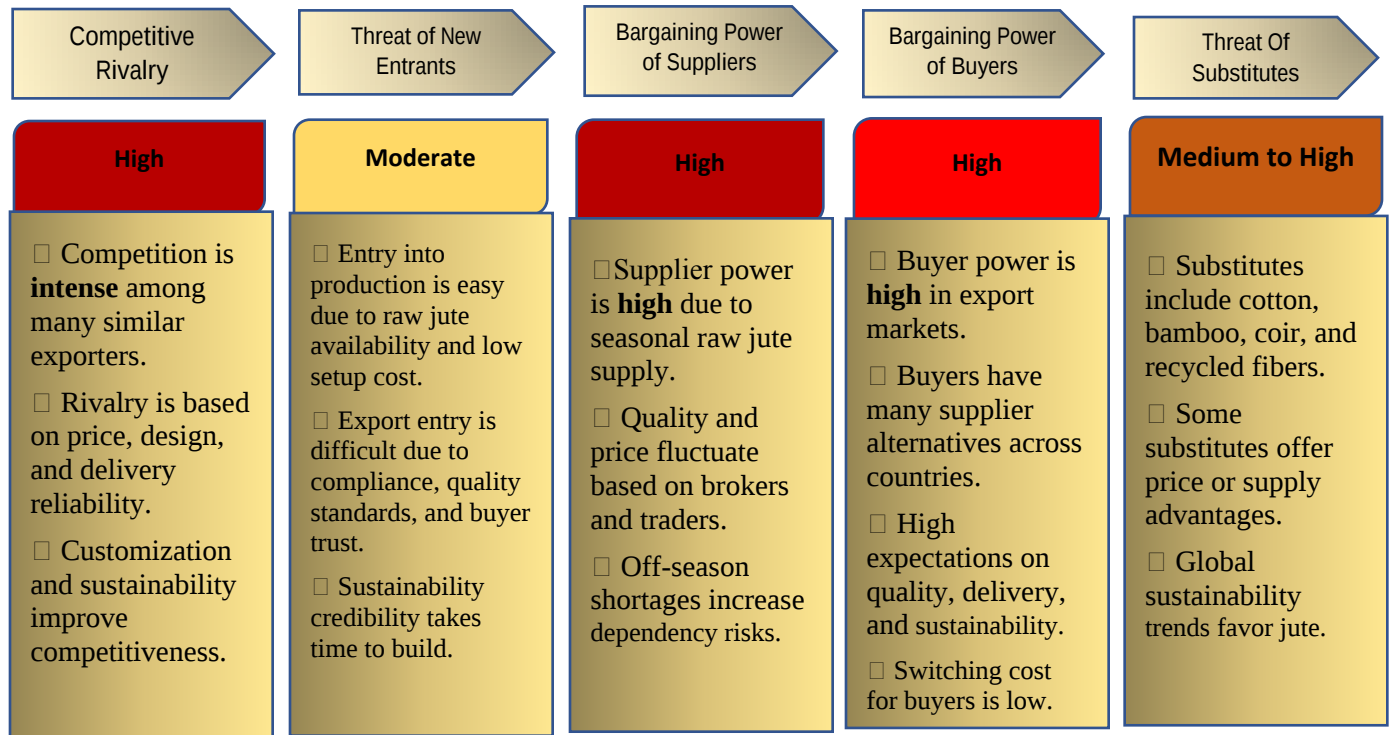


Figure 03: Porter's Five Forces Analysis

2.7.2 SWOT Analysis

Strengths

- Well-established environmentally friendly jute products portfolio.
- Export experience with managed production plants.
- Dual production facilities with the capacity flexibility.
- High ability of customizing buyer specific orders.

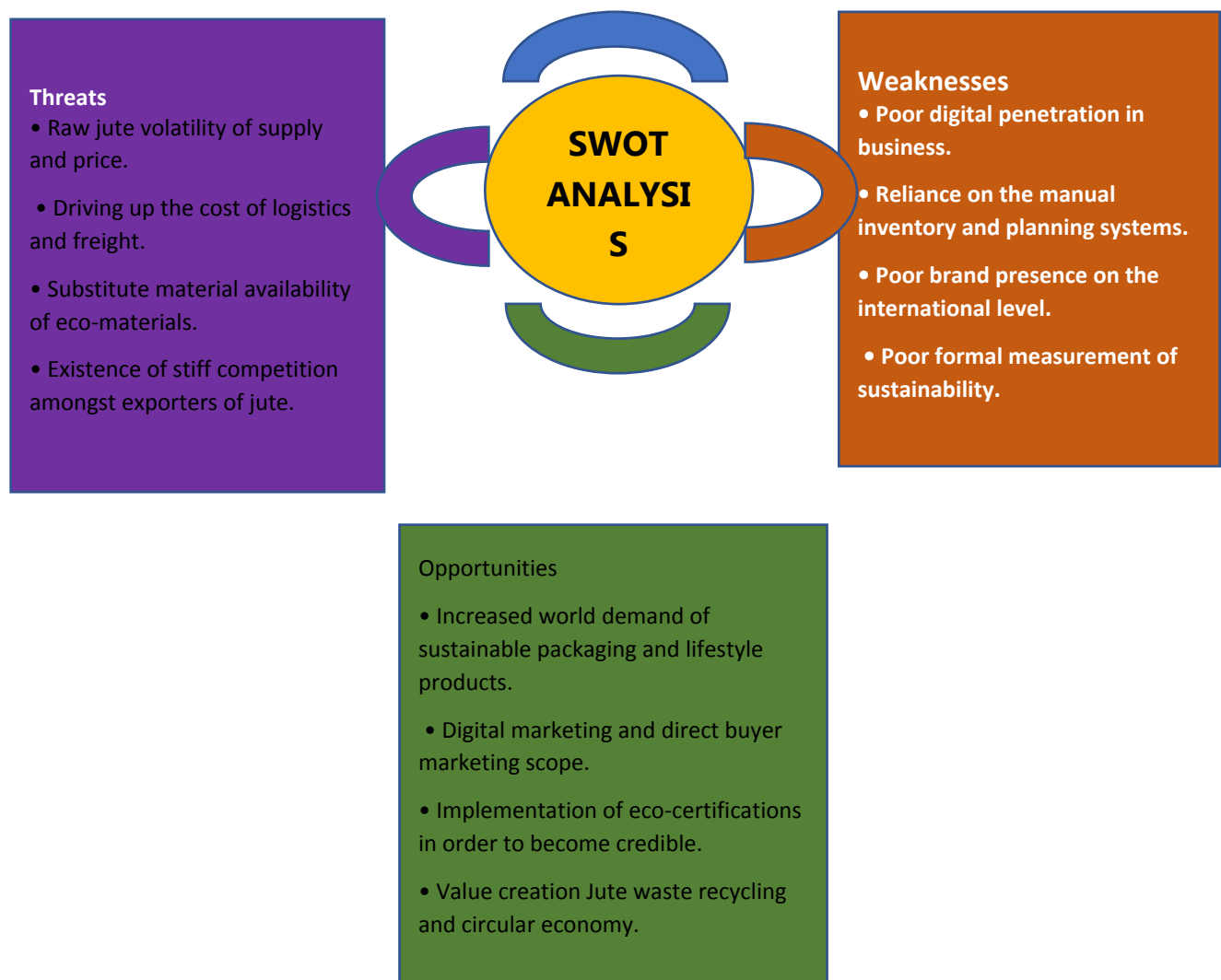


Figure 04: SWOT Analysis

2.8 Summary and Conclusions

The current chapter introduced Golden Jute Product Ltd. as a manufacturing and export SME that is sustainability-positioned and was founded in 2008 located in Savar and Rajbari and specializes in the production of diversified and environmentally-friendly jute products. The review revealed that the leadership style used in the organization is a balanced participative directive style that facilitates an export-quality discipline and delivery promises without compromising flexibility in operation so as to produce customized products. It also emphasized the fact that HR planning is necessary to Golden Jute since its products are strongly reliant on craftsmanship, consistency of finishing, and quality inspection. Regarding marketing activities, the organization is mostly using an export-oriented strategy, where they rely on digital and the B2B strategy to reach buyers. This is indicative in the general marketing format of the SMEs wherein direct buyer relations and product catalogs have merit over mass advertising. The analysis of operations also highlighted that product diversity needs to be scheduled with discipline, managed with quality and coordinated with material flow. The competitive analysis has established that Golden Jute is in an industry that is characterized by high buyer power and high rivalry that long-term competitiveness would be based on differentiation responding through quality, sustainability credibility and operational efficiency as opposed to price competition.

2.9 Recommendations / Implications

1. Operational Excellence & Digitalization

ERP & Inventory Integration: Move to a centralized ERP system with barcode-based tracking to avoid stock mismatches and optimize on the procurement cycles, to make the eco-efficiency a measurable KPI.

Quality Standardization: Add Supplier Grading System: Go formal to stabilize the quality of raw materials and reduce the risks of seasonal fluctuations of procurement.

2. Sustainability & Circular Economy

Waste Valorization: Implement an organized "Waste-to-Value" system and measure the 90 percent female labor force to be socially viable, ensuring that social responsibility forms part of the brand identity.

Artisan-Centric Social Impact: Qualifying the 100 percent biodegradability of the products, the social responsibility should be part of the brand identity; formally organize the labor force of 90 percent females. Strategies in the market

3. Market Diversification & Global Branding

High-Value JDPs (Jute Diversified Products): Pivot from traditional sacks to high-margin products like eco-luxury home decor, nursery pots, and jute geo-textiles to bypass low-margin commodity competition.

Impact Narrative & Traceability: Build a "Global Branding" strategy focused on product traceability and environmental storytelling to increase credibility in European and North American markets.

Direct-to-Consumer (DTC) Channels: Reduce reliance on middlemen by utilizing B2B platforms (e.g., Alibaba) and direct export diplomacy to secure higher premiums.

4. Strategic Compliance & Innovation

Global Certification: Pursue WFTO (Fair Trade) and ISO 14001 certifications to satisfy the rigorous compliance requirements of top-tier international retailers.

Material Blending: Experiment with blending jute with other natural fibers (Seagrass, Kaisha) to create unique textures and meet modern aesthetic demands.

Policy Alignment: Leverage Bangladesh's Mandatory Jute Packaging Act and export subsidies for diversified goods to maintain a competitive pricing edge against synthetics.

CHAPTER 3

PROJECT PART

3.1 Introduction

The jute or jute industry can be regarded as a longstanding historically important agro-based industry in Bangladesh and can be considered as one of the main sources of rural jobs, exportation revenues, and the industrial development that is sustainable. With the shift in the global market to synthetic plastic alternatives with biodegradable alternatives, jute has become a strategic resource



in the global sustainability shift. Studies have shown that natural fibers such as jute have an important negative impact on the environmental footprints during their lifecycles (ScienceDirect, 2025).

Golden Jute Product Ltd. is a privately owned manufacturing company, which was founded in 2008 under the name Golden Jute Product Ltd. and focuses on the process of industrialization that is green. The company manufactures Jute Diversified Products (JDPs), such as baskets, mats, nursery pots, and handicrafts, and exports them to foreign markets in the world (Golden Jute Product, 2025). The supply chain to deal with the control of these products is quite complex, as it comprises complex sourcing, manufacturing that is sensitive to design, and stringent quality control that ensures its international standards.

3.1.1 Background and Problem Statement

The modern jute business requires successful supply chain and procurement strategies to be able to thrive in its operations. The procurement process at Golden Jute Product Ltd. is divided into Fixed Assets (machinery, infrastructure and technology) and Recurring Items (raw jute, dyes, accessories as well as maintenance supplies). Although these factors play a very important role in ensuring smooth operations, their management tends to create complexities which affect the delivery performance.

The fundamental issues in the Golden Jute Product Ltd. are:

Upstream Procurement Volatility: Raw jutes are extremely seasonal and rely on several middlemen. This leads to price fluctuations and lack of transparency hence the inability to trace materials or have uniform quality.

Operational Bottlenecks: There is inconsistency in the fiber strength and moisture content due to the lack of standardized grading of the procurement level. This causes production flaws, re-work and material wastes, which undermines the sustainable brand eco-efficiency.

Lead Time and Requisition Complexity: Manual processes tend to cause delays in the receiving of orders (lead time). High order quantities of raw materials are also a burden to the logistics, and it may result in stockouts or degradation of the organic fibers caused by inappropriate storage.

Manual Tracking Systems: Because of the lack of a digital inventory tracking system (ERP/Barcoding), there can be discrepancies in the amount of stock. This ineffectiveness increases

holding costs and the possibility of not satisfying the requirements of the international buyers to achieve sustainability credibility.

Linear waste Problems: Although the company manufactures environmentally friendly products, the absence of a cycle system of recovery implies that jute leftovers are frequently wasted, without having a chance to extract the value and to optimize the environment.

3.1.2 Objectives of the Study

The main objective of the study is to review and improve the supply chain system of Golden Jute Product Ltd. and make it fit into international standards of sustainability and efficiency. The specific objectives are:

1. To examine the current supply chain management implementation within Golden Jute Product Ltd. in order to develop a foundation of the current operations.
2. To assess the effectiveness and certain structural issues encountered by the organization in the day to day running of the supply chain activities.
3. To investigate the effects of digital technology, sustainability indicators, and supplier relationship management on the total production efficiency .

3.1.4 Significance

The research presented in this project has an academic implication given that studies on jute supply chains are mostly macro-based based on the structure of national supply chains but there is little analysis on sustainability integration at the firm level. Empirical value chain studies portray that jute systems encompass numerous actors and processes, however, lacks the understanding of the challenges of internal sustainability implementation by the private manufacturing firms.

This paper addresses such a gap by producing micro-level information on one of the exporters of diversified products in jute.

Industry wise, the study offers Golden Jute Product Ltd. a systematic diagnosis of procurement variability, production inefficiencies, inventory problems and the logistical limitations associated with these inefficiencies, and the connection of these inefficiencies with sustainability performance. The paper also offers solutions to enhancing the resilience of supply chains and credibility of sustainability which is being sought more by the global consumers.

On the national level, the jute sustainable supply chain will help in diversifying Bangladesh export and ensuring that rural employment and consistent with global sustainability transitions.

3.1.4 Scope of the Study

With a focus on structural issues and the function of digital technology integration in production processes, this study examines the variables that affect supply chain management's operational effectiveness. The study looks into how obstacles to efficient supply chain operations are caused by organizational structures, coordination problems, infrastructure constraints, and inefficient processes. It also assesses how supply chain systems' overall performance, responsiveness, and productivity are impacted by these structural issues. Additionally, the study investigates how production efficiency is affected when combining technological advances like automation tools, online interaction applications, enterprise resource planning (ERP) systems, and data analytics. The study examines how digital transformation aids businesses in streamlining processes, enhancing information flow, cutting down on delays, and improving decision-making in production settings. The study's scope is restricted to examining how supply chain and production contexts' operational efficiency, digital technology adoption, and structural obstacles relate to one another. Through improved structural alignment and technology integration, it seeks to offer insights that can assist firms in improving operational performance.

3.2 Literature Review

In the literature on supply chain management, operational efficiency has received a lot of attention. Christopher (2016) asserts that the coordination of processes like production, distribution, procurement, and information flow is essential to the effectiveness of the supply chain. Inadequate communication lines, disjointed organizational structures, and a lack of coordination are examples of structural issues that frequently lower operational effectiveness and cause supply chain delays. Similarly, Mentzer et al. (2001) contend that supply chain integration's efficacy may be constrained by organizational structural constraints. Departmental silos, hierarchical decision-making, and ineffective workflow systems are some of these obstacles that might interfere with supply chain partners' ability to coordinate. These difficulties frequently result in lower response to market needs and higher operating costs.

Digital technology usage is another significant aspect affecting supply chain efficiency. Digital technologies have revolutionized manufacturing procedures by facilitating current information interchange, computerization, and enhanced operational activity monitoring, according to Porter and Heppelmann (2015). Businesses may maximize manufacturing scheduling and boost overall operating effectiveness by using digital tools. Furthermore, Ivanov, Dolgui, and Sokolov (2019) stress that supply chains may become more visible, flexible, and responsive through digitization. Data analytics, cloud-based platforms, and the Internet of Things (IoT) are examples of technologies that enable businesses to monitor manufacturing operations, anticipate interruptions, and make well-informed decisions faster. Overall, research indicates that although supply chain operational efficiency can be hampered by structural problems, these problems can be lessened and production performance can be greatly improved by integrating digital technologies. These results reinforce the necessity of examining how operational efficiency, digital transformation, and structural limitations interact in contemporary supply chain networks.

3.2.2 Jute Value Chain and Upstream Integration

The jute supply chain in Bangladesh has multi-layered and multi-level structure in terms of farmers, local traders (Beparis) and industrial processors. Value chain analysis shows that there is a wide range of profitability and value addition by these actors and in most cases becomes inefficient due to absence of standardization of quality grading and market transparency.

In order to solve these disintegrations, recent studies recommend the use of Lean Supply Chain principles. As an example, Kanban and 5S have been applied to the upstream jute operations; as a result, inefficiencies linked to seasonal changes and inadequate infrastructure have been reduced (Habib et al., 2019). Lean tools contribute to eco-efficiency by increasing material flow and workstation layout, thus reducing wasted motion and waiting time, which is very significant in the diversified product lines in Golden Jute.

3.2.3 Sustainability and the Circular Economy

Modern literature on Sustainable Supply Chain Management (SSCM) clearly states that sustainability should not be an extravagant CSR process incorporated in procurement and logistics. A sustainable chain is based on stable processes that demand the alignment of operational practices and the environmental goals (Springer, 2025). Waste Valorization is one of the points. In natural fibers and textile industries, environmental effects are alleviated through R-strategies (Recycle, Reuse, Recovery). The end product of jute processing is high levels of organic residues that can be processed into fuel briquettes, pulp or charcoal. Recent research on the Jute Stick Charcoal supply chain proves that the recovery of the agro-waste improves environmental and socio-economic performance (ScienceDirect, 2025).

3.2.4 Technology Adoption and Export compliance

In the case of export-based companies like Golden Jute Product Ltd., online programs such as



barcode attractiveness, Enterprise Resource Planning (ERP) and barcode tracking are needed in the preparation of accuracy and transparency in planning. The high standard of traceability demanded by international buyers can be achieved through technology, enabling companies to deliver the sustainability report that is being demanded by retail partners across the globe. Golden Jute Product Ltd. is a company that markets itself as an environmentally friendly exporter with its manufacturing plants in Savar and Rajbari, which deals specifically with the production of handicrafts and nursery products that use biodegradable materials (Golden Jute Product, 2025). As a result, the supply chain practices of the firm should be carefully aligned to these sustainability expectations in order to retain its competitive edge in the world green market.

3.2.5 Gap Identification

Despite the sheer number of studies dedicated to jute supply chain structures, the majority are conducted at an industry level, meaning that they consider the mapping of the value chain on a higher level than the sustainability implementation level on a firm. Empirical value chain research gives us an insight into the actors, Margins, but not an in-depth analysis on the internal sustainability integration ability of the private exporters.

Upstream supply chains have mentioned lean interventions, yet the little evidence regarding the implementation of lean and sustainability by the private jute diversified product manufacturers exists.

Furthermore, in the literature of the textile industry, circular economy is often proposed as a solution, but jute-related circular systems like waste recovery and agro-waste valorization are poorly studied at the level of separate firms.

This provides a definite gap that the current internship project fills through the study of the interaction of sustainability and operational performance in the supply chain of Golden Jute Product Ltd.

3.2.6 Hypothesis

H1: Operational efficiency in the supply chain is strongly impacted by structural challenges.

H2: Integration of digital technologies greatly enhances the efficiency of production.

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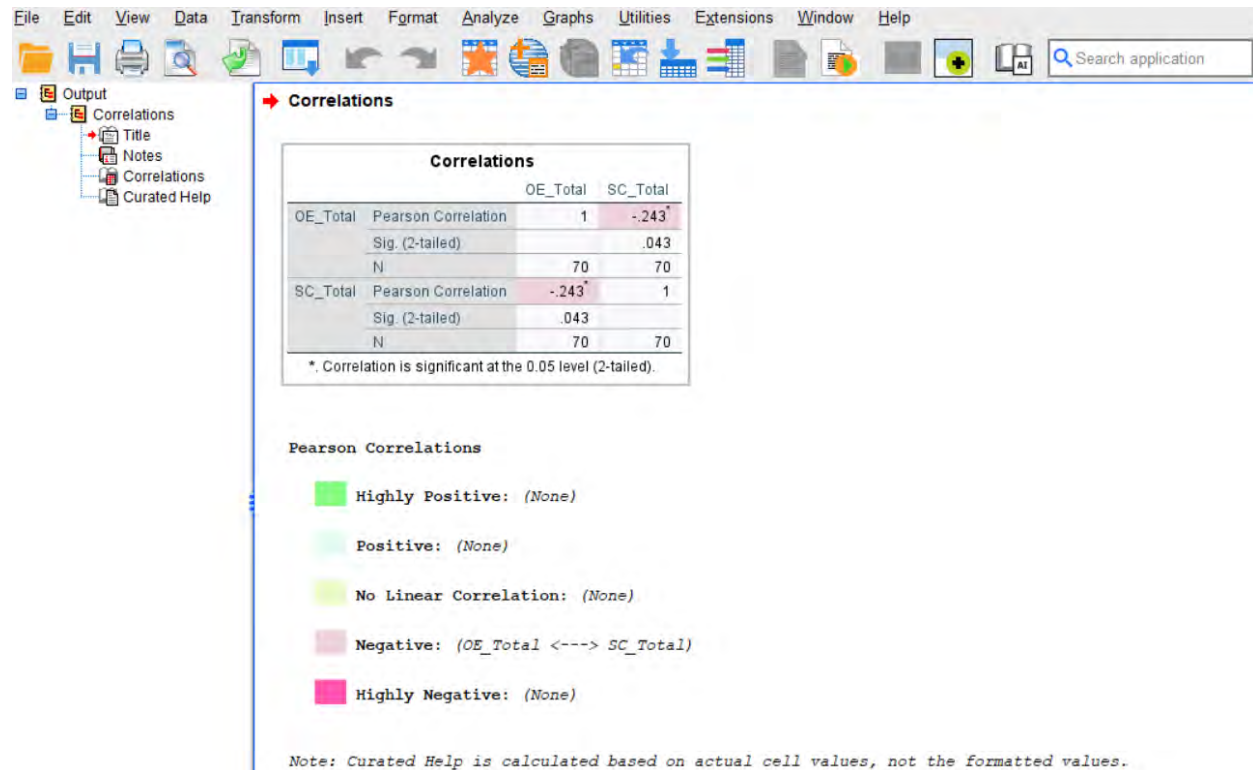
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27	3	3	3	2	4	3	4	2	4	4	4	4	4	4	4	4	3	3	4	4
28	3	3	3	2	4	3	4	2	4	4	4	4	4	4	4	5	3	3	4	4
29	3	3	3	2	5	3	4	2	4	4	4	4	3	3	5	5	3	4	4	4

The mean of the items that represented each construct was used to build composite scores. The average of each of the four measurement categories was used to calculate Structural Challenges (SC), Operational Efficiency (OE), Digital Technology Integration (DTI), and Production Efficiency (PE). Regression analysis and correlation were performed using these composite variables.

Correlation



The association between structural challenges and operational effectiveness was investigated using Pearson correlation analysis. The findings indicate a strong inverse association ($r = -0.243$, $p = 0.043$) between operational efficiency and structural problems. This suggests that increased structural difficulties typically result in worse supply chain operating efficiency. Thus, even if the relationship is weak, Hypothesis 1 is validated.

Correlations

		DTI_Total	PE_Total
DTI_Total	Pearson Correlation	1	.226
	Sig. (2-tailed)		.060
	N	70	70
PE_Total	Pearson Correlation	.226	1
	Sig. (2-tailed)	.060	
	N	70	70

Pearson Correlations

	Highly Positive: (None)
	Positive: (DTI_Total <---> PE_Total)
	No Linear Correlation: (None)
	Negative: (None)
	Highly Negative: (None)

Note: Curated Help is calculated based on actual cell values, not the formatted values.

Production efficiency and digital technology integration have a favorable link, according to the correlation analysis ($r = 0.226$). The association is not substantial, though, as the p-value (0.060) is higher than 0.05. As a result, even though the relationship's direction is positive, this study does not support Hypothesis 2.

3.2.7 Conceptual Framework

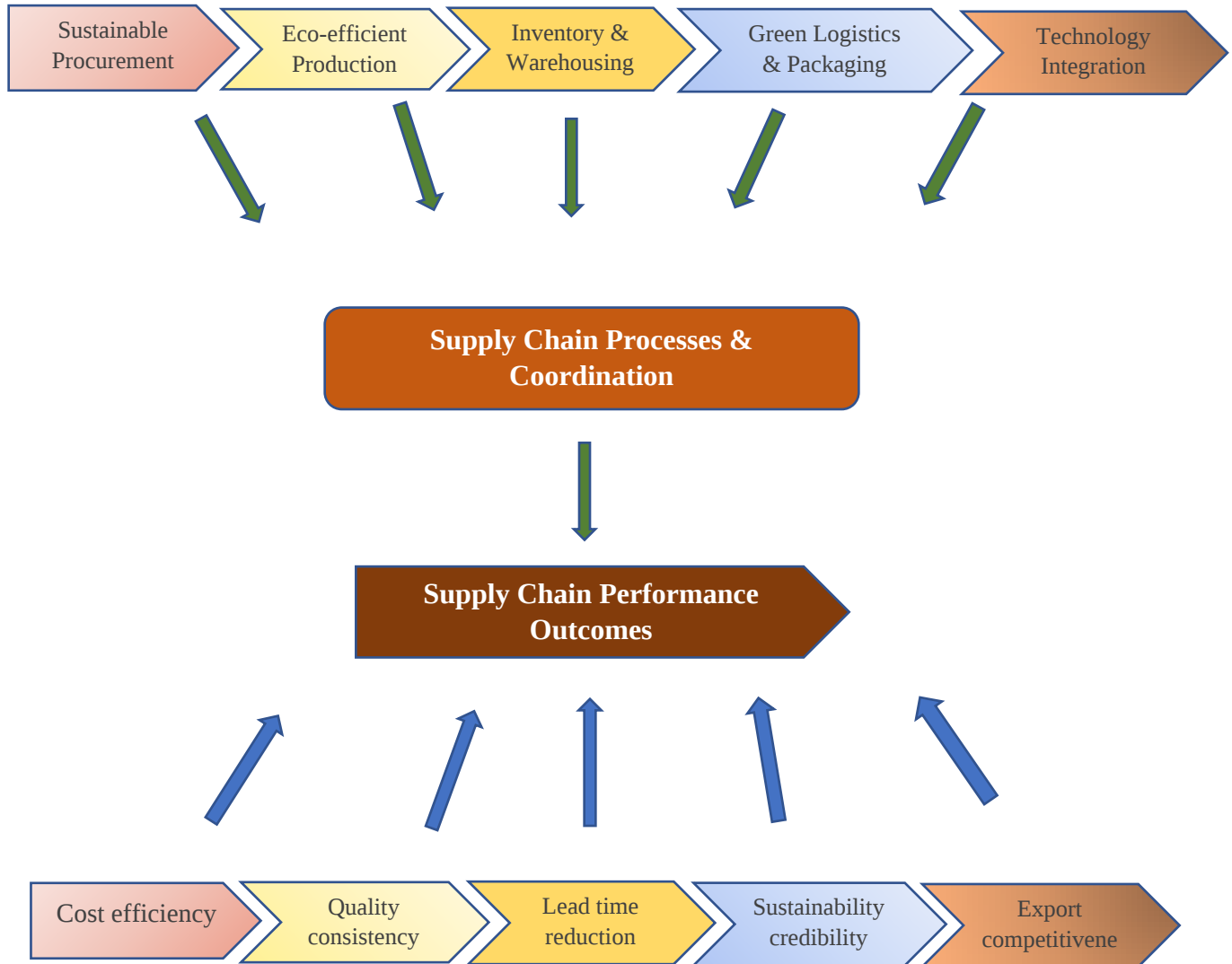


Figure 05: Conceptual Framework

The logic of sustainable supply chain management is the conceptual framework of this project as sustainability practices determine the outcomes of operational performance. Sustainable procurement activities (supplier relationship management, grading standardization, and traceability potential) affect the stability of the quality of raw materials and consistency of production plans.

Practices of production eco-efficiency (downtime control, workflow optimization, defect reduction, and waste minimization) have impacts on the productivity, cost effectiveness and environmental effects. The operational continuity and waste reduction are affected by inventory and warehousing sustainability practices (accuracy of stock, greater control over storage, and less wastage). Green practices of logistics and packaging have an effect on lead time reliability, reduction of product damages, and carbon footprint efficiency. The adoption of technology is a facilitating factor that enhances integration and tracking at these levels of supply chain. A combination of these variables has a significant impact on the main dependent results of supply chain performance, which include cost minimization, consistent quality of products, minimization of lead times and sustainability credibility, as well as export competitiveness.

3.3 Research Methodology

The study adopts the quantitative research methodology to analyze supply chain management practices in jute manufacturing industry with special reference to Golden Jute Product Ltd.

Examples of data used are known through quantitative research that is the collection and analysis of numerical data in a systematic manner to understand what our relationships are between variables. Such method enables the researcher to measure employees' perceptions on supply chain challenges and technological integration through structured questionnaires and statistical analysis.

The quantitative approach is chosen for the study as it allows the observer to evaluate how external challenges impact production results and on the other hand, if digital technology merges with its process will improve efficiency in the company. The data obtained from respondents were processed through statistical techniques to interpret the correlations and relationships among the variables.

3.3.1 Research Paradigm

This study adheres to the positivist research paradigm whereby it rests on assumption that reality can be objectively observed and measured through empirical investigation. Although the positivist

paradigm encourages the collection of quantitative data, structured instruments and statistical analysis to explore relationships between variables.

The nature of research is to analyze the relationship between structural challenges and operational efficiency towards the integration of digital technology for improving production efficiency which are important aspects postulated by supply chain management practices at Golden Jute Product Ltd. Hence, it is considered gravitating under positivist paradigm (Creswell et al., 2016). The present paradigm facilitates the researcher to test hypotheses through statistical techniques like correlation and regression analysis, leading to discover any significant correlation between the selected variables.

This type of research design, known as positivist paradigm is one of the most applied in business and supply chain studies to provide an accurate assessment of organizational behaviors/actions and its impact on operational outcomes.

3.3.2 Research Design

Research Design

This study adopts an explanation research design which seeks to clarify the causal relationships among a variety of factors. This kind of research is used most commonly in hypothesis testing as it explains how one variable affects another variable (Cording, 2002).

In this study, the explanatory design applied to investigate:

The impact of structural constraints on operations

How does integrating digital technology affect production efficiency?

Moreover, this study employs a cross-sectional design, which means data was collected at only one point in time from the respondents. Within this method, the researcher gathers data from practitioners in order to obtain a snapshot of current supply chain management practices within the organization.

Sample Design

The study used **non-probability convenience sampling** to select participants. This method was chosen due to the accessibility of respondents within the organization and time limitations associated with the internship period.

The selected employees provided valuable insights into the operational challenges and technological practices within the company's supply chain system.

Sample Size

A total of **70 employees** were selected as the sample for this study. These respondents were internal employees working within the organization and were chosen because of their familiarity with the supply chain activities and operational processes of the company.

3.3.3 Variables

3.5 Variables of the Study

Four core constructs that capture the key variables of the research are focused in this study.

Independent Variables

Structural Challenges (SC)

Structural challenges are organizational or infrastructural obstacles that impact the efficiency of supply chain operations. These could be communication gaps, coordination issues, lack of infrastructure and resource limitations etc.

Digital Technology Integration (DTI)

Integrating digital technology means making sure information systems, automation and digital communication hardware are in place to get information — production and supply chain performance data.

Dependent Variables

Operational Efficiency (OE)

Operational efficiency is the capacity of the organization to carry out its supply chain activities efficiently with minimum wastage of time, delays and operational costs.

Production Efficiency (PE)

Production efficiency refers to the formulation of optimal processes for the manufacture of goods and outlays without delays.

3.3.4 Data Collection

This research is largely based on primary data collected through a structured questionnaire survey. The questionnaire captured employee perception about the organizational supply chain management practices.

The four constructs included several statements in the questionnaire;

- Structural challenges
- Operational efficiency
- Digital technology integration
- Production efficiency

Respondents rated the statements with a five-point Likert scale, from strongly disagree to strongly agree.

The survey distributed for data collection was done among 70 employees of Golden Jute Product Ltd.

3.3.5 Data Analysis Techniques

Once the responses were gathered, they were analyzed using statistical methods to examine and test the hypotheses of research and relationships between different variables.

The analytical techniques used included:

- Reliability analysis
- Descriptive statistics
- Inferential statistics

These methods enable completeness-checking, summary of responses, and analysis of whether relationships exist between the variables.

Reliability Statistics

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Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	70	100.0
	Excluded ^a	0	.0
	Total	70	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.654	4

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Reliability

Scale: ALL VARIABLES

Case Processing Summary

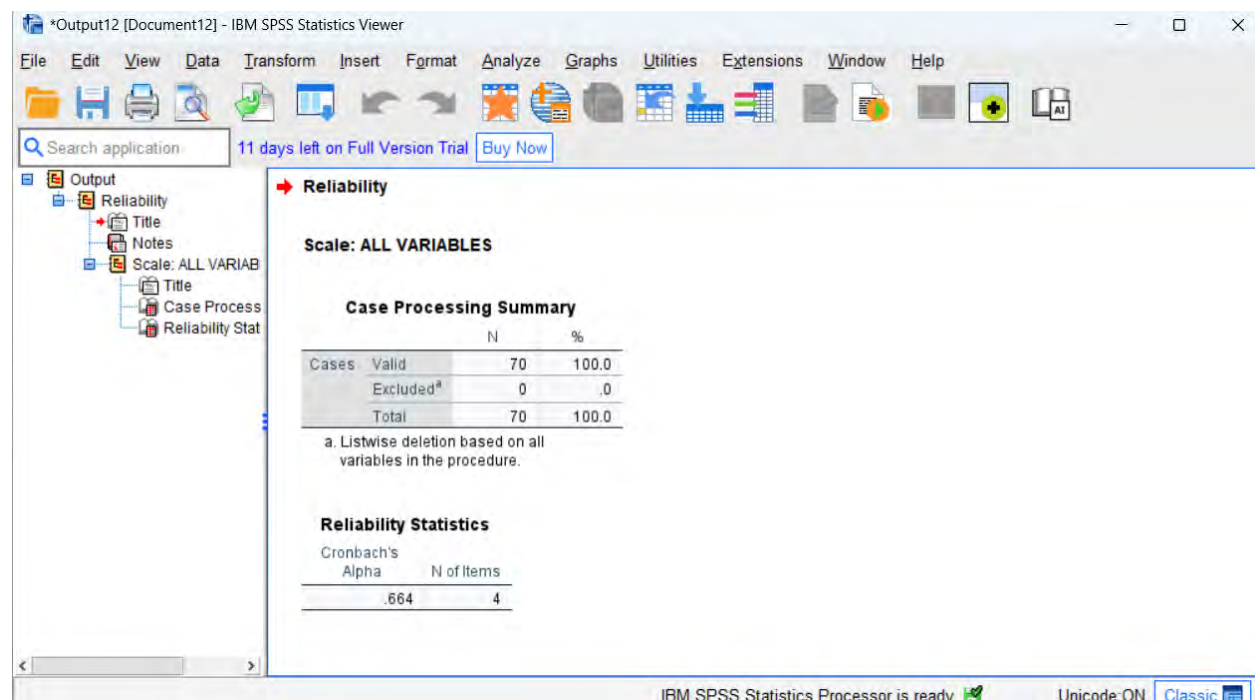
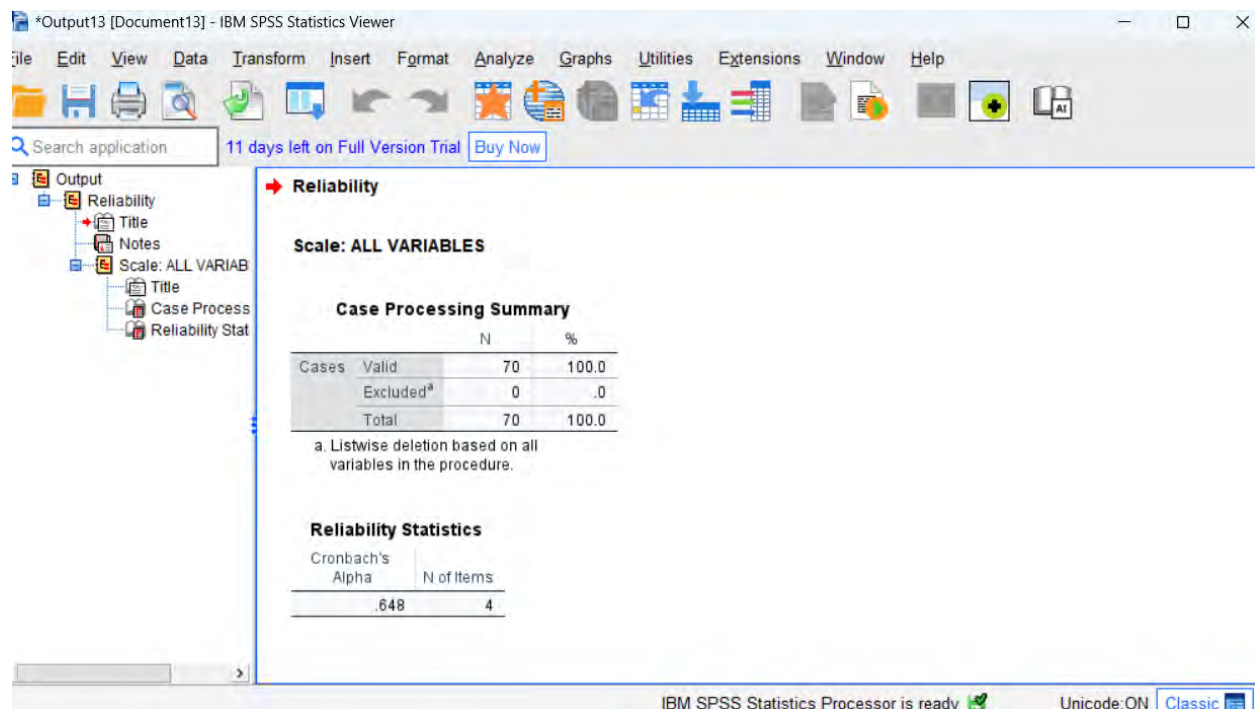
		N	%
Cases	Valid	70	100.0
	Excluded ^a	0	.0
	Total	70	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.765	4

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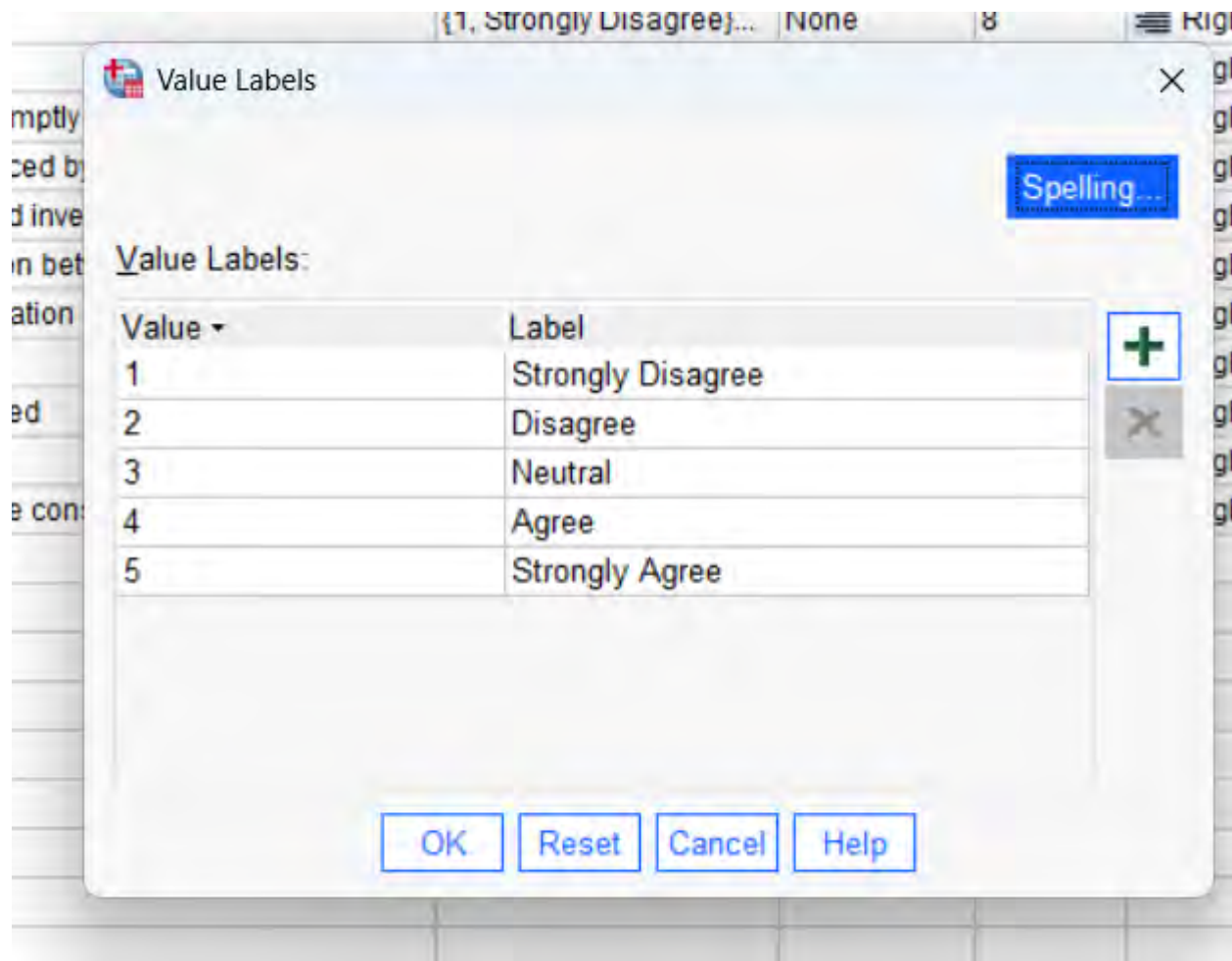


In the analysis of reliability, internal consistency of the questionnaire items used in the study was examined.

Data were used for training The reliability of the measurement scales was measured by Cronbach's Alpha coefficient, which demonstrates how much are close related the items that are grouped within each construct.

Cronbach's Alpha value is between 0 and 1, where the acceptable research level is higher than 0.70. Cronbach's Alpha: The higher the value, the more reliable and consistent are measurement items.

Descriptive Statistics



	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1	SC1	Numeric	8	0	Structural structure slows decisions	{1, Strongly Disagree}...	None	8	Right	Scale	Input
2	SC2	Numeric	8	0	Poor coordination affects activities	{1, Strongly Disagree}...	None	8	Right	Scale	Input
3	SC3	Numeric	8	0	Lack of clear duties disrupts operations	{1, Strongly Disagree}...	None	8	Right	Scale	Input
4	SC4	Numeric	8	0	Communication gaps create delays in procurement a...	{1, Strongly Disagree}...	None	8	Right	Scale	Input
5	OE1	Numeric	8	0	Timely delivery of raw materials	{1, Strongly Disagree}...	None	8	Right	Scale	Input
6	OE2	Numeric	8	0	Production is seamless	{1, Strongly Disagree}...	None	8	Right	Scale	Input
7	OE3	Numeric	8	0	Inventory is managed efficiently	{1, Strongly Disagree}...	None	8	Right	Scale	Input
8	OE4	Numeric	8	0	Customer orders are fulfilled promptly	{1, Strongly Disagree}...	None	8	Right	Scale	Input
9	DT1	Numeric	8	0	Production scheduling is enhanced by ERP	{1, Strongly Disagree}...	None	8	Right	Scale	Input
10	DT2	Numeric	8	0	Defects are reduced with digitized inventories	{1, Strongly Disagree}...	None	8	Right	Scale	Input
11	DT3	Numeric	8	0	Technology improves coordination between departme...	{1, Strongly Disagree}...	None	8	Right	Scale	Input
12	DT4	Numeric	8	0	Real time data improves coordination between depart...	{1, Strongly Disagree}...	None	8	Right	Scale	Input
13	PE1	Numeric	8	0	Reaching production goals	{1, Strongly Disagree}...	None	8	Right	Scale	Input
14	PE2	Numeric	8	0	The cost of manufacturing dropped	{1, Strongly Disagree}...	None	8	Right	Scale	Input
15	PE3	Numeric	8	0	Production time is now faster	{1, Strongly Disagree}...	None	8	Right	Scale	Input
16	PE4	Numeric	8	0	Product quality has become more consistent.	{1, Strongly Disagree}...	None	8	Right	Scale	Input
17	SC_Total	Numeric	8	2		None	None	10	Right	Scale	Input
18	OE_Total	Numeric	8	2		None	None	10	Right	Scale	Input
19	DTI_Total	Numeric	8	2		None	None	11	Right	Scale	Input
20	PE_Total	Numeric	8	2		None	None	10	Right	Scale	Input

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71 - OE4

SC1SC2SC3SC4OE1OE2OE3OE4DT1DT2DT3DT4PE1PE2PE3PE4SC_TotalOE_TotalDTI_TotalPE_Total

1	3	4	3	2	4	4	3	1	1	3	4	5	3	4	5	4	3	3	3	4
2	3	3	2	2	4	5	4	1	4	4	3	4	3	5	5	3	4	4	4	5
3	3	4	3	2	4	4	3	1	4	2	2	3	3	4	4	5	3	3	3	4
4	3	3	2	2	4	4	4	1	4	4	5	2	3	4	5	4	3	3	4	4
5	4	4	3	2	4	5	3	1	4	3	5	4	3	4	3	4	3	3	4	4
6	3	3	2	2	4	4	3	1	4	5	3	4	4	4	4	3	3	3	4	4
7	4	4	3	2	4	2	3	1	5	5	3	4	3	3	4	3	3	3	4	3
8	3	3	2	2	4	3	3	2	5	5	4	3	4	4	3	4	3	3	4	4
9	3	4	2	2	5	3	3	2	5	5	5	4	4	3	3	1	3	3	5	3
10	3	3	2	2	5	3	3	2	3	5	4	3	4	5	4	3	3	3	4	4
11	3	4	2	2	5	3	3	2	3	4	3	4	4	4	3	3	3	3	4	4
12	3	3	2	2	4	3	3	2	4	3	2	5	4	3	4	4	3	3	4	4
13	4	3	2	2	5	3	3	2	3	4	3	4	5	3	4	4	3	3	4	4
14	3	3	3	2	4	3	3	2	5	5	3	3	4	4	3	4	3	3	4	4
15	3	3	3	2	4	3	3	2	4	4	4	5	5	5	5	4	3	3	4	5
16	3	3	3	2	4	3	3	2	4	4	4	4	4	4	4	5	3	3	4	4
17	3	3	3	2	4	3	3	2	5	5	4	4	4	4	5	5	3	3	5	5
18	3	3	3	2	4	3	3	2	4	4	5	5	4	5	4	5	3	3	5	5
19	3	3	3	2	4	3	3	2	4	4	4	3	4	3	4	3	3	3	4	4
20	3	3	2	2	4	3	3	2	4	5	4	4	5	4	4	4	3	3	4	4
21	4	4	2	2	4	3	3	2	4	4	4	4	4	4	4	4	3	3	4	4
22	4	3	2	2	4	3	3	2	4	4	4	4	4	4	5	3	3	3	4	4
23	4	3	2	2	4	3	3	2	5	4	4	4	4	4	4	5	3	3	4	4
24	4	3	2	2	4	3	3	2	4	3	4	3	5	4	3	4	3	3	4	4
25	4	3	2	2	4	3	4	2	5	4	5	4	4	4	4	5	3	3	5	4
26	4	3	2	2	4	3	4	2	5	4	4	4	5	4	4	4	3	3	4	4
27	3	3	3	2	4	3	4	2	4	4	4	4	4	4	4	4	3	3	4	4
28	3	3	3	2	4	3	4	2	4	4	4	4	4	4	4	5	3	3	4	4
29	3	3	3	2	5	3	4	2	4	4	4	4	3	3	5	5	3	4	4	4

Descriptive statistics were performed to summarize and describe the fundamental characteristics of the obtained data.

The study utilized the following descriptive measures:

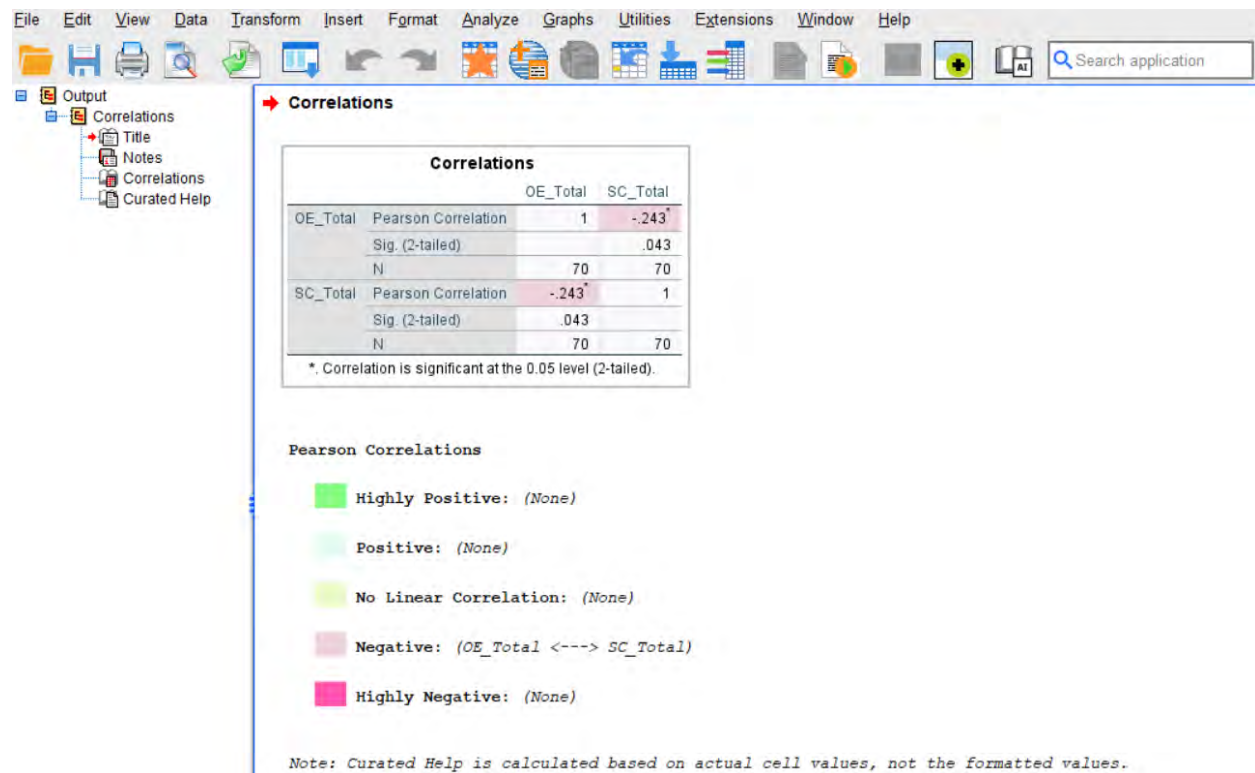
- Mean
- Standard deviation
- Frequency distribution

These statistics give a good overview of what they think and feel about the challenges in their supply chain as well as integrating technology within the organization.

Composite variables for each construct were obtained based on the mean scores of the measurement items.

Inferential Statistics

Correlation (H1)



Correlation (H2)

Correlations			
		DTI_Total	PE_Total
DTI_Total	Pearson Correlation	1	.226
	Sig. (2-tailed)		.060
	N	70	70
PE_Total	Pearson Correlation	.226	1
	Sig. (2-tailed)	.060	
	N	70	70

Pearson Correlations

- Highly Positive: (None)
- Positive: (DTI_Total <----> PE_Total)
- No Linear Correlation: (None)
- Negative: (None)
- Highly Negative: (None)

Note: Curated Help is calculated based on actual cell values, not the formatted values.

Regression

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	SC_Total ^b	.	Enter

a. Dependent Variable: OE_Total

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.243 ^a	.059	.045	.238

a. Predictors: (Constant), SC_Total

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.240	1	.240	4.255	.043 ^b
	Residual	3.839	68	.056		
	Total	4.079	69			

a. Dependent Variable: OE_Total

b. Predictors: (Constant), SC_Total

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	DTI_Total ^b	.	Enter

a. Dependent Variable: PE_Total

b. All requested variables entered.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.226 ^a	.051	.037	.484

a. Predictors: (Constant), DTI_Total

b. Dependent Variable: PE_Total

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.860	1	.860	3.672	.060 ^b
	Residual	15.926	68	.234		
	Total	16.787	69			

a. Dependent Variable: PE_Total

b. Predictors: (Constant), DTI_Total

Associations among the variables were evaluated and research hypotheses tested using inferential statistical techniques.

The study applied:

- Pearson correlation analysis
- Regression analysis

The Pearson correlation analysis determines the strength and direction of the relationship between two variables. Regression analysis finds the amount of influence one variable has on another.

3.3.6 Ethical Considerations

A number of ethical principles guided the research process.

First, respondents were willing to answer the questionnaire and were informed of the purpose of the study prior to taking it.

Second, they knew that their identities would remain confidential and anonymous; no one would know who had made which successions.

Third, the information accumulated was only kept for my research related to the internship report and did not use for any commercial purposes or outside uses.

The researcher also made sure that organizational data, information and details acquired during the internship were managed in a responsible and ethical way.

3.4 Findings and Analysis

3.4.1 Reliability Findings

Construct	Cronbach's Alpha	Interpretation
Structural Challenges	0.654	Moderate reliability
Operational Efficiency	0.765	Acceptable reliability
Digital Technology Integration	0.648	Moderate reliability
Production Efficiency	0.664	Moderate reliability

Interpretation:

The Cronbach's Alpha values were between 0.648 and 0.765, which indicated moderate to acceptable internal consistency of the measurement items. Hence, the scales used in this study have shown good reliability for further statistical analysis.

3.4.2 Descriptive Findings

Cases	N	Percentage
Valid	70	100%
Excluded	0	0%
Total	70	100%

Interpretation:

All 70 responses were valid, and therefore nothing was excluded as the table shows. Hence, statistical analysis was performed using the complete dataset.

Construct	Measurement Items
Structural Challenges (SC)	SC1, SC2, SC3, SC4
Operational Efficiency (OE)	OE1, OE2, OE3, OE4
Digital Technology Integration (DTI)	DTI1, DTI2, DTI3, DTI4
Production Efficiency (PE)	PE1, PE2, PE3, PE4

Interpretation:

Composite variables were formed by averaging item scores for that construct. These composite scores were subsequently utilized in correlational and regression analysis.

3.4.3 Inferential Findings

Hypothesis 1

Correlation between Structural Challenges and Operational Efficiency

Variables	Correlation (r)	Sig. (p-value)	N
Structural Challenges & Operational Efficiency	-0.243	0.043	70

Interpretation:

The Pearson correlation provides evidence for a negative relationship between structural challenges and operational efficiency ($r = -0.243$). Since the p-value (0.043) is lower than 0.05, the relationship is statistically significant. This means that more structural challenges have an inverse corresponding phenomenon on the overall efficiency of the operation of the supply chain.

Hypothesis 2

Correlation between Digital Technology Integration and Production Efficiency

Variables	Correlation (r)	Sig. (p-value)	N
Digital Technology Integration & Production Efficiency	0.226	0.060	70

Interpretation:

The correlation coefficient indicates a positive relationship between digital technology integration and production efficiency ($r = 0.226$). Note that the p-value (0.060) is greater than 0.05 and therefore not statistically significant.

Regression Analysis

Table 4.6 Regression Analysis for Hypothesis 1

Model	R	R ²	Sig.
Structural Challenges → Operational Efficiency	0.243	0.059	0.043

Interpretation:

Results from the regression analysis suggest that structural challenges have a substantial impact on operational efficiency. With an R^2 value of 0.059, structural challenges account for roughly 5.9% of how operational efficiency varies across organizations.

Regression Analysis for Hypothesis 2

Model	R	R ²	Sig.
Digital Technology Integration → Production Efficiency	0.226	0.051	0.060

Interpretation:

Results show that there is no meaningful influence of digital technology integration on production efficiency ($p\text{-value} = 0.060 > 0.05$).

3.4.4 Overall Findings

Overall findings of the study are drawn from reliability, descriptive and inferential analysis carried out based on data collected from 70 staffs of Golden Jute Product Ltd.

The reliability analysis, using Cronbach's Alpha, suggests moderate to acceptable internal consistency of the measurement scales with values approximately between 0.64 and 0.76. This indicates that the items in the questionnaire applied to measure these constructs are reliable for subsequent analysis.

Based on descriptive statistics, all 70 responses were valid and mean values of items representing Structural Challenges, Operational Efficiency, Digital Technology Integration, and Production Efficiency were calculated to create composite variables.

The interplay of variables indicates that Structural Challenges are significantly and inversely related to Operational Efficiency ($r = -0.243$, $p = 0.043$); more structural challenges lead to less operational efficiency in the supply chain. In contrast, Digital Technology Integration maintains a positive but statistically non-significant relationship with Production Efficiency ($r = 0.226$; $p = 0.060$).

In conclusion, these findings imply that the critical structural issues can greatly influence supply chain operational functionality, while there is no statistically significant effect of integrating digital technology on production efficiency in this particular research.

3.5 Summary

Here in this internship report an analysis has been done on the supply chain management practices of Golden Jute Product Ltd. related to procurement activities, manufacturing coordination, inventory handling and distribution flow, etc. The operational objective of the study was to analyze how structural challenges and digitization influences operational efficiency and production performance in the organization.

The study utilized a quantitative research approach. The first-hand data was collected through a structured questionnaire survey of the 70 employees of the organization. Reliability analysis, descriptive statistics and inferential analysis (correlation and regression) were conducted to ensure the validity and consistency of the collected data.

Cronbach's Alpha for reliability test showed satisfactory internal consistency (value 0.648–0.765), confirming that the measurement scales were adequate for further statistical analysis. Following descriptive analysis that confirmed all 70 responses were deemed valid, composite variables of the key constructs identified in this study—namely Structural Challenges, Operational Efficiency, Digital Technology Integration and Production Efficiency—were generated.

The inferential analysis showed a statistically significant inverse correlation between Structural Challenges and Operational Efficiency ($r = -0.243$, $p = 0.043$), concluding that higher levels of structural barriers can decrease supply chain performance. Digital Technology Integration, on the other hand, showed a positive but not statistically significant association with Production Efficiency ($r = 0.226$, $p = 0.060$).

In summary, the results stress that organizational and structural factors are pivotal in establishing supply chain efficiency, emphasizing that mere technological adoption might not lead to marked production performance improvements if artfully implemented.

3.6.1 Recommendations

Based on the study findings some suggestions can be made to improve the supply chain performance of golden jute product ltd.

So, the organization needs to begin at avoiding structural difficulties in its operational processes. Supply chain operations can become more organized by improving communication channels, creating a strong interdepartmental coordination, and clearly delegating roles and responsibilities.

Second, the company should reinforce the digitalization of its supply chain activities. Enterprise Resource Planning (ERP), digital inventory tracking and automated data management systems will help improve transparency and minimize operational errors, supporting better production planning.

Third, lean supply chain management practices can help minimize resource utilization and operational inefficiencies. Process standardization, workflow optimization and strategies for waste reduction can greatly boost productivity or operational efficiency.

Lastly, the firm must advocate for sustainable supply chain curations such as resource efficiency and sustainable operations which can be a competitive advantage in cross-border markets.

3.6.2 Implications Theoretical

This research adds to the existing literature by analyzing supply chain management of jute manufacturing industry in a developing economy context like Bangladesh.

These findings substantiate previous theoretical conceptions that suggest organizational structure and internal coordination greatly affect operational efficiency within the ecosystem of supply chain systems. Governance and relationships between the actors is crucial for supply chain management ensuring operational efficiency, thereby they need to be managed properly if the organization aims at improving itself.

Further, the findings indicate that while integrating digital technology can have a positive impact on production performance, its success is contingent upon appropriate implementation and due preparedness by organizations. Hence, appropriate managerial strategies and organizational improvements must accompany technological adoption.

3.7 Future Research

While this particular study adds certain contributions into the knowledge of operations management field it leaves room for a number of future research opportunities.

i.e., future studies could cover a larger sample size including multiple firms, which would broaden the insights on supply chains from across the jute manufacturing industry.

For instance, researchers might study the impact of emerging technologies such as advanced digital technologies, automation systems, and real-time supply chain analytics on operational/production effectiveness. Moreover, future studies could be done on the whole supply chain network with the entire actors such as suppliers, logistics providers and distributors to get an overall perspective of jute supply chain dynamics.

3.8 Conclusion

The study covers the complete process with Golden Jute Product Ltd. For example, how structural challenges influence their supply chain management and to what degree they are adopting digital technology in order to increase operational efficiency.

The results show that the structural challenges has a strong negative effect on operational performance suggesting need of better coordination, communication and organization management of supply chain system. While the integration of data technology indicated a positive correlation with production efficiency, these results were not statistically significant for this study.

Z1: In conclusion, the study concludes that there are several influential factors that could impact supply chain performance in jute manufacturing industry such as effective organizational

management system and strategic adoption of technology would lead to improved operational practices in this industry.

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