Impact of Ukraine-Russia War in Supply Chain Management on Garments Sector of Bangladesh: A Case Study on Auko-Tex Group

Submitted by:

Md. Firoz Kaium Nawas
ID: MSCM 2202026003
Program: MBA
Major: MSCM
Semester: Summer-2023
Sonargaon University (SU)

Submitted to:

Department of Business Administration

Sonargaon University (SU)

Submitted for the partial fulfillment of the degree of

Master of Business Administration- MSCM



Sonargaon University (SU),
147/I, Green Road, Tejgaon, Dhaka-1205, Bangladesh.

Date of Submission: September 05, 2023

Impact of Ukraine-Russia War in Supply Chain Management on Garments Sector of Bangladesh: A Case Study on Auko-Tex Group

Submitted by:

Md. Firoz Kaium Nawas
ID: MSCM 2202026003
Program: MBA
Major: MSCM
Semester: Summer-2023
Sonargaon University
(SU)

Submitted to:

Md. Masud Rana

Assistant Professor & Head

Department of Business Administration

Sonargaon University (SU)

Submitted for the partial fulfillment of the degree of

Master of Business Administration-MSCM



Sonargaon University (SU),
147/I, Green Road, Tejgaon, Dhaka-1205, Bangladesh.
Date of Submission: September 05, 2023

Letter of Transmittal

September 05, 2023
Md. Masud Rana
Assistant Professor & Head
Department of Business Administration
Sonargaon University (SU)

Subject: Submission of Thesis paper.

Dear Sir,

I am hereby submitting my Thesis paper entitled "**Impact of Ukraine-Russia War in Supply Chain Management of Bangladesh: A Case Study on Auko-Tex Group"** which was assigned to me as a requirement for the completion of the MSCM Program. I have discovered this paper very interesting, beneficial, and insightful.

The entire report is based on my practical experience in Auko-Tex Group. I expect this paper to be informative as well as comprehensive. This thesis paper will help me a lot in my future career life.

Thank You very much for your guidance and cooperation during the course without which this thesis paper cannot be completed.

Moreover, if you have any further inquiries concerning any additional information, I would be very pleased to clarify that.

Sincerely Yours

Md. Firoz Kaium Nawas
ID: MSCM 2202026003
Program: MBA
Major: MSCM
Department of Business Administration
Sonargaon University

Declaration of student

This is to notify you that, the Thesis paper on **"Impact of Ukraine- Russia War in Supply Chain Management of Bangladesh: A Case Study on Auko-Tex Group"**, has been prepared as a part of my dissertation formalities. It is an obligatory part of my MBA-MSCM program to submit a thesis paper.

Moreover, I was inspired and instructed by my supervisor **Md. Masud Rana**, Assistant Professor, Faculty of Business, Sonargaon University.

I am further declaring that I did not submit this report anywhere for awarding any degree orcertificate.

Sincerely Yours

Md. Firoz Kaium Nawas
ID: MSCM 2202026003
Program: MBA
Major: MSCM
Semester: Summer-2023
Sonargaon University (SU)

Certificate of Supervisor

This is to certify that the Thesis report **"Impact of Ukraine-Russia War in Supply Chain Management of Bangladesh: A Case Study on Auko-Tex Group"** has been prepared as a part of completion of the MBA program from Department of Business Administration, Sonargaon University (SU), carried out by Md. Firoz Kaium Nawas, bearing ID: MSCM 2202026003 under my supervision. The report or the information will not be used for any other purposes.

Md. Masud Rana
Assistant Professor & Head Department
of Business Administration
Sonargaon University (SU)

Acknowledgment

In the beginning, I would like to convey my sincere appreciation to the Almighty God for giving me the strength and ability to finish the task.

I want to thank my academic supervisor **Md. Masud Rana**, Assistant Professor & Head, Faculty of Business, Sonargaon University, for providing me with all the necessary help for the completion of this report. I want to give the greatest thanks to her for guiding me as an advisor to start and complete this report successfully.

The opportunity I had with Auko-Tex Group is a great chance for deep learning and professional development. I consider myself a very lucky individual as I was provided with an opportunity to be a part of it. I am also grateful for having a chance to meet so many wonderful people and professionals who led me through this period.

I would like to express my deep sense of thankfulness to Mr. Ashim Kumar Ghosh, Deputy Director, Accounts & Supply Chain Department, Head Office, Auko-Tex Group for his enormous help and endless support throughout the dissertation period.

And last but not the least; thanks to all officers working at Auko-Tex Group.

The opportunity I had with Auko-Tex Group is a great chance for deep learning and professional development. I consider myself a very lucky individual as I was provided with an opportunity. I am also grateful for having a chance to meet so many wonderful people and professionals who led me through this period.

Abstract

This thesis paper aims to analyze the impact of the ongoing Ukraine-Russia war on the supply chain management of Bangladesh, with a specific focus on the case study of Auko-Tex Group. The study examines the challenges faced by the company due to the disruption in the global supply chain caused by the war and investigates the strategies employed by the company to overcome these challenges. The research methodology includes a mixed-methods approach, combining qualitative and quantitative data collection techniques such as interviews, surveys, and case studies. The findings of the study reveal the significant impact of the Ukraine-Russia war on the supply chain management of Auko-Tex Group and provide insights into the strategies that can be adopted by other companies to manage such disruptions effectively. The research contributes to the existing literature on supply chain management and provides practical recommendations for companies operating in similar contexts.

Table of Contents

Cover Page i
Cover Page ii
Letter of Transmittal iii
Declaration of student iv
Certificate of Supervisor v
Acknowledgment vi
Abstract vii
Table of Contents viii

CHAPTER 1 1
INTRODUCTION 1
1.1 Introduction 2
1.2 Background of the Study 2
1.3 Supply Chain Management 2
1.4 Functions 2
1.5 Justification of the Study 2
1.6 Objectives of the Study 3
1.7 Research Question 4-6

CHAPTER 2 7
LITERATURE REVIEW 7
2.1 Literature review 8-12

CHAPTER 3 13
ORGANIZATIONAL PROFILE 13
3.1 History of the Organization 14
3.2 Vision of the Organization 14
3.3 Mission of the Organization 14
3.4 Corporate value 14
3.5 Corporate Sustainability 15
3.6 Economic Sustainability 15
3.7 Mission of Economic Sustainability 16
3.8 Business Growth Roadmap 16
3.9 Research and Development (R&D) ----- 16

3.10 Home of Design…….17
3.11 Sample & Product Development ……17
3.12 Products of Auko-Tex Group ----------17
3.13 Valued Buyer ……..17
3.14 Corporate Vertical Setup……...18
3.15 Knit Department……..18
3.16 Dyeing Department……19
3.17 Fabrics Finishing Department……...20
3.18 Dyeing Lab……...20
3.19 Quality Testing Lab……20
3.20 Cutting Department……20
3.21 Printing Department ……..21
3.22 Embroidery Department……21
3.23 Sewing Department……22
3.24 Washing Department……22
3.25 Textile Quality Control Department ……23
3.26 Garments Quality Control Department……24
3.27 Product Gallery ……..24
3.28 Value Addition to Products ……...25
3.29 Certification……25-27
3.30 Training and Motivation……28
3.31 Best Practices of Economic Sustainability ……28
3.32 Future Plan for Economic Sustainability ----------28
3.33 Future Plan for Social Sustainability ……..29
3.34 Safety and Security Measures……30
3.35 Fire & Safety Setup……30
3.36 Safety Training & Orientation……...31
3.37 Safety Security ……...31
3.38 National Award & Recognition ……31
3.39 International Award & Recognition ……32
3.40 Estimated Visitors' Gallery……33
3.41 Board of Directors ……34
3.42 Sisters Concern……..35
Chapter 04 Data Collection, Analysis & Findings……36

4.1 Data Collection ……..37-41
4.2 Russia-Ukraine War……42
4.3 Bangladesh's Dependency on Russia-Ukraine ……..42
4.4 Impact and Mitigation strategies on Auko-Tex Group……43
4.5 Alternative Supplier……..43
4.6 Challenged faced……..43
4.7 Lesson Learned……43
4.8 Disruption in Supply Chain Management ……44
4.9 Increased Import Costs……44
4.10 Alternative Supplier Sourcing Difficulties ……...44
A. Analysis……45
B. Findings……..46-47
Chapter 05 Recommendation & Conclusion……..48
5.1 Recommendation……49-50
5.2 Conclusion……...51
Bibliography ……..52
Reference……...53
Books……..54

Chapter: 01

Introduction

1.1 Introduction:

The Ukraine-Russia conflict, which began in 2014, has had significant global ramifications, including its impact on supply chain management. Bangladesh, a developing country heavily dependent on imports, is not immune to this impact. Auko-Tex Group, a prominent manufacturer of Knit Garments & Textile in Bangladesh, is one such company that has been affected by the Ukraine-Russia conflict. This thesis aims to analyze the impact of the conflict on the supply chain management of Auko-Tex Group.

1.2 Background of the Study:

Bangladesh's economy is heavily reliant on imports, particularly of raw materials for manufacturing. As a result, any disruption in the global supply chain can have a significant impact on the country's industries. The Ukraine-Russia conflict has resulted in trade restrictions, particularly in the export of garments, which have had a ripple effect on Bangladesh's manufacturing industry. Auko-Tex Group, a leading garments & textiles manufacturer in Bangladesh, has been facing challenges in its supply chain due to this conflict.

1.3 Supply Chain Management:

Supply chain management (SCM) is a critical aspect of business operations, particularly in manufacturing. SCM involves the coordination and management of activities involved in the production and distribution of goods and services, from raw material procurement to the delivery of finished products to customers.

1.4 Functions:

The functions of SCM include procurement, production, inventory management, logistics, and customer service. SCM plays a crucial role in ensuring the timely delivery of goods to customers, optimizing inventory levels, and reducing costs.

1.5 Justification of the Study:

This thesis aims to fill the research gap by studying the impact of the Ukraine-Russia conflict on the supply chain management of Auko-Tex Group. The study is significant because it will provide insights into the challenges faced by Bangladeshi manufacturing companies due to the conflict, and the measures they can take to

mitigate these challenges.

1.6 Objectives of the Study:

The objectives of this study are to:

- Analyze the impact of the Ukraine-Russia conflict on the supply chain management of Auko-Tex Group.
- Identify the challenges faced by the company in its supply chain management due to the conflict.
- Evaluate the measures taken by the company to mitigate the impact of the conflict on its supply chain management.
- Provide recommendations for improving the supply chain management of Auko-Tex Group in the context of the Ukraine-Russia conflict.

1,7 Research Question:

The research question for this study is:

1. How much do you agree that the Russia-Ukraine War has affected the supply chain management in Bangladesh?

a) Strongly agree

b) Agree

c) Neutral

d) Disagree

e) Strongly disagree

2. To what extent has the Russia-Ukraine War affected the availability of raw materials in Bangladesh?

a) Very significantly

b) Somewhat significantly

c) Neutral

d) Not very significantly

e) Not at all Significantly

3. How much do you agree that the Russia-Ukraine War has caused an increase in transportation costs in Bangladesh?

a) Strongly agree

b) Agree

c) Neutral

d) Disagree

e) Strongly disagree

4. To what extent has the Russia-Ukraine War impacted the delivery times of goods in Bangladesh?

a) Very significantly

b) Somewhat significantly

c) Neutral

d) Not very significantly

e) Not at all Significantly

5. How much do you agree that the Russia-Ukraine War has led to an increase in the prices of goods in Bangladesh?

a) Strongly agree

b) Agree

c) Neutral

d) Disagree

e) Strongly disagree

6. To what extent has the Russia-Ukraine War impacted the reliability of suppliers in Bangladesh?

a) Very significantly

b) Somewhat significantly

c) Neutral

d) Not very significantly

e) Not at all Significantly

7. How much do you agree that the Russia-Ukraine War has forced businesses in Bangladesh to find alternative suppliers?

a) Strongly agree

b) Agree

c) Neutral

d) Disagree

e) Strongly disagree

8. To what extent has the Russia-Ukraine War impacted the overall business

operations of companies in Bangladesh?

a) Very significantly

b) Somewhat significantly

c) Neutral

d) Not very significantly

e) Not at all Significantly

9. How much do you agree that the Russia-Ukraine War has made it harder for companies in Bangladesh to compete in the global market?

a) Strongly agree

b) Agree

c) Neutral

d) Disagree

e) Strongly disagree

10. To what extent has the Russia-Ukraine War affected the demand for goods in Bangladesh?

a) Very significantly

b) Somewhat significantly

c) Neutral

d) Not very significantly

e) Not at all Significantly

Chapter: 02

Literature Review

2.1 Literature Review:

The beginning of the Russian military operation in Ukraine has had an impact on the world economy. Its impact is visible in Bangladesh as in other countries. The impact of the Russian invasion has been felt in many areas, including fuel, oil and gas. It has also affected the garment industry, one of the most important sectors in Bangladesh. Garment exports are getting stuck in private container depots (offdocks) in Chittagong due to the announcement of closure of shipments to Russia by big international shipping companies.

The Ukraine-Russia war, which began in 2014, has affected various countries and industries across the globe. One such industry is the supply chain management (SCM) of different countries, including Bangladesh. The purpose of this literature review is to examine the impact of the Ukraine-Russia war on the supply chain management of Bangladesh in Textile and Garments sector, with a specific focus on the case study of Auko-Tex Group.

2.2 Impact of Russia- Ukraine war on textiles & Garments sector:

The ongoing Russia-Ukraine war has started to have a heavy impact on garment shipments to Russia as export earnings are declining significantly from this promising market for Bangladeshi apparel goods. In the July-February period, earnings from garment export to Russia stood at $482.23 million, meaning that the average monthly earning was $60.15 million in the first eight months of the current fiscal year. However, the average monthly earning in the last three months between March and May from the Russian market declined significantly to $27.05 million, totaling $81.17million.Although apparel shipment earnings during the July-May period showcased a 4.32 per cent year-on-year growth to $562.40 billion, the amount was mainly against garments shipped before the start of the war.

In the July-May period of last fiscal year, earnings from apparel shipments to the Russian market stood at $539.10 million, according to data from the Export Promotion Bureau (EPB).Exporters said the shipments of garment items declined to Russia after the beginning of the war mainly for two important reasons.

Firstly, many goods-carrying ships were stuck in associated ports in the beginning of the war. Secondly, when the SWIFT ban against Russian banks came into effect, the

local exporters were in a quagmire as to how they could receive payments. As a result, they did not manufacture goods for future shipments, although work orders had been placed earlier. So, garment export to Russia is going through a downward trend over the last three to four months. However, the exporters are saying that shipments would rebound soon for the restoration of formal shipping channels and arrangements for local exporters to receive payments in Chinese currency. The local exporters appreciated payments in Chinese currency as it is helping them continue business with Russia.With the war running for the past five months, local garment exporters are still hopeful that shipments to Russia will rise because it had continued even during the war.

They are hopeful, going as far as even expecting the shipment figures to go up in the future as Russian retailers and brands have been placing work orders with Bangladeshi manufacturers while foreign retailers and brands had been leaving Russia for the SWIFT ban.

The local garment exporters said earnings from shipping apparel items to Russia was supposed to be grounded, as predicted by some people because of the outbreak of the Russia-Ukraine war that began on February 24 this year. Still, they are capable of making earnings from the shipments to Russia although the growth is declining every month.

For instance, Rajiv Chowdhury, managing director of Fatullah-based Young 4 Ever Textile, said he was able to receive $5 lakh as export payment from his Russia buyer but through an alternative route from Turkey. "Primarily with the breakout of the war, I was scared regarding the payment from the Russian buyer but finally the buyer paid me the amount from Turkey," he said. Until now, the Russian buyers had been interested in placing work orders to his factory but Rajiv remains very cautious regarding buyers from this nation as the war was still going on.

With the SWIFT ban, many local garment exporters have been receiving payments through alternative channels such as in Chinese currency. Chowdhury also said big buyers easily complete making payments through the alternative channels such as in Chinese currency but reaching shipments to the war zone had turned very risky. He

said every year he usually ships more than $1 million worth of knitwear items like t-shirts and polo shirts to Russia.

Shahidul Islam, managing director of Rupa Group, another exporter of knitwear items like sweaters, polo shirts and t shirts, has been very cautious in making shipments to Russia although he was determined to reach his goods in spite of the risks posed by the war. Usually, he ships knitwear items worth $2 million in a year. But reaching this annual figure apparently seems impossible within the six months left of the current year because of a slowdown in exports for the war, he said.

2.3 Mitigation Strategies:

Mohammad Hatem, executive president of the Bangladesh Knitwear Manufacturers and Exporters Association, still sees Russia as a very promising export destination as Russian buyers were getting habituated to paying through alternative channels such as in Chinese currency.

Moreover, the old export shipment routes of Russia have also been restored. For instance, currently, the local garment exporters can ship goods through the ports in Finland, Belarus and Hamburg.

The only route closed until now for shipment of goods to Russia is through Poland, he said. "We see Russia as a boon in spite of the ban," he said. "We are exporting in alternatively ways and receiving payments in alternative ways. Hope the export will rebound to Russia soon," said Faruque Hassan, president of the Bangladesh Garment Manufacturers and Exporters Association. Few work orders were put on hold and deferred and now the business is being restored gradually, he said. (Source: The Daily Star)

2.4 Impact of Ukraine-Russia War on Global Supply Chain Management:

The Ukraine-Russia war has disrupted global supply chains, affecting the flow of goods and services across the globe. The war has had a significant impact on the supply of raw materials, particularly in the raw cotton, specialized yarn, accessories, machinery & spares, fuel, gas for garments industries.

Impact of Ukraine-Russia War on Supply Chain Management of Bangladesh: Bangladesh heavily relies on imports for raw materials to produce various products. The Ukraine-Russia war has affected the import of raw materials such as fuel and gas, which has had a ripple effect on the country's industries, including the garments & textiles industry. The impact of the war on the supply chain management of Bangladesh can be seen in the case study of Auko-Tex Group. According to Auko-Tex Group (2017), the company had to face challenges in the procurement of raw materials and garments shipment due to the Ukraine-Russia war, which led to a shortage of raw materials, an increase in prices, and longer lead times.

Mitigation Strategies for the Impact of Ukraine-Russia War on Supply Chain Management:

To mitigate the impact of the Ukraine-Russia war on the supply chain management of Bangladesh, various strategies can be adopted. One such strategy is to diversify the sources of raw materials. Bangladesh can look for alternative sources of raw materials in another countries. Another strategy is to adopt lean principles in supply chain management. This would involve reducing waste, streamlining processes, and improving efficiency in the supply chain. According to Fahmy and Mousa (2017), lean principles can help to reduce lead times and improve the availability of raw materials.

The Ukraine-Russia war has had a significant impact on global supply chain management, including Bangladesh. The case study of Auko-Tex Group highlights the challenges faced by the country's industries in procuring raw materials due to the conflict. However, mitigation strategies such as diversifying sources of raw materials and adopting lean principles can help to mitigate the impact of the war on the supply chain management of Bangladesh.

2.5 References:

The Daily Star, BGMEA, BKMEA, Export Promotion Bureau (EPB).

Fahmy, H., & Mousa, W. (2017). Lean supply chain management: A literature review. Journal of Industrial Engineering and Management, 10(2), 373-397. doi:10.3926/jiem.2342

Higginbottom, T. (2019). The Impact of the Ukraine-Russia Conflict on Global Supply Chains. Retrieved from https://www.chathamhouse.org/2019/02/impact-ukraine-russia-conflict-global-supply-chains

The ongoing conflict between Ukraine and Russia has had a significant impact on the global supply chain. Bangladesh, which is a major exporter of goods to both countries, has been affected by the conflict. Auko-Tex Group is one of the companies that have been impacted by the conflict, with its supply chain being disrupted. To mitigate the impact of the conflict on its supply chain, Auko-Tex Group can explore various solutions, such as diversifying its supply chain and exploring new markets for its products.

Chapter: 03

Organization Profile

3.1 History of the Organization:

Auko-Tex Ltd and Yasin Knittex Ind. Ltd sister concerns of AUKO-TEX GROUP are 100% Export-Oriented Knit Composite Garment Manufacturing conglomerate established in 2002. In this period of time, Auko-Tex Group is blessed with 5 sister concerns. We are based on 3 pillars of Sustainability: 01) Economic (Progress), 02) Environmental (Planet) and 03) Social Sustainability (People). Since its inception in 2003, Auko-Tex Group has exported over US$ 560 million in total while US$ 57.4 million was exported in 2022 with 5000 workforces.

3.2 Vision of the Organization:

Become the most preferred Knit Textile and Garment manufacturer for global clothing companies with the philosophy of corporate sustainability.

3.3 Mission of the Organization:

To stay ahead of the fast-paced fashion industry by:

➢ Offering trendsetting knit garments to the global market

➢ Being innovative, cost-effective and globally competitive

➢ Ensuring in-time delivery with the right quality

➢ Providing opportunities for growth for all stakeholders and improving people's lives.

➢ Committing cleaner and greener environment caring for people, the planet & profit Create opportunities for the Professional Growth of Our People.

3.4 Corporate Values:

➢ Fostering Innovation Research & Development is at the heart of everything we do. Innovation is what we always strive for Trend-setting fashion and cost-effective products are its outcomes.

➢ Keeping Promises Everything we produce meets the required quality and agreed lead time.

➢ Committing Ethical Business Integrity & Honesty are our principles to ensure

ethical business. Being fair to customers, suppliers, and employees and also reducing environmental degradation.

➢ Customer Satisfaction Innovative and quality products; at fair prices and on-time delivery through dedicated team efforts; are key to satisfying our customers.

3.5 Corporate Sustainability:

A trending movement reconciling corporate sustainability is gaining worldwide attention. It is built on the integration of three alternative approaches to viewing sustainability – Economic, Social and Environment. Based on the vision, commitment, leadership and comprehensive system, Corporate Sustainability has become invaluable for exploring ways to reduce costs, manage risks, create new products, and drive fundamental internal changes. The Auko-Tex Group has remained steadfast for over 20 years with the same philosophy.

❑ Its CS department extracts findings from the company's operations and other idea practices at home & abroad and advocates required measures.

❑ CS Department also keeps sharp observations on our:

A) Backward Linkage setup from knitting to finishing

B) Forward Linkage from idea conception, R&D, Fashion Design to Sample Preparation and

C) Supporting Departments from HR, Training, Admin, Accounts, IT, Cost-Control to Marketing & Merchandising.

❑ Moreover, CS Department is involved in Research on national and international perspectives, constant surveys on raw materials, the latest machines/technologies & concepts of the latest corporate management and advocates proper measures in terms of all three pillars. Thus ATG moves on with continuous improvement programs.

3.6 Economic Sustainability:

Auko-Tex Group believes in its Economic Sustainability by using its own resources efficiently and responsibly so that businesses can operate in a sustainable manner to consistently produce an operational profit. It allows us to scrutinize overall business functions – specifically, where we are wasting time, effort and money. Economic Sustainability refers to practices that support long-term economic progress without negatively impacting social, environmental and cultural aspects of the community.

3.7 Mission of Economic Sustainability:

➢ Efficient resource management and conservation practices.
➢ Promote inclusive and sustainable economic growth.
➢ Ensure equitable distribution of economic opportunities and benefits.
➢ Encourage financial stability and resilience.
➢ Advocate for social justice and equality in economic systems.
➢ Drive sustainable innovation and technological advancements.
➢ Support ethical and responsible business practices.
➢ Empower communities and promote local economic development.
➢ Reduce income inequality and alleviate poverty.
➢ Engage stakeholders and foster partnerships for economic sustainability.
➢ Consider long-term impacts and future generations in decision-making

3.8 Business Growth Roadmap:

Our achievements and sustainability efforts are the culmination of visionary management, a sense of responsibility towards society and the environment, and a strong ability to adapt to new technologies and changes. Since establishment, it has experienced consistent growth in terms of exports and revenue. In order to maintain and achieve our growth target, Auko-Tex Group has devised a five-year plan for sustainable business growth, aiming for an annual growth rate of 10-15%

3.9 Research and Development (R&D):

R&D department consists of seasoned professionals in fashion design, knitting, dyeing, washing & textile engineering. We constantly participate in national and international events, carry out market research and leverage our expertise to create cost-effective and sustainable products. The team blends the ideas of both experienced and younger to develop newness of fabrics, structures, designs and styles.

3.10 Home of Design:

We are committed to offering customized services to our valued business partners. We have a dedicated team of highly innovative and creative experts in our Fashion Design Department, Product Development Department, and R&D. Our state-of-the-art Laboratory and Design Studios enable us to produce unique designs where the success rate is over 65%.

3.11 Sample & Product Development:

We collaborate with buyers, fashion designers, and R&D experts to bring forth physical products that showcase innovative styles and ideas. Our highly skilled team, utilizing state-of-the-art CAD-CAM technology, is dedicated to crafting competitive offerings. As we strive to develop impeccable styles, we embrace the opportunity to challenge conventions and explore through trial and error. We acknowledge that permanent styles have no fixed formula, and thus, we remain committed to a process of ongoing refinement.

3.12 Our Products:

T-shirts, Polo-shirts, Tank Top & Vest, Sweatshirt & Hoodie, Shorts & Leggings, Short & Long Dress, Nightwear, Activewear, Knit Blazer and Boxer are produced with different types of knitted fabrics including S/J, Lycra-Jersey, Drop needle S/J, Plaited S/J, Plain Rib, Design Rib, Interlock, pique, Lacoste, Terry, Fleece, Y/D Stripes, etc.

3.13 Our Valued Buyer:

Auko-Tex Group believes in win-win deals. Our every step is strictly based on the mutual interests of all Stakeholders. We devote ourselves to ensuring Quality, Competitive Prices and Newness to the Product which help us get customers satisfaction. Over the business journey of the last 21 years, Auko-Tex Group has now a number of esteemed Buyers from all over the world mainly as GERRY

WEBER, UNITED COLORS OF BENETON, SPRINGFIELD, CELLIO, ETAM, LERROS, MARC O'POLO, TESCO, REGATTA, CRAGHOPPERS, F&F, BESTSELLER, JACK & JONES, ONLY, SELECTED, NAME IT, VERO MODA, PRODUKT, US POLO ASSN, MARK'S, WOODS, RIPZONE, TORAY etc.

3.14 Corporate Vertical Setup:

Auko-Tex Group is a vertically integrated Knit Manufacturing set-up starting from Knitting, Dyeing, Fabric Finishing, Cutting, Printing, Embroidery, Sewing, Garments Washing, Garments Finishing & Packing supported by Certified Laboratory, Fashion Design Studio, R&D, Product Development as well as skilled workforce. From the inspiration of a design to a finished garment product, every process is done in-house.

3.15 Knit Department:

In Knitting Department, we knit the foundation of our bondage among Buyers, Suppliers and Us with intangible loops, because when we knit a piece of fabric, we knit our relationship tight. Our advanced & environment-friendly Circular and Flat knit machines are the keys to producing cost-effective fabrics like varieties of Single Jersey with Cotton/ CVC/ PC/ Injected/ Siro/ Tri-blended/ Nappy/ 100% Polyester/ Viscose/ Modal Yarn and varieties of Pique, Lacoste, French Terry, Loop-back Fleece, Various types of Rib: 1x1, 2x1, Variegated, Waffle, Mash, Dropped Needle, Spandex, Plain & Separation Interlock, Plaited, Double face, Yarn Dyed, Fancy Design Fabrics and different types of Collar Cuff, Neck & Bottom, etc. This Section produces 24500 kg of fabrics per day.



3.16 Dyeing Department:

Our automated energy-efficient and eco-friendly machines, trained hands with passion, colors and dyes- all are blended here and ultimately greige fabric starts shining taking the image of the fashion industry's fabrics- all knitted structures on 100% Cotton/ Viscose/ Modal/ Nylon/ CVC/ PC/ Linen & Blend with Cotton or Polyester and so on get live here. Our Dyeing Department has been going through ceaseless modernization to meet market requirements with competitive manufacturing processes in terms of Price, Quality, Lead-time and Continuous Innovation. At present, Daily Production Capacity of Dyeing Department is 16000 kg.



3.17 Fabrics Finishing:

We produce high-quality finished products with a finishing range of Peach (Carbon/ Sueding), Brush, Semi-Mercerize, Wicking, Anti-Microbial, Dirt-Repellent, Flame-Retardant, Hydrophilic Moisture Mgt Finish, UV Protect, Water Repellent etc.

3.18 Dyeing Laboratory:

Our highly equipped Dyeing Laboratory with trained people from home and abroad does computerized color measurements, dyeing recipe formulations, R&D works on dyes/chemicals/auxiliaries for quality improvement & cost minimization resulting in reduction of environmental pollution. Besides doing tests for chemicals, dyes and auxiliaries, 30 lab dips are developed by our Laboratory per day.

3.19 Quality Testing Laboratory:

Sophisticated testing facilities ensure all kinds of required tests of the fabrics and garments with 100% precision- the testing facilities include Color Fastness, Light, Rubbing, Perspiration as well as Pull test, Dimensional Stability, Bursting, Pilling, etc. Each day, Quality Control Laboratory carries out 200 tests of those.

3.20 Cutting Department:

With technical support from advanced CAD-CAM Machines, Auto Fabric Spreaders, Auto Fabric Cutter controlled by the latest software and highly experienced technical persons with their caring hands, our Cutting Department is able to provide cutting support for 90000 pcs daily ensuring optimum fabric utilization with required measurement and shape.



3.21 Printing Department:

In two floors measuring 35000sq feet area, our Printing Department is comprised of Computerized Auto Print, Table Print, Heat Press and Sublimation Printing Machines. Our Energy Saving Machines take care of every drop of colors extracting our zeal of vogue and ultimately all the colors of rainbow smile up on the canvas of our products: Pigment, Discharge, Plastisol, Rubber, High Density, Puff, Velvet, Foil, Flock, Jell, Glitter, Crack, Heat Transfer, Burnout, Sublimation, etc. With passionate and skillful hands, we can print 75000 sets per day.

3.22 Embroidery Department:

Through embroidery on our garments, our latest state-of-the-art machines along with craftsmanship of passionate workers create masterpieces. We engrave our thoughts and imaginations with every stitch to wave out the best in us for our clients on products of Embroidery: Sequin, Chain Stitch, Cross Stitch, High Density, Puff Stitch, Felt Applique, Zigzag Stitch, Coil Stitch, Stipple, etc. Our four MultiHeaded Computerized Embroidery Machines, TAJIMA from Japan, can stitch 12000 pcs per day.



3.23 Sewing Department:

Sewing requires passion, creativity, soul's satisfaction and Maneuvers from highly Advanced Cost-Effective Machines & Equipment like Energy Saving Bulbs, Servo-Motors & Thread Trimmers, etc. Our highly trained operators with great thirsts are continuously pouring out their sewing craftsmanship & artistry as the bobbin of our efforts never ends. In 55 lines with 1524 machines, we produce 85000 pcs of complete garments daily.



3.24 Washing Department:

We have poured out all its efforts to make a proficient Washing Department backed by Power Saving Modern Equipment. Our Washing Department is capable of washing 30,000 pcs of garments per day. We offer our valued buyers a Wide Range of Basic, Semi-Basic and Fancy Garment Dyeing and Washes: ❑ Garment Dyeing of Pigment, Neon, Cool, Thermal, Weave, Tie, Deep, Indigo, Reactive, Direct, Pigment Spray, Towel Dyeing, etc. ❑ Garment Wash of Silicone, Enzyme, Vintage, Stone, Burnout, Towel Bleach, Snow, Indigo, Machine Acid, Spray Acid, Crinkle, Bleach, Rain and Milky Wash etc.



3.25 Textile Quality Control Department:

Quality is an abstract idea. Quality needs to be addressed from the very beginning at the textile level because “Prevention is better than Cure”. Quality of products never comes only from quality material or sophisticated machines or latest technology or creativity or passionate work or relentless supervision rather quality comes from the combination of all as mentioned above.

❑ In terms of quality control, each Department acts as the customer to its previous Department while receiving goods/products and acts as a supplier while delivering to the next departments in the whole supply chain.

❑ Check Quality in 3 to 4 steps starting from Perfect Sourcing, Compliant Storing, Superb Knitting, Precise Batching, Finding Accuracy in Laboratory, Exact Dyeing and Refined Washing.

3.26 Garments Quality Control Department:

Our Quality Control Department for Garments Department is a separate entity supervised by Top Management and out of influence from other departments. Comprise of 500 Quality Inspectors and 100 Quality Staff & Officers, our Quality Team keep eyes & inspect the products giving top priority to buyer's requirements for Total Quality Management.

❑ With double checking on the whole quality processes, Quality Department looks after the interest of our buyers and consequently maintains the interest of the Group.

❑ Check Quality in 3 to 4 steps starting from Precise Cutting, Artistry of Sewing, Printing with Majesty Fabulous Embroidery & finally in Finishing Touch.

3.27 Product Gallery:

Our Products' Gallery is a place where Creativity and Science Embrace Each Other. Our 2 floors are very spaciously designed with excellence of interior decoration to display our samples categorically. Our clients can see our products from far away with the facility of Video Conference / Meeting Arrangement as available here at Product Display Center.



3.28 Value Addition to Products:

Auko-Tex Group takes pride in its wide range of knit products, encompassing various options in yarn type, knitting structure, fabric treatment, printing, embroidery, garment style, dyeing, and washing. With complete vertical integration, we ensure excellence at every stage, delivering exceptional products that serve as effective marketing tools to captivate and exceed expectations. Trust us to elevate your brand.

3.29 Certification:

ACCORD:

Since its inception, Auko-Tex Ltd has been matching with the standards of safety and security at a very high level of national and international standards.

- ❑ Auko-Tex Ltd has customized its standards a little to match the criteria of ACCORD in terms of fire, electrical and building safety measures.
- ❑ ACCORD Bangladesh awarded Auko-Tex Limited with Letter of Recognition on 28 August 2016.
- ❑ ACCORD Bangladesh also awarded Yasin Knittex Industries Ltd with Letter of Recognition on 11 January 2017 for the Implementation of their recommendations.

BUSINESS SOCIAL COMPLIANCE INITIATIVE (BSCI):

- ❑ Auko-Tex Group joined Business Social Compliance Initiatives (BSCI) as a Member since 2013. Involvement in BSCI has an important role in ceaseless expertise development of Auko-Tex Group.
- ❑ BSCI is based on 11 principles in conformity with ILO and UNO about social, environmental & ethical issues.
- ❑ It deals with workers' right, fair remuneration, workers health and safety, discrimination & working hours.

SUPPLIER ETHICAL DATA EXCHANGE (SEDEX) :

❑ Sedex, a membership organization, is dedicated to driving improvements in ethical and responsible business practices in global supply chains. Its aim is to secure an online database and share ethical supply chain data so that brands and retailers can see how their suppliers are meeting their social and ethical responsibilities.

❑ Auko-Tex Group joined Sedex in 2016.

WORLDWIDE RESPONSIBLE ACCREDITED PRODUCTION (WRAP) :

❑ ATG joined WRAP since 2013 as a certified member with regular audits.

❑ WRAP's 12 principles are based on generally accepted international standards of workplace, local laws and workplace regulations focusing on apparel, footwear and sewn product sector.

❑ Yasin Knittex Ind. Ltd., a concern of ATG, received Gold Certificate in 2018 & 2019 and has now been pursuing Platinum Certificate as the highest-ranked Certificate given by WRAP.

UNITED NATIONS GLOBAL COMPACT (UNGC) :

❑ Auko-Tex Group achieved UNGC Membership in April 22, 2013. It is focused on 10 principles on

A) Human rights

B) Social sustainability

C) Environment and

D) Anti-corruption.

❑ From 2015, UNGC has also adopted 17 UN Sustainable Global Goals (SDGs) to be addressed in the next 15 years up to 2030.

❑ ATG is committed to UNGC for continuously following and implementing their Principles and SDGs.

ENERGY EFFICIENCY PROGRAM WITH GIZ:

❑ Yasin Knittex Ind. Ltd, a sister concern of ATG, joined in Energy Efficiency Program in September 2013.

❑ Local and international experts worked to identify energy efficiency measures of Auko-Tex Group, and employees were trained to improve their skills to ensure autonomous improvement measures with reduced effects on the environment.

❑ ATG improved its energy efficiency by recovering heat from hot water and air, enhancing boilers' efficiency, maintaining steam traps and insulating equipment and tanks.

OHSAS 18001:2007:

❑ In the same year 2016, Auko-Tex Group also received Certificate for Occupational Health and Safety (OHSAS 18001).

❑ OHSAS is recognized as the de-facto international specification for occupational health and safety management in all industries and geographical sectors.

OEKO-TEX 100 CERTIFICATES (TEXTILES & GARMENTS):

❑ ATG has been following the standards of OEKO-TEX 100 Certificates by using prescribed standard chemicals, dyes, auxiliaries & yarns and checking their results time to time from prescribed laboratory.

❑ Since 2011 ATG has been getting these two certificates for dyeing and printing.

❑ ATG got Washing & Garments Certifications at 2021.

3.30 Training & Motivation:

❑ Induction, orientation, motivation and training are regular culture of Auko-Tex Group.

❑ Auko-Tex Group organizes need-based training for its workers, staffs and officials depending on gap analysis, skill matrix and HR reports. Besides, staffs & officers participate training programs outside the factory and abroad.

❑ Participation in these different types of training programs have enhanced modern vision of management and strengthened technical know-how of our team members.

3.31 BEST PRACTICES OF ECONOMIC SUSTAINABILITY:

➢ Yearly Profit Sharing with the Workers.

➢ Contributory Provident Fund for the Staffs and Officers.

➢ Attendance Bonus for Workers.

➢ Paying stipend to the talented Sons/Daughters of the Employees.

➢ Birthday Greetings with Token Gifts for all Employees.

➢ Special Gifts for all Employees in addition to Religious Festival Bonus.

➢ Dormitory Facilities for Staffs.

➢ Provision of Health Insurance for all beyond Law.

3.32 FUTURE PLAN FOR ECONOMIC SUSTAINABILITY:

➢ Use of Treated ETP Water for Toilet Flushing, Gardening and Agro-Firm.

➢ Renewable energy project

➢ Implementation of ERP System (Paperless)

➢ Implementation of Renewable Energy generation to 10% (180KW)

3.33 FUTURE PLAN FOR SOCIAL SUSTAINABILITY:

Our journey to the Future is designed with lots of endeavors. We have clustered our future programs in three dimensions for society, environment and economic. Our satisfaction is not on the border of a particular need rather we like to go deeper beyond fundamental needs. Our programs for the future are adding every moment whenever any idea of needs peeps into our mind or necessity.

1. Establishing Training Center: We cherish establishing a Training Center to teach female folk about garment manufacturing so that the female community can contribute to the Auko-Tex Group as well as in the RMG sector in other factories. This will elevate the underprivileged female community to stand on their own.

2. Accommodation for Workers & Staff: Accommodation is one of the key problems for garment workers and staff. Keeping that in mind, We have plans to arrange separate/ independent housing facilities for staff and workers as a welfare scheme in the near future.

3. Fire Station: Auko-Tex Group has a plan to establish a privately owned fire station with all modern facilities and manpower nearby the factory. Our Fire Station will not only work for us but also will help other garments and textiles whenever the necessity arises.

5. Expansion of Health Care: Expansion of Health Care for the workers, staff & outside community.

- ➢ Purchase of Digital X–Ray machine.
- ➢ Processed Canned Fish and 500 gm packet of milk every day.
- ➢ Establishment of a General Hospital with 500 Beds at Kanaipur, Faridpur.

3.34 SAFETY & SECURITY MEASURES:

❑ Fire Safety: We maintain full safety measures against fire incidents. This includes First Aid Fire Appliances, Fire Hydrant System with 13 lacs liter of Reserved Water, Smoke Detection System, Sprinkler System, Fire Alarm System with central monitoring system maintained by Fire Section with highly trained fire crews.

❑ Electrical Safety: We maintain ACCORD and all other recognized standards for Electrical Safety, meeting all legal requirements.

❑ Building Safety: Our building safety measures are ACCORD recognized. We are continuously maintaining it as per all legal and Building code requirements with all test parameters.

❑ Cargo Safety: We ensure Cargo Safety by following a system from receiving covered van, checking (7 points checking system), loading, closing, locking, dispatching with escort through fixed route, vehicle tracking system and finally monitoring for safe reaching at the destination.

❑ Security: We have a large team of trained security personnel with round the clock security watching, physical checking at the entrance by male & female security checkers and 24 hours' CCTV coverage of whole campus. All safety security measures are also regularly checked and ensured by an experienced team. Overall security and safety are also monitored by another team of all level officials on daily roster basis.

❑ Emergency Safety: To facilitate any emergency evacuation or any rescue operation, all factory buildings are interconnected with baily bridges-floor to floor, roof top to roof top.

3.35 FIRE & SAFETY SETUP:

A comprehensive plan with all sorts of modern machines and equipment is taken to face any unexpected fire or safety issue. A modern hydrant system has been introduced along with half a million liter of water reserved. This hydrant system is connected with auto generator and is automatically kicked off in case main generator line is switched off. In addition, another stand-by diesel generator is also in place for requirement of water to be pumped.

3.35 SAFETY TRAINING & ORIENTATION:

To fight the fire or any accident, our Fire Fighters are deputed round the clock with all necessary equipment to respond very fast. Fire Fighters are trained nationally and internationally. Besides, Fire Team regularly organizes academic as well as practical training inside the Factory premises 3/4 days per week.

3.36 SAFETY SECURITY:

❑ We maintain a large team of trained security personnel who provide round-the-clock surveillance. At the entrance, both male and female security checkers perform physical inspections, and our entire campus is under constant CCTV coverage. Our experienced team regularly checks and ensures the effectiveness of all safety and security measures. Additionally, we have a team of officials at all levels who monitor and oversee the overall security and safety on a daily basis according to a rotational roster.

3.37 Certification:

M (C-TPAT) SUPPLIER ETHICAL DATA EXCHANGE (SEDEX)
HIGG INDEX UNITED NATIONS GLOBAL COMPACT (UNGC)
ACCORD
WORLDWIDE RESPONSIBLE ACCREDITED PRODUCTION (WRAP)
WATER FOOT - PRINT NETWORK
GLOBAL ORGANIC TEXTILE STANDARD (GOTS)
ORGANIC TRADE ASSOCIATION (OTA)
RECYCLED CLAIM STANDARD (RCS)
GLOBAL RECYCLE STANDARD (GRS)
CLEANER PRODUCTION (CP)
PARTNERSHIP FOR CLEANER TEXTILE (PACT-01, PACT-02)
ORGANIC CONTENT STANDARD (OCS)
OEKO - TEX 100 CERTIFICATES (PRINTING & DYEING)
OHSAS 18001: 2007

ZERO DISCHARGE OF HAZARDOUS CHEMICALS (ZDHC)
BETTER WORK BANGLADESH (BWB)

3.38 National Award & Recognition:

Honorable Managing Director, Abdus Sobhan, was awarded recognition as a Commercially Important Person (CIP) by Bangladesh Government for his contribution to the field of Economy, Society and Environment for consecutive 04 years (2013 to 2016) and 2023 & National Productivity & Quality Excellence Award 2017. He was also endowed with the country's highest recognition "President's Award for Industrial Development 2016 & 2017" in the small category for his significant contribution to the economy of the country.

3.39 INTERNATIONAL AWARDS & RECOGNITIONS:

❑ International Quality Crown Award in London 2014: AUKO-TEX GROUP had been selected to receive the International Quality Crown (IQC) Award in the Gold category in London, UK on Nov 30th, 2014 to recognize the contribution in terms of Leadership, Quality and Excellence.

❑ Platinum Winner Social Compliance (Innovative Initiative): Yasin Knittex Ind. Ltd 2nd Social and Environmental Excellence award-2014.

❑ ACCORD has awarded Auko-Tex Limited with a Letter of Recognition on 28 August 2016 and Yasin Knittex Industries Ltd on 11 January 2017 for fulfilling necessary recommendations.

❑ Yasin Knittex Industries Ltd is awarded RMG Times Best Practice Award-2019-2020 for creating a positive impact on workers' living standards & Society.

❑ ESQR also awarded Auko-Tex Group "European Award For Best Practices 2016" in Brussels in Belgium.

3.40 ESTEEMED VISITORS' GALLERY:

❑ H.E. Ms Hanne Fugl Eskjaer, Danish Ambassador visited Auko-Tex Group on 12th February 2015.

❑ Mr. Anders Holch Povisen, Chief Executive Officer, Bestseller visited Auko-Tex Group on 18th March 2015.

❑ Ms Mary Porter Peschka, Director of the Cross-Cutting Advisory Solutions Department, IFC visited us on 18th June 2015.

❑ Mr. Dan Jorgensen, Hon'ble Minister for Dev Cooperation & Global Climate Policy of Royal Danish Govt visited Auko-Tex Group on 14th June 2023.

❑ H.E. Ms. E.M.J Ploumen, Minister for Foreign Trade & Development Corporation, the Kingdom of Netherlands on 19th Feb 2014.

❑ On 18th March 2015, H. E Mr. Mogens Jenson, The Danish Minister for Trade & Development Cooperation visited this Factory.

❑ On 18th January, 2016 H. E Mr. Jorn Neergaard Larsen, Hon'ble Minister for Employment, The Kingdom of Denmark visited the Factory.

❑ H.R.H Ms. Mary Elizabeth, The crown Princes & H.E Ms. Ulla Tørnæs of The Kingdom of Denmark on 6 th April, 2017

3.39 Board of Directors:



Engr. Abdus Sobhan
Managing Director
Auko-Tex Group

3.40 Sister Concerns of Auko-Tex Group:

Under the umbrella of Auko-Tex Group of Industries there are 6 companies. All over the world it has a quality brand value. The vast description of different companies of Auko-Tex are given below-

1. AUKO-TEX LTD.
2. EQUITEX ASSURANCE.
3. YASIN KNITTEX IND. LTD.
4. EQUITEX ACCESSORIES LTD.
5. SAJID PROPERTIES LTD.
6. EQUI-TEX SOURCING (UK) LTD.

Chapter: 04

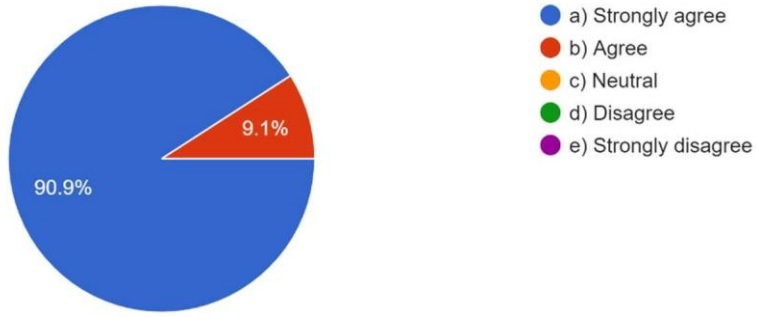
Data Collection, Analysis &Findings

4.1 Data Collection:

I conduct a survey task with 10 questions on a google form to prepare a thesis paper. There, experts of supply chain working in different institutions of Bangladesh gave their opinion. Based on their information the following section discusses.

1. How much do you agree that the Russia-Ukraine War has affected the supply chain management in Bangladesh?

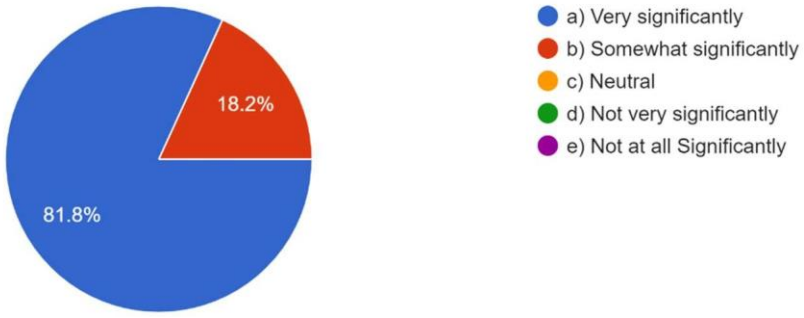
11 responses



a) Strongly agree	**90.90%**
b) Agree	**9.10%**

2. To what extent has the Russia-Ukraine War affected the availability of raw materials in Bangladesh?

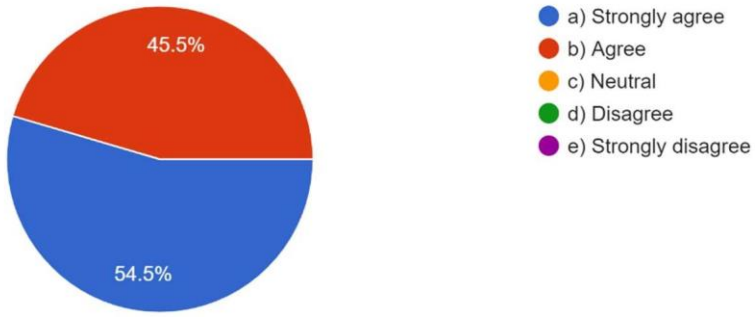
11 responses



a) Very significantly	**81.80%**
b) Somewhat significantly	**18.20%**

3. How much do you agree that the Russia-Ukraine War has caused an increase in transportation costs in Bangladesh?

11 responses

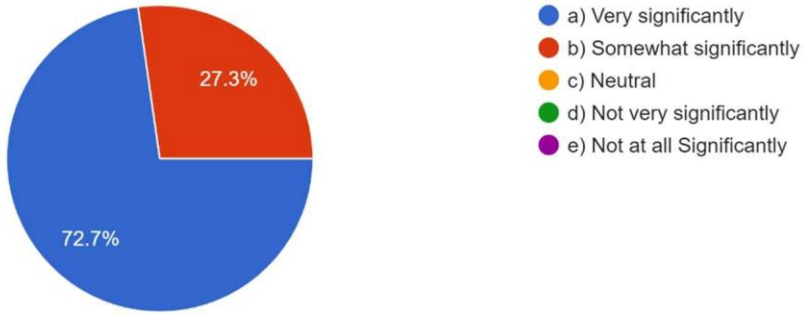


a) Strongly agree **54.50%**

b) Agree **45.50%**

4. To what extent has the Russia-Ukraine War impacted the delivery times of goods in Bangladesh?

11 responses

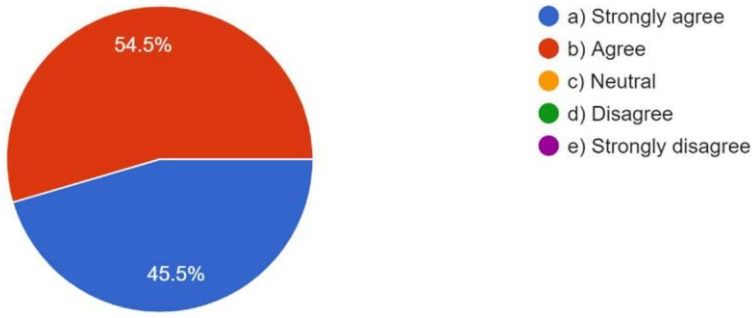


a) Very significantly **72.70%**

b) Somewhat significantly **27.30%**

5. How much do you agree that the Russia-Ukraine War has led to an increase in the prices of goods in Bangladesh?

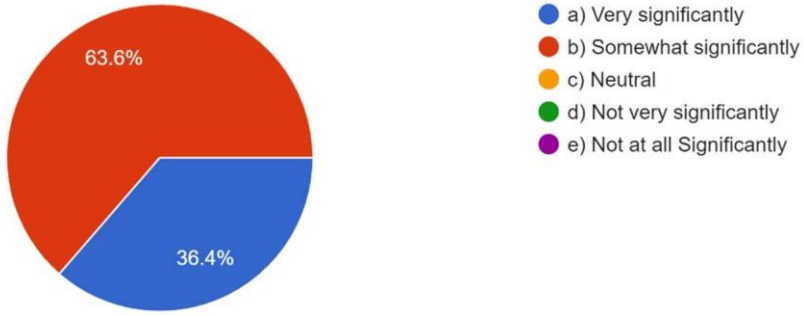
11 responses



a) Strongly agree **45.50%**
b) Agree **54.50%**

6. To what extent has the Russia-Ukraine War impacted the reliability of suppliers in Bangladesh?

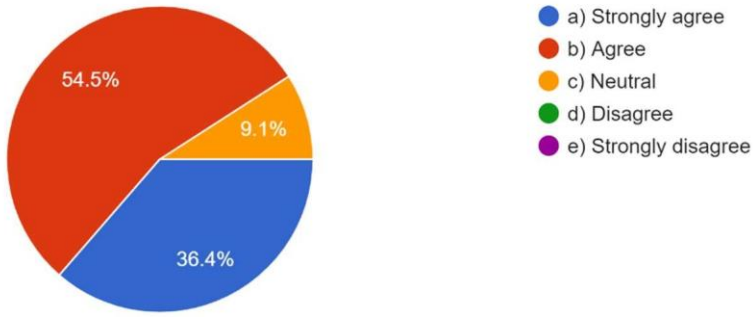
11 responses



a) Very significantly **36.40%**
b) Somewhat significantly **63.60%**

7. How much do you agree that the Russia-Ukraine War has forced businesses in Bangladesh to find alternative suppliers?

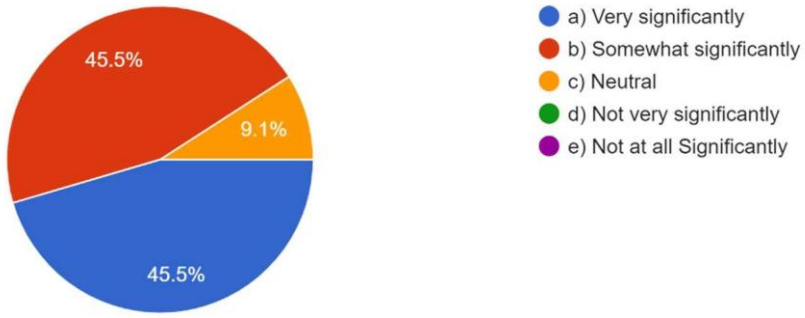
11 responses



a) Strongly agree	**36.40%**
b) Agree	**54.50%**
c) Neutral	**9.10%**

8. To what extent has the Russia-Ukraine War impacted the overall business operations of companies in Bangladesh?

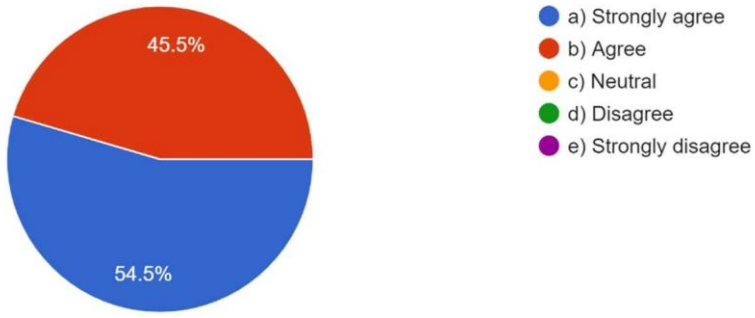
11 responses



a) Very significantly	**45.50%**
b) Somewhat significantly	**45.50%**
c) Neutral	**9.10%**

9. How much do you agree that the Russia-Ukraine War has made it harder for companies in Bangladesh to compete in the global market?

11 responses

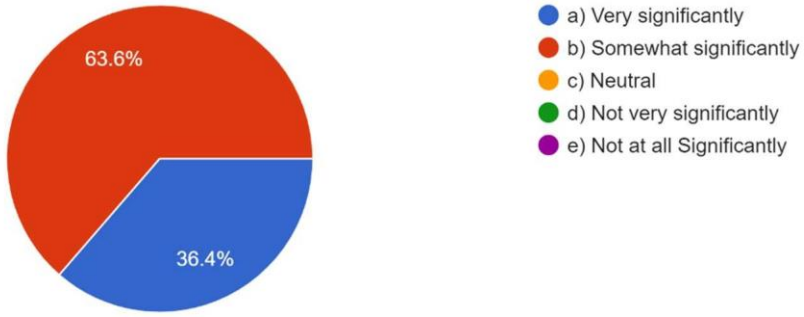


a) Strongly agree **54.50%**

b) Agree **45.50%**

10. To what extent has the Russia-Ukraine War affected the demand for goods in Bangladesh?

11 responses



a) Very significantly **36.40%**

b) Somewhat significantly **63.60%**

4.2 Impact of the war:

The Ukraine-Russia war has had a significant impact on the global supply chain management system. Bangladesh, being a developing country with a growing economy, is no exception. This case study focuses on the impact of the Ukraine-Russia war on the supply chain management system of Auko-Tex Group, one of the leading manufacturers in Bangladesh. The following are the ten main points that illustrate the impact of the war on the company's supply chain management. Briefly introduce the case study and the relevance of studying the impact of the Ukraine-Russia war on the supply chain management of Auko-Tex Group.

Auko-Tex Group is a leading conglomerate in Bangladesh, with diverse business interests, including textiles and apparel, cement, consumer goods, and trading. The group has a significant presence in the textile and apparel industry, with state-of-the-art production facilities and a wide range of product offerings. Auko-Tex Group has a strong focus on sustainability and social responsibility and has been recognized globally for its efforts in these areas.

4.3 The Ukraine-Russia War

The Ukraine-Russia war began in 2014, and it has been ongoing, with intermittent ceasefires and escalations. The conflict started when Russia annexed Crimea, and it has since spread to other parts of Ukraine. The war has had significant geopolitical and economic impacts, affecting global supply chains and trade.

4.4 Bangladesh's Dependence on Ukrainian Imports

Bangladesh heavily relies on Ukrainian import-exports, particularly in the textile and apparel industry. Ukraine is one of the largest suppliers of cotton, a key raw material for the industry. Bangladesh also imports fertilizer, which is essential for cotton cultivation. The disruption in Ukrainian exports due to the war has had a significant impact on the textile and apparel industry in Bangladesh.

4.5 Impact on Auko-Tex Group's Supply Chain

Auko-Tex Group has been significantly impacted by the Ukraine-Russia war. The group's supply chain has been disrupted due to the shortage of raw materials and ncreased import costs and garments shipment also. The delays in delivery have also affected production schedules and customer demand. The increased inventory costs have also put pressure on the group's financial performance.

Mitigation Strategies:

Auko-Tex Group has implemented several mitigation strategies to address the impact of the Ukraine-Russia war on its supply chain. The group has explored alternative suppliers and diversified its supply chain. It has also renegotiated contracts with existing suppliers and collaborated with other industry players to share resources and knowledge.

4.6 Alternative Suppliers

Auko-Tex Group has identified alternative suppliers for raw materials and other inputs. The group has explored suppliers from other countries, such as Turkey, Finland, and Poland. It has also explored the possibility of sourcing raw materials locally.

4.7 Challenges Faced by Auko-Tex Group

Auko-Tex Group has faced several challenges in addressing the impact of the Ukraine- Russia war on its supply chain. The group has struggled to find alternative suppliers who can meet its quality and quantity requirements. The increased costs of importing raw materials have also affected the group's financial performance.

4.8 Lessons Learned

Meghna Group has learned several lessons from the Ukraine-Russia war's impact on its supply chain. The group has realized the importance of diversifying its supply chain and exploring alternative suppliers. It has also recognized the need for greater collaboration with other industry players and the government to address supply chain disruptions.

4.9 Disruption in Raw Material Supply

The disruption in Ukrainian exports has led to a shortage of raw materials, affecting Auko-Tex Group's supply chain. The group has had to explore alternative suppliers and diversify its supply chain to mitigate the impact of the disruption.

4.10 Increased Import Costs

The disruption in Ukrainian exports has also led to increased import costs for the Auko-Tex Group. The group has had to renegotiate contracts with existing suppliers and explore alternative suppliers to reduce the impact of the increased costs on its financial performance.

4.11 Difficulty in Finding Alternative Suppliers

Finding alternative suppliers who can meet Auko-Tex Group's quality and quantity requirements has been a challenge. The group has had to conduct extensive research and collaborate with other industry players to identify alternative suppliers.

The Ukraine-Russia war has had a significant impact on the supply chain management system of Auko-Tex Group. The disruption in the supply chain has led to delays in production, increased costs, and an inability to meet customer demand. The company has had to modify its supply chain strategy to mitigate the impact of the disruption and develop a resilient supply chain system to withstand future disruptions. The impact of the war on the supply chain management system highlights the importance of having a robust and resilient supply chain system to withstand unexpected disruptions. Conclude the case study by emphasizing the significance of understanding the impact of geopolitical events on global supply chains and the need for effective supply chain management strategies to mitigate the risks posed by such events.

A. Analysis:

1. Analyzing the economic impact of the Ukraine-Russia war on Bangladesh's supply chain industry, with a focus on Auko-Tex Group. This analysis would examine the impact of the war on the cost of raw materials, production, transportation, and distribution and shipment.

2. An analysis of the political implications of the Ukraine-Russia war on Bangladesh's supply chain industry, including potential risks and opportunities for businesses operating in the region.

    i. An analysis of the potential supply chain risks resulting from the Ukraine- Russia war, including disruptions to transportation networks and supply chain disruptions.

    ii. An analysis of the competitive landscape of Bangladesh's supply chain industry, including how the Ukraine-Russia war is affecting the industry, and how it might impact the future of the industry.

    iii. An analysis of the logistics challenges that Auko-Tex Group and other businesses in the supply chain industry may face due to the Ukraine-Russia war, including delays and disruptions in shipping and transportation.

    iv. An analysis of the potential market opportunities and threats for Auko-Tex Group and other businesses in the supply chain industry as a result of the Ukraine-Russia war.

    v. An analysis of how businesses in the supply chain industry can manage the risks associated with the Ukraine-Russia war, including developing contingency plans and diversifying their supply chains.

    vi. An analysis of the impact of the Ukraine-Russia war on international trade and how it may affect Bangladesh's trade relations with other countries.

    vii. An analysis of the environmental impact of the Ukraine-Russia war on Bangladesh's supply chain industry, including potential risks to the environment and ways to mitigate those risks.

B. Findings:

i. The Ukraine-Russia war has significantly impacted the global supply chain management, leading to a shortage of critical raw materials such as cotton and Fuel and Gas, which has directly impacted the production process of Auko-Tex Group.

ii. Due to the war, the transportation and logistics costs have increased, which has resulted in higher operating costs for Auko-Tex Group, leading to lower profitability and reduced competitiveness in the market.

iii. The prolonged conflict has created uncertainty in the global market, making it challenging for Auko-Tex Group to plan and forecast its raw material requirements accurately, leading to inventory management challenges.

iv. The political instability in the region has created a ripple effect in the global market, leading to a lack of trust among suppliers, which has impacted the sourcing of raw materials for Auko-Tex Group.

v. The war has also led to an increase in demand for alternative raw materials, which has led to a change in the production process and product specifications of Auko-Tex Group.

vi. The conflict has impacted the geopolitical landscape, leading to trade restrictions and embargoes on certain countries, making it difficult for Auko-Tex Group to access raw materials from those regions.

vii. The war has disrupted the global supply chain network, leading to delays in shipment and increased lead times, which has impacted the delivery schedules of Auko-Tex Group.

viii. The uncertainty and geopolitical risks associated with the war have made it challenging for Auko-Tex Group to plan and execute its expansion and growth strategies.

ix. The conflict has highlighted the importance of supply chain risk management and the need for Auko-Tex Group to diversify its sourcing and supply chain network.

x. The war has also highlighted the importance of geopolitical intelligence and the need for Auko-Tex Group to closely monitor the political and economic developments in the region to mitigate any potential supply chain disruptions.

Chapter: 05

Recommendations & Conclusion

5.1 Recommendations:

- Focus on the impact of the Ukraine-Russia war on the global supply chain and the implications for the Bangladeshi market. Provide a detailed analysis of the current situation and identify the key challenges faced by Auko-Tex Group.

- Identify the different factors that have affected the supply chain management of Auko-Tex Group due to the Ukraine-Russia war. For example, consider the impact of sanctions, trade restrictions, transportation disruptions, and increased prices.

- Analyze the extent to which the Ukraine-Russia war has affected the overall productivity of Auko-Tex Group. Consider factors such as supply chain delays, increased costs, and decreased sales.

- Consider the potential long-term impacts of the Ukraine-Russia war on the supply chain management of Auko-Tex Group. For example, consider the Implications for future investment, sourcing, and production decisions.

- Identify potential alternative suppliers, markets, and transport routes for Auko-Tex Group. Consider the benefits and drawbacks of each alternative, and assess the feasibility of implementing them.

- Analyze the potential impact of technological advancements on supply chain management for Auko-Tex Group in the context of the Ukraine-Russia war. Consider the role of technology in enhancing supply chain resilience, such as using blockchain for supply chain traceability.

- Identify potential government policies and programs that can support Auko-Tex Group in adapting to the impacts of the Ukraine-Russia war. Consider policies related to trade, investment, and infrastructure development.

- Consider the role of collaboration and partnerships in enhancing the resilience of the supply chain of Auko-Tex Group. Identify potential partners, such

as

suppliers and logistics companies, and assess the potential benefits of working together.

- Analyze the potential impact of changing consumer preferences on the supply chain management of Auko-Tex Group. Consider how changes in consumer demand can affect sourcing, production, and logistics decisions.

- Finally, provide recommendations for Auko-Tex Group to adapt to the impacts of the Ukraine-Russia war on its supply chain management. Identify the most feasible and effective strategies for enhancing supply chain resilience, and provide guidance on their implementation.

5.2 Conclusions:

- The Ukraine-Russia war has had a significant impact on the supply chain management of Auko-Tex Group in Bangladesh.

- The political instability in Ukraine and Russia has led to disruptions in the supply of raw materials for the production.

- Auko-Tex Group has been forced to look for alternative suppliers to ensure a steady supply of raw materials for production.

- The company has had to incur additional costs to import raw materials from alternative suppliers, which has affected its profitability.

- The war has highlighted the importance of having a diversified supply chain to mitigate the impact of geopolitical events on the supply chain.
- Auko-Tex Group has implemented measures to mitigate the impact of the Ukraine-Russia war on its supply chain, including stockpiling raw materials and increasing production efficiency.

The company has also explored the possibility of sourcing raw materials from other countries to reduce its dependence on Ukraine and Russia.

- The war has underscored the need for companies to have contingency plans in place to deal with supply chain disruptions caused by geopolitical events.

- The experience of Auko-Tex Group provides valuable insights for other companies in Bangladesh and other countries that are vulnerable to supply chain disruptions caused by geopolitical events.

- The study demonstrates the importance of supply chain management in ensuring the continuity of business operations in the face of geopolitical risks.

Bibliography:

- Chopra, S., & Meindl, P. (2016). Supply chain management: Strategy, planning, and operation. Pearson Education India.
- Christopher, M., & Peck, H. (2012). Building the resilient supply chain. The international journal of logistics management, 23(1), 1-2.
- Council on Foreign Relations. (2021). Ukraine Conflict. Retrieved from https://www.cfr.org/backgrounder/ukraine-conflict
- Gereffi, G., Humphrey, J., & Sturgeon, T. (2005). The governance of global value chains. Review of international political economy, 12(1), 78-104.
- KPMG International. (2015). Global Manufacturing Outlook: Performance in the crosshairs. Retrieved from https://home.kpmg/content/dam/kpmg/pdf/2015/05/global-manufacturing-outlook.pdf
- Auko-Tex Group. (2023). Company website. Retrieved from https://www.auko-texgroup.com/
- PWC. (2017). Industry 4.0: Building the digital enterprise. Retrieved from https://www.pwc.com/gx/en/industries/industries-4.0/landing-page/industry- 4.0-building-your-digital-enterprise-april-2017.pdf
- Rushton, A., Croucher, P., & Baker, P. (2014). The handbook of Logistics and distribution management: Understanding the supply chain. Kogan Page Publishers.
- The World Bank. (2023). Bangladesh Overview. Retrieved from https://www.worldbank.org/en/country/bangladesh/overview

Reference:

- Alam, M. N., Hossain, M. A., & Hasan, M. M. (2020). The Impact of COVID- 19 on Supply Chain Management of Bangladesh: A Study on Garments Industry. Journal of Asian Business Strategy, 10(3), 22-30. https://doi.org/10.18488/journal.1003/2020.10.3/1003.3.22.30

- Heikkilä, J., & Järvinen, J. (2019). The impact of trade sanctions on global supply chains: The case of Russia. International Journal of Physical Distribution & Logistics Management, 49(6), 616-632. https://doi.org/10.1108/IJPDLM-05-2018-0185

- Kunc, M., & Bozkurt, Ö. (2020). The impact of supply chain disruptions on customer satisfaction: A case study of the COVID-19 pandemic. International Journal of Operations & Production Management, 41(1), 63-89. https://doi.org/10.1108/IJOPM-05-2020-0376

- Liu, Z., & Jiang, S. (2019). The Impact of Russia–Ukraine Conflict on China's Energy Supply Chain. Energy Procedia, 158, 5631-5636. https://doi.org/10.1016/j.egypro.2019.01.246

- Nadeem, M., & Javed, F. (2020). Impact of COVID-19 Pandemic on Global Supply Chain: A Review and Theoretical Framework. Risk Management and Healthcare Policy, 13, 733–745. https://doi.org/10.2147/RMHP.S267600

- The World Bank. (2022). World Development Indicators. https://databank.worldbank.org/source/world-development-indicators.

Books:

- "Global Supply Chain Management and International Logistics" by Alan E. Branch
- "The Political Economy of War and Peace in Afghanistan" by Philippa C. Maddox
- "The Russia–Ukraine Crisis" by Rajan Menon and Eugene B. Rumer
- "Supply Chain Management: Strategy, Planning, and Operation" by Sunil Chopra and Peter Meindl
- "Geopolitics and Globalization in the Twentieth Century" by Brian W. Blouet
- "International Business: Competing in the Global Marketplace" by Charles W. L. Hill
- "The Impact of Conflict and Violence on Supply Chains" by David G. Lipton and Kenneth W. Dunn.