

Assignment 011 Module 007698 Supply Chain Management

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(You should write a 3000 words (+or- 10%) consultancy report)

*This is the case study for your written assignment. Please read it carefully and highlight or underline all the issues that need to be addressed; this will be your first step towards writing your consultancy report. First, ensure you fully **understand the case**, then develop appropriate solutions. The assignment questions, the grade weighting for each section, the learning outcomes, and the word count are provided at the end of the case study.*

Introduction

EcoFashion Apparel is an innovative fashion company founded in 2010 by designers Mia Gonzalez and Lucas Schmidt. The company has quickly risen to prominence by focusing on sustainable and eco-friendly clothing. They aim to provide stylish yet environmentally conscious fashion alternatives to traditional fast fashion. Initially, EcoFashion Apparel began with a small line of organic cotton t-shirts and has expanded to a full range of clothing including casual wear, formal attire, and accessories. The company is headquartered in San Francisco with design studios in Berlin and manufacturing units spread across Asia and South America.

As the company grows, it faces various challenges related to supply chain management, sustainability, and market expansion.

Current Situation

EcoFashion Apparel's headquarters is located in San Francisco with design studios in Berlin and manufacturing facilities in Bangladesh, India, and Peru. Since its inception, the company's founders have emphasised innovation and design, often at the expense of operational efficiency.

There is a pervasive attitude of prioritising creative output over logistical discipline, leading to delays and inconsistencies in product delivery.

EcoFashion Apparel sources raw materials such as organic cotton and recycled polyester from various suppliers worldwide. However, the company has not implemented formal supply chain methodologies, resulting in frequent late deliveries and quality issues. Recently, a batch of products had to be recalled due to defects in fabric quality, causing significant financial and reputational damage.

The company's reliance on suppliers in Bangladesh and India has been particularly problematic. Two long-term suppliers, personal friends of the founders, have consistently failed to meet delivery schedules, leading to production bottlenecks. Additionally, the company has faced challenges due to political and economic instability in these regions, further exacerbating supply chain disruptions.

The impact of these inefficiencies is far-reaching. Delays in receiving raw materials lead to production halts, which, in turn, delay product availability in the market. This affects sales and tarnishes the brand's reputation for reliability. Furthermore, the financial implications are significant as late deliveries often result in expedited shipping costs and penalty fees from retail partners.

Manufacturing and Logistics (LO1, LO3)

EcoFashion Apparel recently opened a new manufacturing facility in Lima, Peru, to better serve the growing market in South America. This facility is strategically located near major ports, providing excellent access to shipping routes. However, the facility is still not operating at full capacity due to issues with supplier coordination and workforce training.

The strategic location of the Lima facility offers numerous advantages, such as reduced shipping times to South American markets and lower transportation costs. However, the challenges in ramping up production capacity underscore the need for better integration of supply chain processes. Effective supplier coordination is crucial to ensure that raw materials arrive on time, and workforce training is essential to maintain high production standards.

To cope with demand fluctuations, EcoFashion Apparel often resorts to air freight materials from Asia, incurring substantial costs and environmental impact. The company's management is concerned about the sustainability of this practice both financially and ecologically. Air freight is significantly more expensive than sea freight, contradicting the company's commitment to sustainability.

The company uses a third-party logistics provider, Green Logistics, for global shipments. While initially reliable, Green Logistics has recently struggled with late deliveries and damaged goods, causing further disruptions in EcoFashion Apparel's supply chain. The issues with GreenLogistics highlight the importance of choosing reliable logistics partners and having contingency plans in place to address potential disruptions.

Inventory Management (LO1, LO3)

Inventory management is a critical challenge for EcoFashion Apparel. The company has struggled with maintaining optimal inventory levels due to inconsistent supplier deliveries and fluctuating demand. Excess inventory of certain items has led to increased holding costs, while stockouts of popular products have resulted in lost sales and dissatisfied customers.

Effective inventory management is essential to balance supply and demand, minimise holding costs, and ensure product availability. EcoFashion Apparel’s manual inventory tracking system lacks real-time visibility, leading to inaccuracies and inefficiencies. Implementing an automated inventory management system could help improve accuracy, reduce holding costs, and ensure better alignment between supply and demand.

An automated system would provide real-time data on inventory levels, helping the company to make informed decisions about reordering and stock replenishment. This would reduce the likelihood of stockouts and excess inventory, ultimately improving customer satisfaction and reducing costs.

Supplier Details and Transportation

EcoFashion Apparel sources materials from a variety of suppliers. The following table outlines the main suppliers, their locations, distances to manufacturing facilities, modes of transportation, and transportation costs:

Component	Supplier	Location	Distance to Lima (km)	Mode of Transportation	Cost per Shipment (\$)
Organic Cotton Fabric	GreenTextiles	India	16500	Sea Freight	2500
Recycled Polyester Fiber	ReCycleTech	Bangladesh	17000	Sea Freight	2700

Component	Supplier	Location	Distance to Lima (km)	Mode of Transportation	Cost per Shipment (\$)
Natural Dyes	EcoDyes	Peru	500	Truck	600
Sewing Thread	ThreadCo	China	17500	Sea Freight	2800
Buttons	ButtonWorld	Germany	10500	Sea Freight	1200
Zippers	ZipFast	Vietnam	17000	Sea Freight	2600
Packaging Material	PackGreen	USA	6000	Air Freight	3500
Labels	LabelPro	Brazil	4500	Truck	1000

Issues with Transportation and Freight (LO1, LO2, LO3)

EcoFashion Apparel faces several challenges related to transportation and freight impacting their supply chain efficiency and sustainability:

- **High Costs of Air Freight:** Due to the urgency of certain shipments, EcoFashion Apparel often uses air freight, which is significantly more expensive than sea or land transportation. This increases overall logistics costs and reduces profit margins.
- **Environmental Impact:** Air freight has a higher carbon footprint compared to sea or land transport, contradicting EcoFashion Apparel's commitment to sustainability. The company needs to explore more eco-friendly transportation options.
- **Delays and Unreliability:** The reliance on third-party logistics providers such as GreenLogistics has led to delays and damaged goods. Recent incidents of lost shipments and damaged products have further strained the supply chain.
- **Political and Economic Instability:** Suppliers in regions with political or economic instability, like Bangladesh and India, face frequent disruptions. This unpredictability affects the timely delivery of raw materials and components.

- **Lack of Real-Time Tracking:** The current manual inventory and shipment tracking systems lack real-time visibility, leading to inefficiencies and errors in order processing and delivery.

Addressing these transportation and freight issues requires a multi-faceted approach. The company (EcoFashion Apparel) needs to evaluate the cost-benefit of different transportation modes, considering both financial and environmental impacts. Establishing partnerships with multiple logistics providers could reduce the risk of disruptions and delays. Additionally, investing in real-time tracking systems would enhance visibility and improve decision-making.

Sustainability and Future Opportunities (LO1, LO2)

EcoFashion Apparel prides itself on its commitment to sustainability, actively participating in initiatives like the Better Cotton Initiative (BCI) and the Global Fashion Agenda. However, the company is facing increasing scrutiny from consumers and regulatory bodies regarding its environmental impact and labour practices.

The European Union's upcoming fast fashion taxes and increasing consumer demand for transparency and ethical sourcing pose significant challenges and opportunities for EcoFashion Apparel. The company must adapt its reverse logistics processes to comply with these regulations and maintain its reputation as a sustainable fashion leader.

To further its sustainability goals, EcoFashion Apparel could explore the use of biodegradable materials and invest in sustainable manufacturing technologies. Implementing a comprehensive sustainability strategy that includes reducing carbon emissions, minimising waste, and ensuring fair labour practices would not only enhance the company's reputation but also attract environmentally conscious consumers.

Despite these challenges, there are significant opportunities for growth. EcoFashion Apparel is in discussions with a major European retail chain to supply 10,000 units of a new eco-friendly clothing line annually. This partnership could substantially boost the company's market presence and revenue.

Financial Performance (LO1, LO3, LO6)

EcoFashion Apparel has experienced steady revenue growth over the past five years, reaching \$50 million in annual sales in the last fiscal year. However, profit margins have been under pressure due to increasing logistics costs and supply chain inefficiencies. The following table provides a summary of key financial indicators:

Financial Indicator	Value (\$ millions)
Annual Revenue	50
Gross Profit	20
Net Profit	5
Logistics Costs	10
Inventory Holding Costs	3

The financial performance of EcoFashion Apparel indicates a strong revenue stream but highlights the need for improved operational efficiency to enhance profit margins. Reducing logistics costs and optimising inventory management are critical to achieving this goal. Additionally, exploring cost-effective sourcing strategies and negotiating better terms with suppliers could further improve financial performance.

Technological Integration (LO1, LO3, LO5, LO6)

Currently, EcoFashion Apparel uses basic ERP systems for order processing and financial management but lacks an integrated supply chain management system. The company is considering investing in advanced technologies to improve operational efficiency and supply chain visibility.

The company has allocated a budget of \$1 million for technological upgrades. Students are tasked with evaluating and selecting the most suitable technologies for EcoFashion Apparel's supply chain. Below are some potential technology options along with their estimated costs and benefits:

Technology	Estimated Cost (\$)	Benefits
RFID for Inventory Tracking	150,000	Enhances inventory accuracy, reduces manual labour, and provides real-time stock levels.
IoT Devices for Real-Time Monitoring	200,000	Improves visibility into the supply chain, enables proactive maintenance, and reduces downtime.

Technology	Estimated Cost (\$)	Benefits
Blockchain for Supply Chain Transparency	250,000	Increases traceability, improves security, and fosters trust among stakeholders.
Advanced Supply Chain Management Software	300,000	Integrates all supply chain processes, provides comprehensive data analytics, and improves decision-making.
Automated Warehouse Systems	400,000	Increases efficiency in warehouse operations, reduces errors, and lowers labour costs.
Cloud-Based Collaboration Tools	100,000	Enhances communication and collaboration among global teams, and provides access to real-time data.

Students should consider the cost benefits and alignment with EcoFashion Apparel's sustainability goals and supply chain challenges. They need to evaluate which combination of technologies would provide the best return on investment and support the company's strategic objectives.

Integrating advanced technologies into the supply chain could significantly enhance EcoFashion Apparel's operational efficiency. For instance, RFID technology would provide real-time inventory data, reducing the risk of stockouts and excess inventory. IoT devices could monitor the condition of goods during transit, ensuring product quality and reducing the likelihood of returns. Blockchain technology would enhance transparency and traceability, addressing consumer demands for ethical sourcing.

Customer Feedback and Market Position

Customer feedback indicates strong satisfaction with EcoFashion Apparel's product quality and sustainable practices, but there are concerns about product availability and delivery times. The company holds a competitive position in the market, competing with other sustainable fashion brands such as Patagonia and Reformation.

To address customer concerns, EcoFashion Apparel needs to focus on improving its supply chain reliability and reducing lead times. Enhancing communication with customers and providing accurate delivery estimates could improve customer satisfaction. Additionally, expanding the

product range to include more innovative and sustainable materials could attract new customers and strengthen the brand's market position.

Human Resources and Training (LO4)

EcoFashion Apparel recognises the need for a skilled workforce to manage its supply chain effectively. The company plans to invest in comprehensive training programs for its employees focusing on new supply chain management systems and sustainability practices.

Training programs should cover the use of advanced technologies, sustainable practices, and effective communication skills. Empowering employees with the necessary skills and knowledge would enhance their ability to manage supply chain operations efficiently. Furthermore, fostering a culture of continuous improvement and innovation would encourage employees to identify and implement best practices.

Supplier Performance Metrics (LO1, LO2, LO3)

EcoFashion Apparel uses the following metrics to evaluate supplier performance:

- On-Time Delivery Rate: Measures the percentage of orders delivered on time.
- Quality Score: Assesses the quality of materials and components.
- Sustainability Compliance: Ensures suppliers meet sustainability standards and ethical practices.
- Cost Efficiency: Evaluates the cost-effectiveness of suppliers.

Regularly evaluating supplier performance using these metrics would help EcoFashion Apparel identify areas for improvement and take corrective actions. Establishing clear performance expectations and maintaining open communication with suppliers would foster strong and collaborative relationships.

Regulatory Environment (LO2)

EcoFashion Apparel operates in a complex regulatory environment, particularly in key markets such as the European Union and the United States. Compliance with labour laws, environmental regulations, and trade policies is crucial for maintaining operations and market access.

Staying informed about regulatory changes and adapting operations accordingly is essential for compliance. For example, the introduction of the EU's fast fashion taxes requires the company to review its pricing strategy and supply chain practices to minimise the impact of these taxes.

Collaborating with industry associations and participating in policy discussions could also help EcoFashion Apparel influence and prepare for regulatory changes.

Risk Management (LO2)

The company has identified several risks in its supply chain and developed contingency plans to mitigate them:

- **Supply Disruptions:** Diversifying the supplier base to reduce dependency on any single source.
- **Logistics Delays:** Establishing alternative logistics partners and routes.
- **Regulatory Compliance:** Keeping abreast of regulatory changes and adapting operations accordingly.

Effective risk management involves continuously monitoring the supply chain for potential risks and implementing proactive measures to address them. For example, maintaining a buffer stock of critical materials could mitigate the impact of supply disruptions. Regularly reviewing and updating contingency plans would ensure they remain effective in addressing emerging risks.

Innovation and Future Plans (LO1, LO2, LO5)

EcoFashion Apparel is exploring several innovations to enhance its supply chain:

- **Technology Adoption:** Implementing advanced supply chain management systems and real-time tracking technologies.
- **Product Development:** Expanding the product line to include more sustainable and innovative materials.
- **Market Expansion:** Entering new markets in Asia and Europe to increase market share.

Investing in innovation is essential for maintaining a competitive edge and driving long-term growth. For example, developing new products using biodegradable materials could attract environmentally conscious consumers and differentiate the brand from competitors. Expanding into new markets would also provide opportunities for revenue growth and diversification.

Interview Feedback

Interview with the head of supply chain management at EcoFashion Apparel:

Question: *What are the major supply chain challenges currently faced by EcoFashion Apparel?*

Answer: One of the significant challenges we face is the lack of a standardised supply chain process. Each department operates independently using different systems, leading to inefficiencies and communication gaps. This lack of integration makes it difficult to manage orders, track inventory, and ensure timely deliveries. Additionally, our reliance on a few key suppliers has made us vulnerable to disruptions.

Question: How can EcoFashion Apparel improve its supply chain management?

Answer: We need to establish a standardized supply chain framework that integrates all departments and systems. Investing in technology solutions such as an integrated supply chain management system could provide better visibility and coordination. Training our staff on these new systems and processes is also crucial. Furthermore, diversifying our supplier base and building more robust relationships with our logistics partners will help mitigate risks and improve overall efficiency.

Consultancy Report (LO5)

As an external consultant, you have been hired to review EcoFashion Apparel's supply chain and develop a comprehensive improvement plan. Your objective is to address the company's operational issues and provide clear recommendations for enhancement.

Your role is to define a suitable supply chain strategy for EcoFashion Apparel, considering some of these items, but you are free to expand on your own ideas and solutions. Please note this is not a question-and-answer assignment; you must define a suitable strategy for this case study.

Marking Criteria

Scenario Analysis (20%) (Approximately 600 words)

- Use either the Porter Value Chain model or the SCOR model to analyse the situation.
- Describe the current situation with the given case study, what are their current capabilities for supply chain management, and detail the opportunities for future growth of the company (Perform a SWOT then TWOS and report your TWOS analysis).

Supply Chain Strategies (30%) (approximately 1200 words)

- Define how the case study organisation could establish a global supply chain, referring to one supply chain theory such as Porter's value chain, SCOR model, etc., and the impact on the company structure. The strategies could include references to:

- a) Global supply chain operations, i.e., manufacturing, suppliers, engineering centre.
- b) Advantages and disadvantages of outsourcing key sections of the supply chain.
- c) Identify key supply chain risks and how these risks can be managed.
- d) Benefits and disadvantages of Agile vs. Lean vs. Hybrid supply chain strategies.
- e) Impact of future technologies in sharing information throughout the supply chain.
- f) Impact on future EU fast fashion taxes and reverse supply chains.

Conclusion and Recommendations (30%) (Approximately 1200 words)

- Provide a clear set of recommendations defining your ideas on how to establish a supply chain based on your academic research.

Academic Rigour (10%)

- Your assignment should include the academic insight, i.e., the concepts and the supporting references involved, indicated in the report and listed in the references and bibliography.

Appendix A

Bill of Materials for Product

Component	Volume	Supplier	Lead Time (weeks)
Organic Cotton Fabric	1000	GreenTextiles	4
Recycled Polyester Fiber	500	ReCycleTech	3
Natural Dyes	300	EcoDyes	2
Sewing Thread	200	ThreadCo	3
Buttons	400	ButtonWorld	2
Zippers	150	ZipFast	4
Packaging Material	700	PackGreen	3

Component	Volume	Supplier	Lead Time (weeks)
Labels	600	LabelPro	2

Learning Outcomes (what students need to develop)

This assignment is designed to help students achieve the following learning outcomes:

1. Knowledge and Understanding:

- Develop a systematic understanding of the relationship between strategic and operational supply chain management (Analysed through Porter's Value Chain model).
- Demonstrate a critical awareness of the implications and trade-offs of strategic decisions on supply chains and how to manage associated risks (Considered through the SWOT analysis and risk management strategies).
- Demonstrate a systematic understanding of the relationship between supply chain processes and process improvement (Highlighted in the recommendations for technological integration and operational efficiency).

2. Intellectual, Practical, Affective, and Transferrable Skills:

- Hone effective transferable management skills: task organisation and the management of capacities in groups; analysis; communication; confidence in presentation skills and efficient time management (Encouraged through the collaborative nature of the consultancy report).
- Critically undertake analysis of a business scenario and develop a project plan for improvement (Achieved through the comprehensive analysis and strategy development in the assignment).
- Synthesise and critically evaluate the information and performance mapping of business statistics and communicate these with confidence (Demonstrated through the analysis of financial performance and supplier metrics).