

Report On
Cost Benefit Analysis of Current Supply Chain of LaFarge Holcim Bangladesh
Limited

By
Tanzi Islam Tani
18304119

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

BRAC Business School
November, 2023

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Declaration

Would like to declare –

- The report's whole work done by myself and not published any other website
- Would like to maintain coherence of the reports
- Would like to implement reference and intext so that no one raised question about the report authenticity
- Don't publish anything which is illegal and harmful for the Lafargeholcim and against employment contract

Student's Full Name & Signature:

Tazin Islam Tani
18304119

Supervisor's Full Name & Signature:

Dr. Abu Saad MD. Masnun Al Mahi
Assistant Professor, Finance
Brac Business School

Letter of Transmittal

16th November, 2023

Dr. Abu Saad MD. Masnun Al Mahi

Assistant Professor, Brac Business School

BRAC University

66 Mohakhali, Dhaka-1212

Subject: Submission of Report on “Supply Chain Management” of “LafargeHolcim Bangladesh Ltd

Dear Sir,

With due respect would like to inform you that will represent a report on “Cost Benefit Analysis of Current Supply Chain of LaFarge Holcim Bangladesh Limited” which is mandatory to complete my graduation. Based on my 3 months experience will written this report and tried to uphold the current scenario and also recommend my suggestions.

During making this report tried to followed the given outline and theory so that will able to represent a good quality report.

I hope you will appreciate my hard work. Thank you for your consistent support

Sincerely yours,

Tazin Islam Tani

18304119

BRAC Business School

BRAC University

Date: 16th November, 2023

Non-Disclosure Agreement

This is an internship report and also took permission from the LafargeHolcim authority and also promised to use all the received information for academic purpose.

Tazin Islam Tani

18304119

Acknowledgement

I want to start by thanking Mr. Abdus Salam, Manager of Purchasing and Procurement in Lafarge Holcim Bangladesh Limited, who took over as my report supervisor. Mr. Salam helped me several times from the beginning of my report to create this report with the highest caliber. He has guided me in understanding the theoretical underpinnings of supply chain management and its applications. He spent his valuable time reviewing my report draft once I finished it and gave me insightful input.

Some personnel from LafargeHolcim Bangladesh Ltd.'s central office continually helped students understand various Supply Chain-related topics. I especially like to thank Mazharul Huda Lizan, Manager of Procurement, for his time and advice. He instructed me in every aspect of logistics and procurement throughout the course of my employment and gave me a variety of tasks to do.

Additionally, I appreciate Abdullahel Kafi Mondol and Md. Atikul Islam for enlightening me on various supply chain theories and for sharing information on how LafargeHolcim put these ideas into practice.

I'll never forget Ms. Tanzina of BIGD's earnest collaboration and aid on several occasions in a variety of ways. I will continue to be appreciative of the collaboration of all other BIGD officers and personnel.

Finally, although I would like to appreciate all the nice people who helped me, there just isn't enough room to include everyone. Please accept my deepest apologies and gratitude to everyone.

Executive Summary

LafargeHolcim Bangladesh Ltd. operated their journey for many years and tried to follow a structural supply chain management so that they can ensure cost minimization and organizational sustainability. In this internship report will try to show the LafargeHolcim industries current supply chain methods, their challenges, and my contribution.

In this report will try to follow a structural internship format so that easy to understood the organizations detailed and their current supply chain scenario and my internship experience. During internship time I got chance to work under logistics, plant, terminal and depots departments.

Tried to divide the whole report into separate sections so that easy to understand the In chapter 2 will discuss background of the organization, Bangladesh operations, mission, vision product, SWOT analysis, overall supply chain management system. In chapter 3 will discuss methodology of the report, literature review, cost analysis of the report, in chapter 3 will show the overall supply chain management system and its reflection we seen on overall assets and management system.

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List of Acronyms

LHBL = Lafarge Holcim Bangladesh Limited

SCM = Supply Chain Management

ROA = Return on Assets

KT = 1000 Tons

ROE = Return on Equity

DIR = Defensive interval ratio

TMS = Transportation and Management System

PLtC = Portland Limestone Cement

Glossary

Employee: Participants of the Company for which retirement plan is made. Employer: Owner of the company

Prior Year: Year Prior to a plan

Plan Year: The year in which retirement plan is assessed

Chapter 1: Internship Overview

Student Information

- Tazin Islam Tani
- 18304119
- BRAC Business School
- BRAC University
- Major: Finance

Internship Information

- Company Name: Holcim Bangladesh Ltd. (LHBL)
- Department: Logistics and Supply Chain
- Address: Level-7, Ninakabbo, Level 7, Ninakabbo, 227/A Bir Uttam Mir Shawkat Sarak, Dhaka 1208

Internship Supervisor Information

- Name: MD. Abdus Salam
- Designation: Manager purchasing and procurement

Job Description

Internship is prerequisite for BBA graduation. I have done my internship at Lafarge Holcim Bangladesh Ltd. (LHBL). From the day 1 the HR first asked me my major and future career growth interest based on that he appointed me under Supply Chain and Procurement Team. For the 2 weeks my task was

- Report Preparing
- Data Entry
- Attending vendor calls

My supervisor first asked me to observe the whole supply chain process for few days and also asked for to write down formal daily based report. From that report preparing I learn some basic things of the organizations supply chain management system. Rather than my supervisor asked me to do data entry. Through data entry system I learned about how important data entry work is and which way the whole supply chain management system works. After that my supervisor tell me to observe vendors management team work and asked me to attend some vendor calls so that will get idea about the vendor management. During query dealing time I learn so many practical knowledge which is really tough to gather through book knowledge.

In the second month my supervisor tell me to find out the most typical and complicated part of supply chain and suggest me to design a new one based on my knowledge and gathered experiences based so that he can justify my current experiences. I felt honored when my supervisor give me that opportunity to redesign the supply chain management. From the first day I never felt I am internee. They always valued my opinion and always give me priority as a permanent employee. Not only that, when I did any kind of mistakes my supervisor tell me the facts and future consequences and help me to take the right decision.

In my three month internship period I have learned many things from the organization. I have learnt about the corporate culture especially time management, accountability and punctuality. I have gather lot of experience from this organization also realize which weak points should I need to recover it if I continue my job in this supply chain department.

From my internship I can compare my expectation and reality and leaned about the corporate job with realistic experience which makes me more professional. During the internship time they give me my transport and lunch allowance and also allowed leave whenever I need. The whole supply management team is very supportive and friendly which create positive corporate

environment.

Internship Outcome

- Student's Contribution to The Company: During the three months internship I was engage in various activities and work related to the supply chain procurement department. In below will show my contribution towards the organization-
- Data Entry: On the first week my regular task was preparing data and make the entry on the company's system. The software used for the task was Oracle and Microsoft Excel. Because based on those data the whole procurement team work. If I input any wrong information regarding stock related issue the other team will be sufferer. For that reason my supervisor asked me to do that data entry task so that, I can learn how important each simple task is and how it is related with the whole team.
- Collection of Data: from 2nd week my tasks was collecting data from the vendors and store the data in the company's server for the preservation. For data collection purpose we mostly focus written and documented data instead of informal data also reconfirm the data's information by the authorized persons so that, there will be no confusion.
- Attending Vendor's Call: from 3rd week my major task was answering calls from the vendors and answer to their queries. Before that my supervisor tell me some basic and general guideline and also tell me how to handle the vendors call professionally. For example; general Q/A about a procurement deal. When I handle those vendors call I got many new ideas which helps me to enhance my knowledge.
- Analyzing LC: later my supervisor asked me to observe how to open LC account and what types of documents needed to open this account. Because this is the most important part of supply chain management system. During file organize timing will learn the most and important document. However, the LC is opened by the bank.
- Analyzing supply chain strategy- later my supervisor tell me to find out the current supply chain management problem and asked me to prepare a formal report about the facts of this current supply chain management problem. And asked me to propose a supply chain so that they can enjoy sustainable competitive advantage. In that week I

gave them some major problems what I found-

- They produce their product based on historical data analysis. But they don't analyze current market situation, their market positions and so on. That's why most of the time they have to stored finished goods for long time. Which reduce the product quality and at the same time enhance costs.
- The second problem I found that, for raw materials purchase purpose they rely on some fixed vendors which may enhance their costs too. If the organization look after many international new vendor they may reduce their costs.
- Regarding packaging purpose they use synthetic material which may causes harm. Instead of that if they use advanced eco-material it might be less costly and eco-friendly too.

Benefits of the student

- Gather practical knowledge about Supply Chain Software: For supply chain management purpose the organization use ORACLE software for their daily task. In the database they have all the records of the supplier profile and vendor information. Through database they do balance transfer, authorization, send material requisition and other operational activities. For banking related task the company uses EBL Connect provided by Eastern Bank PLC. I had not the authorization to use all the soft wares. However, I observed how the officers use these soft wares.
- Develop Networking and Communication Skills: Communication skill plays a vital role for a corporate jobholder. Working with customer service staff I learnt the importance of Nonverbal Communication. Even when vendors showing bad behavior, I saw Mr. Salam's body language and tone all trying to convey a positive message to the clients. Sometime I also deal with vendor directly. I tried to hear the problems or opinion of the customer and discuss with my line manager and provided them solution. I never did any bad behavior with the client who behave badly. I always tried to convince them. Other officers also pleased with my communication skills and behavior toward customers. The operation manager Mrs. Nyema one day told that she was too much pleased with my dealing with customers because I always deal with the customer politely and never said

that the customer did wrong. I always said that we are sorry for our mistakes even through the customers made any mistakes.

- **Multitasking attitude:** During the internship period I was assigned in data management section. But I had to do other tasks too beside this. For example I am writing a report form at the same time officers also told me to deliver an email or note or to write a memo or the customer service officer told to help her in her work. It was so challenging to do such kind of task at a time as bank is a sensitive area. Any mistake can create a big problem. Later I was used to do all the tasks at time. I did the job according to the importance and sensitivity of the task.
- **Dispute Management:** During my internship I had some conflict with a customer service officer. She was transferred from a telecommunication company and well experienced but from the beginning she always opposed my decisions or feedback. I learnt the customer dealing process from my academic knowledge. Finally she understand our dealing approach differences and try to explain me with logics so that I can understand my fault.
- **Other Task:** Other common task involved printer setup, making Xerox of the important documents, scan the documents and preserve for the future use. On the other hand, I was engaged in office programs such as birthday celebration, retirement program etc.

Chapter 2: Organization Part

Background and History of Lafarge Holcim

In Bangladesh Lafarge Holicom operated their business more than 14 years and invested \$500 million. In the very beginning the Lafarge and Holicim was two different organization and operate separately. Lafarge company is a French based organization and founded in 1833. On the other side, Holcim is an Switzerland based company and operated their business in in 1912. Later both industry expand their business globally and grab the international cement industry.in 2016 time both Lafarge and holcim started their joint venture by the name of Lafarge Holcim. For that joint ventures the share value automatically enhance because both already had reputation in the market and technically strong. Lafargehocim now operated their business more than 70 different region and have total 72000 people. In 2019 they earned CHF 26.7 billion.

Bangladesh Operation of Lafarge Holcim

Lafargeholcim create strong market position in the market for their quality and advanced product. They always try to maintain international quality product standard so that they can compete with others local cement manufacturing industry. Before 1997 is was started their business as personal restricted enterprise. In 2003 they became public. When they enlisted in the Dhaka and Chittagong stock market will get huge response from the share investors and now have 24000 shareholders. Each year they expand their business and create employment opportunity which enhance social economical condition.

They established their industrial area in Sylhet, Chhatak so that the industry will get unique cross border facility because the raw materials limestone coming from Meghalaya India. Because of low distance and other issues the production cost getting decrease which positively impacts on production section. Their unique business strategy enhance organization profit margin and also create new employment opportunity. Now 4500 people directly or indirectly related with that industry and create healthy competition.

The company able to produce 4.2 million tons of cement annually and their grinding plants in Dhaka and Khulna. According to 2021-22 data the company produced 2703 Kt of clinker, 2202 Kt of limestone. The organization always try to explore new business opportunity.

Lafargeholcim also participate in corporate social responsibilities and tried to help the communities as well as overall environment. They always tried to reuse the abstracts and make it a new product by their Geocycle application methods. They build a bridge in a nearby Chatak hamlet for the local areas peoples benefit purpose which will be considered as part of CSR.

Mission, Vision and Commitment

Via analyze mission and vision easy to judge that companies current and future prospects and also judge that organizations commitment towards their organizations.

Mission of LHBL

Try to became a top position on constructing substances in Bangladesh.

Vision of LHBL

- Ensure customers satisfaction via offer international standard product
- Focus more on advanced environment friendly technologies so that can able to produce more environment friendly product.

Commitment of LHBL

- Tried to offer best price in the market
- Avoid environment unfriendly production process
- Always tried to be transparent, accountable and honest towards the shareholders and stakeholders.
- Always respect host countries implemented laws, rules and regulations.

Products of Lafarge Holcim

The Lafarge Holcim always followed BDS 197-1:2003,CEM II/B-L, 42.5 N standard. Always tried to be implement advanced technology so that able to produce standard quality cement. Their main strength part is that they have own clicker producing facility for that reason they ensure their product quality. The organization always tried to maintain their manufacturing machines so that they can reduce their manufacture related default problems. Through this advance technology the organization can measure their product quality which enhance their market acceptance among the engineers and architect.

They always focus on quality so that their cement can use for multiple purpose like foundation, beam, column, plastering project etc. this cement is offered solely limestone and tried to avoid others obstacles like ash or slag so that they can offer high quality product. Their offered products are Holcim strong structure, Holcim red cement brand and Holcim grey cement brand.

Holcim strong structure- this product is famous for its long term energy improvement gains also maintain

42.5N requirements for CEM II/B-M per BDS EN 197-1:3. This cement is applicable for all types of production activity as raw concrete and mortar cloth.

Holcim red cement brand- this cement raw material sourced from Thailand and Vietnam and maintain BDS EN 197-1:2003, CEM 1,52.5N Standard.

Holcim grey cement brand- this cement is all types soil friendly and maintain BDS EN 197-1:2003, CEMIIA 32.5N.

They have total 3 grinding units which situated Dhaka and Khulna and the cement and clinker factory in Chhatak. Also collect limestone from different zone of the world and produce approx. 4.3 million tons years. Now the LafargeHolcim group owns 128 cement factories around the globe. That's why they can manage their one countries loss by the others countries profit. But if they faces continuous losses they first research their losses reasons if they found major and incompatible challenges they stopped business on that country.

SWOT Analysis

Via SWOT analysis through will rectify the LafargeHolcim strength, weakness, opportunities and threats and tried to focus more on weakness so that the organization can overcome from it and tried to focus the opportunities so that the organization can prepare themselves and utilize the opportunities for getting better outcome.

<p>Strength</p> <ul style="list-style-type: none"> • Strong brand image globally • Strong financial condition • Huge shareholders • Strong workforce and logistics team • International consultant support • Technically strong 	<p>Opportunities</p> <ul style="list-style-type: none"> • Can offer lower price for bit the local market • Have the opportunity to invest on other business • Had chance to get more privileges to the • FDI
<p>Weakness</p> <ul style="list-style-type: none"> • Gas and electricity scarcity • Tax and VAT issues 	<p>Threats</p> <ul style="list-style-type: none"> • Risk of cross border operations • Many new local similar industry came up • Many international cement industry also got licensed to start up their business • Turnover declined

Table 1: SWOT Analysis

Porter's Five Forces Analysis

- Competitive Rivalry (High)- In Bangladesh now many local and international cement industry entered which create competition among the rivals. Sometimes for grab customers attention need to reduce price which may negatively impacts on prices.
- Supplier power (moderate)- LafargeHolcim tried to collect their raw materials from local and international sector. Because on import duty and other issues the organization tried to collect from nearby countries so that they can save money. On the other side, internationally cement industries growth also enhance the supplier demand.
- Buyer power (high)- there are lots of cement industry in the market and offer lucrative price which may negatively impacts on LafargeHolcim. Through they have advanced technology and skilled workforce and global experiences but price fall competition may negatively impacts on long term profit margin.
- Threat of substitutes (high)- dozens of company operate the similar business which may causes threat for LafargeHolcim.
- Threat of new entry (high)- Bangladesh govt. show positive attitude towards the FDI and also allow many local investors to invest on that construction raw material sector which may causes huge competition among the competitors.

Supply Chain Management of LHBL

Supply Chain Management Team Organogram

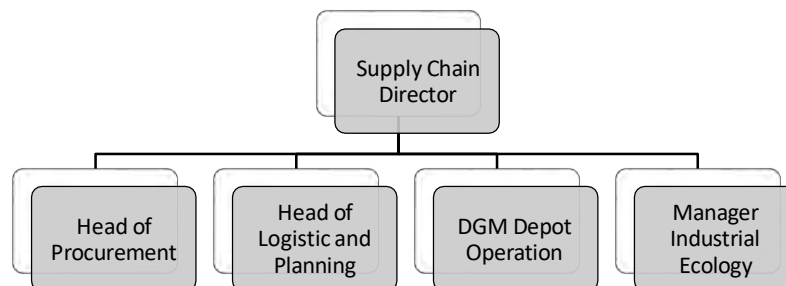


Figure 1: Supply Chain Team

- Supply chain director- this director approve the whole
- Head of procurement- In LafargeHolcim the head of procurement finalize the raw materials suppliers, negotiate them. From production to packaging every raw materials decision came from the head of procurement department. Before anything finalize they again overview the costs and overall quality so that in later they can avoid unavoidable consequences.
- Head of Logistic and Planning: the head of planner design the costs budgeting, logistics planning to inventory management, relationship management and outwards logistics team activities. later the team discussed their budget related issue with others department so that each supportive department may know about their budget limitations.
- DGM depot operation- this section mainly responsible for cost reduction and enhance sales volume. Also responsible for waste minimization, stock management, achieve efficiency, site safety, environment security and others.
- Manager industrial ecology- this department mainly concern about their host countries environment act. Especially this department concern about the machineries well maintenance sectors so that no harmful gas will be produced from this machines which may harm for the environment.

Supply chain management system of LHBL

- Demand and supply planning- in this section the management department did market research and previous sales growth based on that information they decided how much bags they needed to produce within the next 6 months. Based on that information they draw a financial budget regarding production till final distribution. For example- last year the sales was 50 lacks bags. Based on that data based this year the production will be 75 lacks bags so that they can fulfill the market demand and ensure customers satisfaction. less or more production may cause threat for the organization.
- Sourcing and supplier management-limestone, clay, iron and sand are the key raw materials for cemet production purpose. most of the time Lafargeholcim tried to collect all the raw materials from sylhet, later they tried to focus on India and china so that they can minimize the costs and also endure quality as well. For high import rate reasons they

mostly use Indian border which enhances high risks for the organizations. The organization always looking for the best deal. Before final contract, the whole team asked for bidding and gave the contract to those who offered the best quality with price.

- Manufacturing and operation- in that stage the manufacturing team examine the current machineries condition and their production capability. In that time they also analyzed the competitor's current production processes and also tried to gather ideas about the international market sectors so that, could update them via installing the machinery. The whole production is done by the automated system and after production, the quality team examines the product quality. For quality assurance purposes they maintain international standards and a strict inspection strategy. After production, the team gave the contract to the .33events who create the bags according to the direction basis. Most of the time the package weight is 50 kg. The producer always tried to produce a little bit bigger so that during loading time the leakage rate was reduced and the product quality.
- Distribution and logistics- this team is responsible also for raw materials collection to final distribution to the customers/buyers. In that time the team decided the mode of transportation system. For raw material carry purpose the organization mostly focuses on river or road site route. For the final product distribution purpose mostly focus road transport system. However, for product distribution purpose we contract with the dealer or wholesaler who help us to distribute the product to the final customers.
- Primary distributor-this distributor's main task to carry the raw materials to the production house Secondary distributor- this distributor's main task to send the final product to the warehouse/storehouse.
- Tertiary distributor- this teams main task to carry the final product from the warehouse to the final customers/distributors' hands. During transportation choosing time the logistics team also judge the arrival time, costs, customs charge, clearance, invoice verification challenges, accidental issues and so many things so that they can choose the best route. Before final selection they did historical data analysis so that they can choose the best decision for the organizations.
- Customer and order management

Inventory management- for an inventory management perspective the organization followed FIFO methods. Stock shortage or excessive both may cause hard for the organization. First, the

management identifies the current warehouse capacity and their current order and production scenario. Based on that information the team produced and stored the product.

Most of the time the dealers or the contractors carry the product by themselves. Sometimes the organizations need to distribute to their authorized dealer by their own vehicle.

Constructor, engineer, and architects are their major clients. So they always tried to offer a good deal to them so that they can grab the market. The marketing team also communicates with the retail dealers so that they can able to grab local contractors' contacts.

Major problems of SCM of LHBL

- There have lack of machineries experts at the workplace. They don't stock major machinery parts as a result if any machinery faces challenges the whole procurement system may face many unavoidable challenges.
- Mostly focus dealers and contractors instead of general end users.
- Don't have an alternative logistics support team whether other competitors also use third party logistic support for the organization cost reduction purpose.

Newly proposed Supply chain management

My proposed supply chain management and how it works and enhance efficiency for the organization

- Plant-wise summary and inventory visibility- in that section according to budget basis the inventory management inputs the actual stored raw materials data and used data so that the manufacturer can make a decision if they need to import more raw materials or not. Current management just imports raw materials based on their forecast sell and production basis. But if the organization has a huge project they have to import excessive raw materials which may cause costs in most cases. on the other side, storing the raw materials for a long time enhances costs and expenses. In that perspective will suggest that inventory management to keep all of their data
- updated so that the procurement team can take instant and on-time data and don't have to face raw data scarcity problems.
- Order tracking receipt and monitoring- Lafargeholcim only focused on the dealer and the contractors. But they don't have any platform for the end-user customers. in that case, I

suggest they open an online platform through where they can contact the end users and collect online orders so that they can build strong relationships with their end users customers. not only that, through online system the contractors or architects also did order without contacting any medium or sellers. This strategy also reduce the work pressure of field marketing team. Through order tracking system through the manufacturer also notifies the ordered cement's current production status.

- Automated cement reordering system- before the annual production budgeting time the production team needs to do meeting with the sales team, revenue, and logistics team. From this automated system, each department knows about the current sales and production status. Based on those data each team get an idea what will be the ideal production strategy.
- Automated default product detection system- now most of the quality control-related issues done by the quality assurance department. It is true that from manufacturing to packaging everything done by the machine. But still within 100 bags 1 bag found to default which is tough to get via personal inspection. If the organization implement this default inspection machine this machine easily identify defect within a second which may save the organization time and energy. Via this system organization also knows about their current faulty product rates and is also concerned about their current product quality issues.

Ratio Analysis and Supply Chain Management Tools

Via ratio analysis through would like to rectify Lafargeholcim supply chain managements current efficiency and also tried to rectify does the organization need to change their management system or not in that perspective will mostly focus on capacity utilization rations, operating cycle ratios, defensive interval rations and cash management ratios.

Supply Chain Management Ratios

Sl No	SCM Ratios	2022	2021	2020
1	Capacity Utilization Ratios	20.47%	20.95%	-8.30%
2	Operating Cycle Ratios	37.6789	75.4195	137.3017028

3	Defensive Interval Ratios	188.133	212.519	293.1828155
4	Cash Ratio	0.21976	0.27983	4.044984183

Table 3: SCM Ratios

Capacity Utilization Ratio

Via this ratio analysis will know the organizations production capability and its actual production rate and tried to rectify does the organization able to utilize its resources in a best possible ways or not. to calculate this will divide the actual output with potential output into 100.

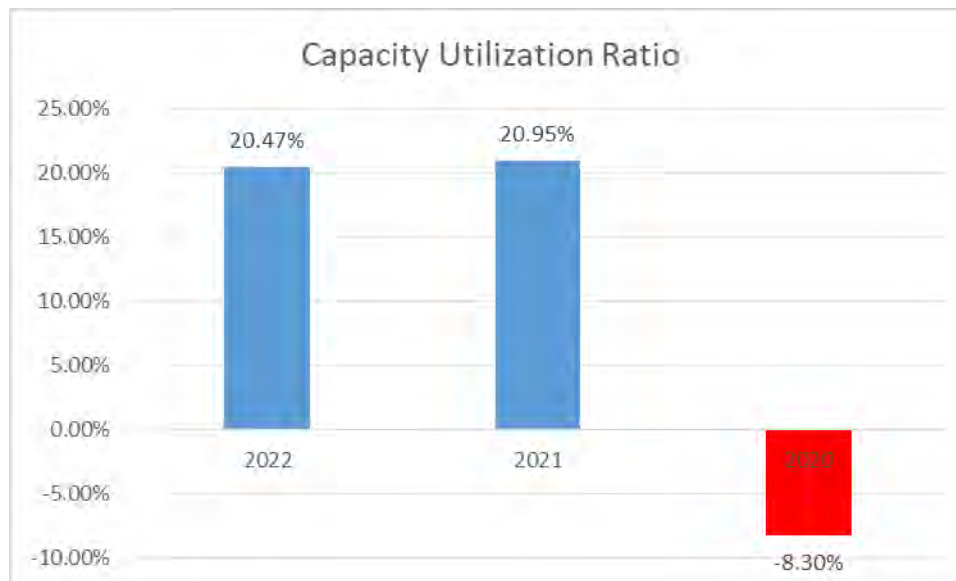


Figure 12: Capacity Utilization Ratio

During 2020 pandemic lockdown time the production was in negative level in 2021 they recover it and their capacity utilization was 20.95% and in 2022 the rate decrease. Which indicates the LafargeHolcim don't utilize their opportunity and resources in a best possible ways that's why they still achieved 20.47% out of 100 which shown their failure.

Operating Cycle Ratio

Via analyze operation cycle the organization rectify that organizations operation efficiency like how much time they need to finished a final goods. If the operation cycle time is too long that

means that the organization failed to maintain time table. It also shown how an organization management utilize their assets in a best possible ways and how much sincere they are about their production.

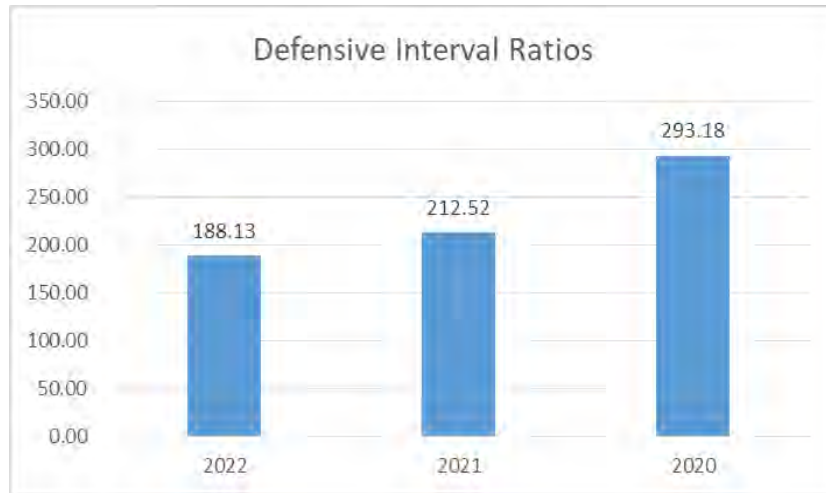


Graph 2: Operating Cycle Ratio

If we look the graph will see that, in 2020 the organization operating cycle was 137.30 and in 2021 the ratio was 75.42 and in 2022 the rate became decrease and reached at 37.68 all those shown positive impacts on production process. That indicates now the whole production system able to supply finished goods within 37 days from 137 days.

Defensive Interval Ratio

In defensive interval ratio through an analyst rectify that particular organizations current financial condition without considering that organizations long term or fixed assets. Like how much that organization capable to continue their production and able to pay their current liabilities without consider the value of final assets.



Graph 3: Defensive Interval Ratio

If we consider the graph will seen that, in 2020 time the defensive interval ratio was high in 2022 the ratio became decrease at reached at 188.13. that indicates the organization is capable to pay all of their liabilities within 188.13 days.

Cash Ratio

From the below ratio analysis will found that, Lafargeholcim now not that much capable to pay their current short term liabilities because each their cash ratios got downward which reduce the organizations market acceptance.

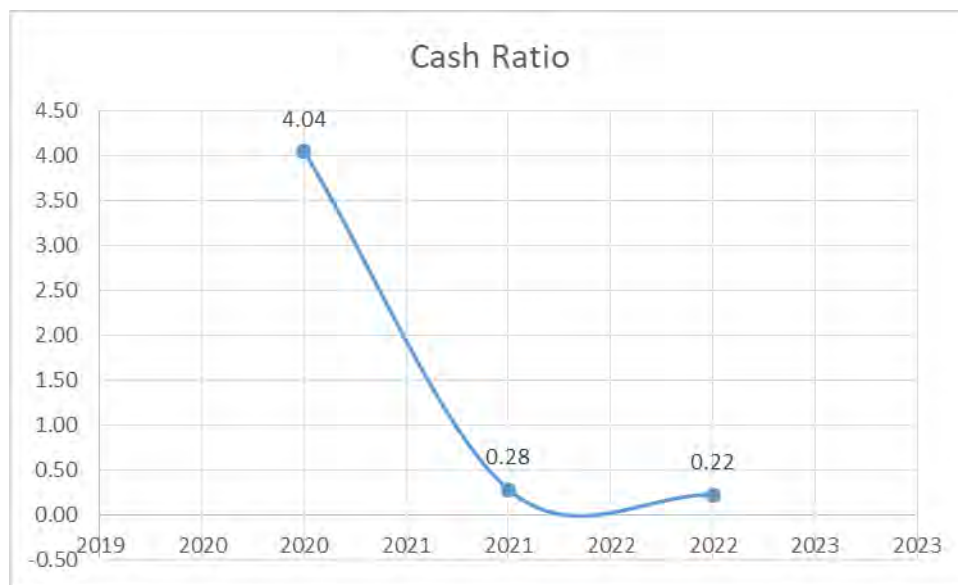


Figure 14: Cash Ratio

Turnover Ratios

Via these ratio analysis an organization justified their property utilization ability via comparing the company's revenues with assets.

Sl No	Turnover Ratios	2022	2021	2020
1	Inventory Turnover Ratio	10.77	8.35	6.94
2	Days in Inventory	33.89	43.69	52.60
3	Fixed Asset Turnover Ratio	1.35	1.25	1.11
4	Asset Turn Over Ratio	1.07	0.96	0.73
5	Account Receivable Turnover	8.52	6.18	3.67
6	Average Collection Period	42.85	59.03	99.42

7	Account Payble Turnover Ratio	9.34	13.37	24.79
8	Average Payment Period	39.06	27.30	14.72

Table 4: Turnover Ratios

Inventory Turnover

Via inventory turnover ratio through an organization rectify how many times the investory is sold and replaced over the given period of time.

This below graph shown the lafargeholcim last 3 years data found that, in 2020 the turnover rate was 6.94, in 2021 the capacity increase and reached at 8.35 and in 2022 time the capacity ratio reached at 10.77.



Figure 15: Inventory Turnover Ratio

Days in Inventory

From this data analysis will rectify how long time the organization take to convert their inventory into daily sales purpose. Via this analysis the organization also rectify how efficient they are on daily based inventory management system. In 2020 tie the organization took 52.60 times and in 2022 the days in inventory system was 33.89. That means each year the organization enjoy efficiency.



Figure 16: Days in Inventory

Fixed Asset Turnover

In this system would like to rectify the current sales volume via comparing the current fixed assets so that would like to judge how much efficient that organization to utilize its resources. A greater ratio indicates that the organization is utilize its fixed assets in a best possible ways. From the graph will seen that, in 2020 time the organization fixed asset turnover ratio was 1.11 and in 2022 the ratio rate increase and reached at 1.35. That indicates each year the organization enjoy efficiency but those are not that much satisfactory enough.

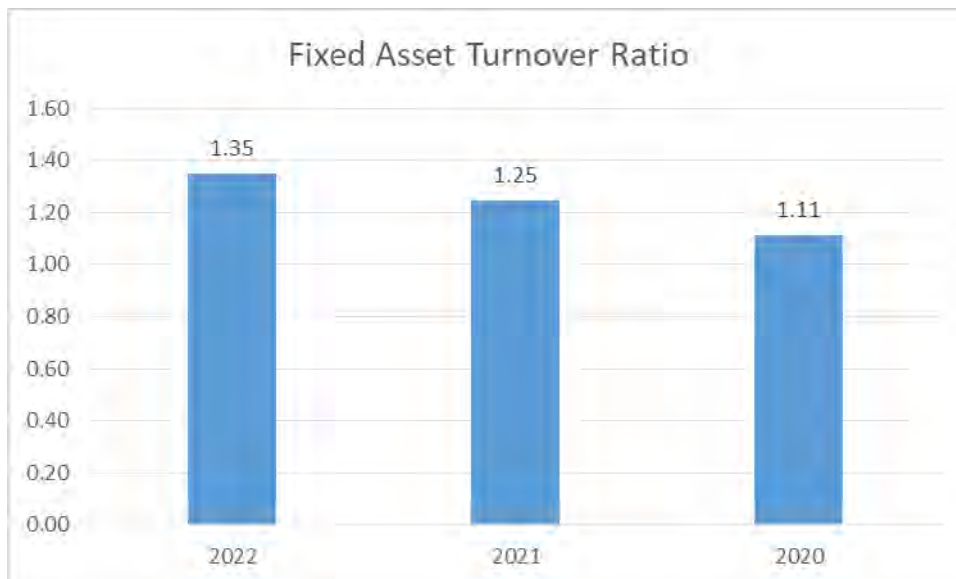


Figure 17: Fixed Asset Turnover Ratio

Asset Turnover

From the below data will see that, in 2020 time the organization asset turnover ratio was .73. In 2021 the rate increase and reached at .96. In 2022 time the rate reached at 1.07. That indicates the organization sales 1.07 taka against 1 takas assets. That indicates positive portfolio for the organization.



Figure 18: Asset Turnover Ratio

Account Receivable Turnover

From that ratio would like to rectify within how many days lafargeholcim can able to manage their debt and how efficiently they manage it. If the organization take long time debt that means they able to utilize their capital in production which helps to enhance overall profit margin. Before their account receivable turnover rate was 3.67 and in 2022 time the rate increased and reached at 8.52 that means now lafargeholcim can established a strong position through which basis they may being late to clear their debt.

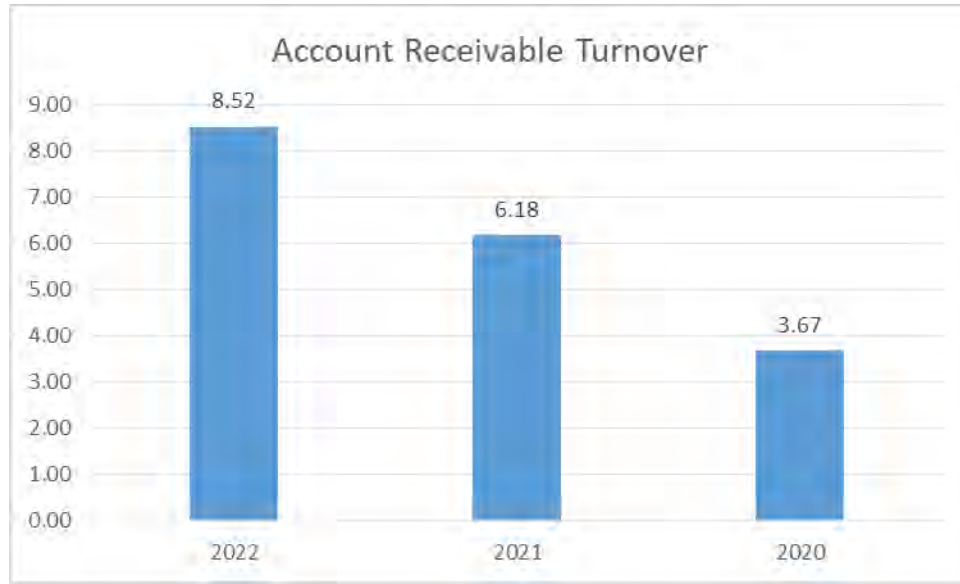


Figure 19: Account Receivable Turnover

Average Collection Period

From that calculation the organization would like to know the timing of cash collection like how long time the organization may turn their short term liquidity into cash. In 2020 time the organization needs 99 days to collect the payment from the market, in 2022 time they need 42.85 days. In the average payment period rate getting higher the organization face liquidity scarcity problem. However, lafargeholcim tried to recovery their weakness and also reduce their payment timing so that, they can able to establish a good position.

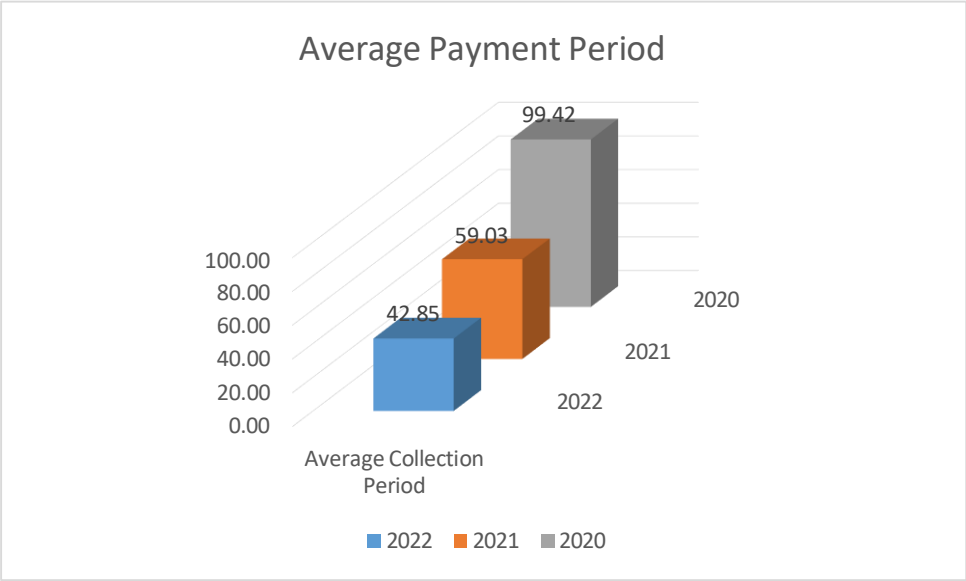
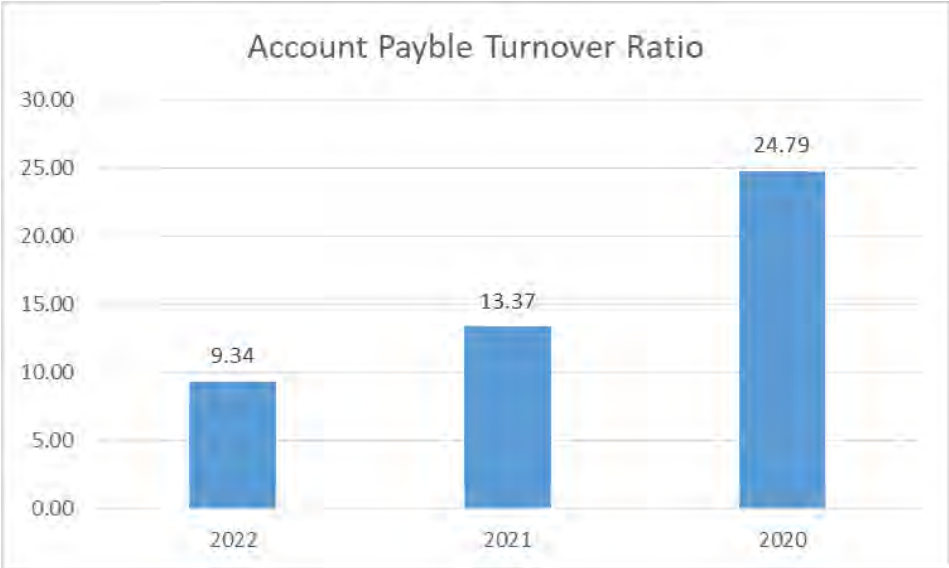


Figure 20: Average Collection Period

Account Payable Turnover

From that analysis will able to justify the organization payment capability. Within how short time the organization capable to pay their creditors and suppliers money. In 2020 time the average due clearance time was 24.79 in 2021 time the rate was 13.37 in 2022 time the rate was 9.34. Each year the organization became more stronger on account payment purpose. Now they can able to pay their creditors payment within 10 days.



Average Payment Period

From that ratio would like to rectify the lafargeholcim debt collection and credit payments time and tried to rectify does those comparison is acceptable or not. In 2020 time the payment period was 15 days and in 2022 time the average payment period time 40 days which create positive impression in the market. And also shown strength part for the organization.



Figure 22: Account Receivable Turnover

Du Pont Analysis

The decomposition of the various return on equity (ROE) drivers is accomplished through the use of the DuPont analysis approach. Investors may concentrate on each of the important financial performance parameters independently to pinpoint strengths and problems thanks to the breakdown of ROE.

Du Pont Formula = Net Profit Margin X Asset Turnover X Financial Leverage

Du Pont Formula = (Net Income/Sales) X (Sales/Average Total Asset) X (Average Total Asset/Average Share Holder Equity)

Du Pont Analysis	2022	2021	2020
Net Profit Margin	-1.20%	5.27%	-0.95%
Asset Turn Over Ratio	107.00%	96.03%	72.71%
Financial Leverage	12.05	11.44	12.85
DU Point Analysis	-15.44%	57.86%	-8.92%

Table 5: DuPont Analysis

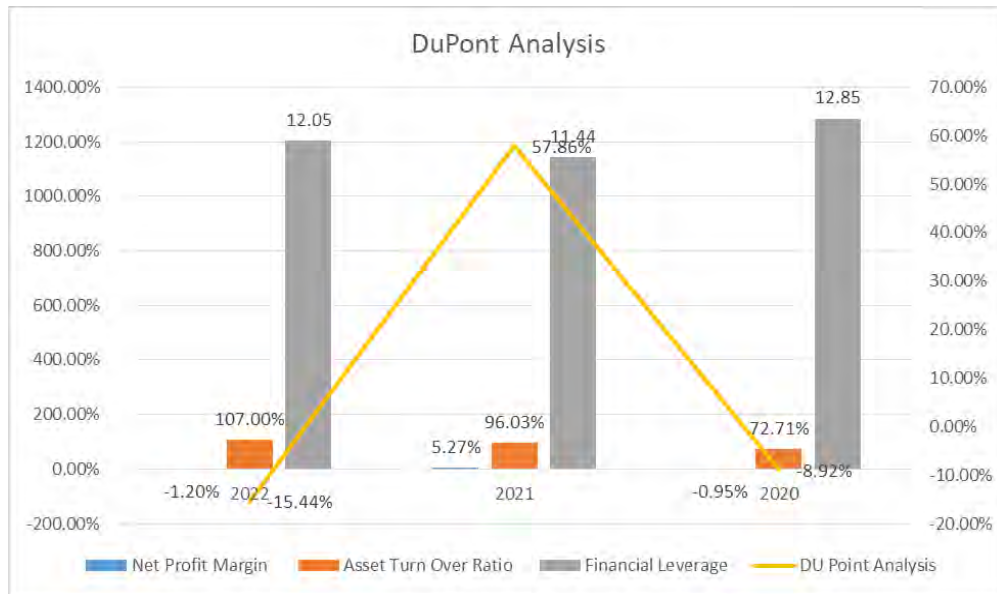


Figure 23: DuPont Analysis

From the Dupont analysis it is found that, from 2020 to 2023 time the sales growth not that much satisfactory but the organization production capability increased and sales volume and operating costs also enhance and the organization more capable to pay their due amount with in shorter time period. Which enhance the acceptance.

Chapter 3: Project Part

Introduction

This internship program give me the opportunity to enjoy real work experience and helps me out to take decision should I able to set up my career in this supply chain department or not. This internship time will gathered so many experience through working different supply chain sector and also learn how each sector works and manipulate the other departments activities. during internship time my access was limited. With in that limitation will tried to gathered major information so that can able to conduct the report. In this report would like to show

- Their current supply chain and management systems

- Current cost scenario
- Develop a new cost efficient supply chain
- And also shown how positively impacts to achieve cost efficiency.

Organization of the Report

Primary Source

In this report will mostly focus my personal experienced overview and others data will collect from different logistics department head and manager. During inspection time will also gathered data from the labor. Would like to cross check the labor and the employer given information so that will justify the actual scenario. Through I am the outsider so manager don't like to share the actual scenario of the organization. in that case will collect some data via informal conversation though and tried to implement the most and prominent information to conduct this report.

Secondary Source

In this report, will also implement secondary data and information too. For develop literature reviewed section purpose will use supply chain relevant journals, articles, research paper data and news papers data. For financial data analysis purpose will use LafargeHolcim annual data so that will able to shown the actual current profit margin scenario, company growth and also shown how my proposed supply chain helps to enhance that organization profit margin and helps to enhance efficiency.

Literature Review

Supply chain management considered the heart of the organization. Before people considered this management as logistics support management. But the concept getting changes. From raw material to final dispatched everything done by the supply chain management system. In that perspective one scholar claims that, this supply chain management give a proper guideline to operate the organization successfully (Ahlestedt & Hameri, 2004). Another scholar claims that, "supply chain management helps to ensure customers satisfaction via providing product on time" (Behra, 2021). This SCM helps to planning, implementing and controlling the procurement

system in an efficient and organized way. Another scholar claims that, this SCM also hints the organizations current market demand. Via analyze market demand basis the organization easily measure their current market positions and demand (Naznin, 2012). When an organization build up they need a proper planning. Like what types of business they need to operate, from where they will collect product/raw materials, how they stored and send their product to their final distributors and customers and so on. Supply chain management helps to think about that issues so that the investors think about it (sukati, Hamid & Bahram, 2021). The. When an investors knows about the whole supply chain management and its impacts they can easily operate their business successfully. Another scholar claims that, “this SCM helps to ensure quality of the product” (Behra, 2021). A quality product depends on many things like raw materials quality, expertise, packaging and many more. When an organization maintain proper SCM they can easily know their current market demand, production capability and in hand raw materials amount (Naznin, 2012). Based on that information the manufacturer can easily goes for production and able to serve customers demanded product on time. When customers get their desired product they became loyal customers. Another researcher claims that, “customers are dissatisfied when they didn’t get their desired product on time” (Ahlestedt & Hameri, 2004). Another scholars claims that, “resources are limited, SCM helps to utilize the resources in a best possible ways and ensure organization sustainability” (Naznin, 2012). Another scholar claims that, “this SCM helps 29 to rectify the organizations production default and helps them to recover their challenging situation” (sukati, Hamid & Bahram, 2021). Another scholar claims that,” this SCM helps to think towards the alternative solution of the organization”. Another scholar claims that, “SCM always gave the direction for future investment” (Behra, 2021). SCM helps to achieve sustainable competitive advantage via ensure mass production at least price. Another scholar claims that, this SCM also helps to rectify current market situation especially competitors positions. Another scholar claims that, “this SCM helps to manage the logistics team efficiently and effectively and also helps to maintain the HR system” (Naznin, 2012). In that perspective another scholar claims that, “there are many organization who appointed workers for seasonal basis, so that they can reduce their costs” (Naznin, 2012). Another scholar claims that, “this SCM hints the organizations about product demand and helps the hr to make a plan about the recruit planning” (Ahlestedt & Hameri, 2004). Because right people in right place at right time is mandatory for organization overall success. Because excessive or less employee both

may hamper the production process system. Another scholar claims that, “ now the modern production management completely dependent on computer based supply chain management tools”. In that perspective one scholar claims that, “this full dependency may cause many unexpected challenging moments” (Parkhi, 2015). If any technical error happened the situation goes down”. Another scholar claims that, “Digital SCM tools makes organizations production system more organized at the same time causes threatened in many ways” (sukati, Hamid & Bahram, 2021). If the hacker or any virus attack the whole system will be ruined. Another researcher claims that, “now investors invest more on SCM tools development purpose so that they can avoid unnecessary challenges” (Behra, 2021). SCM also helps to rectify the procurement system and its minimum timing. in that perspective another scholar claims that, to produce excessive product and its storage not a good idea at all. Because for extra storage reasons the quality decrease and the costs increase (for storage maintenance and other purpose” (sukati, Hamid & Bahram, 2021). now very few organization maintain their own logistics team. Most of them tried to get support from the third party supplier team. In that perspective one scholar claims that, “ its really costly to maintain full time logistics team in that case if the whole responsibilities given to the third party that will be more costly and budget friendly” (Behra, 2021). Another scholar against that statement and claims that, “this is easy to maintain for the small or mid level organizations but not a wise decision for the large inventory management system” (Ahlestedt & Hameri, 2004). Another researcher claims that, “ if the organization gave the supply chain responsibility to the others the original company may lost their control and have chance to leak the information which may causes for the organization(Parkhi, 2015). Another researcher claims that, “in production sector if the whole procurement don’t done by the automated system there have many chance to occur errors’(Parkhi, 2015). Another researcher claims that, “majority 30 of the organization followed FIFO methods on their production system so that they can minimize their production process”. Another scholar claims that, “Both LIFO and FIFO method have their own specialization and helps the organization to achieve their demand’(sukati, Hamid & Bahram, 2021).

Findings and Analysis

Cost and Benefit Analysis LHBL

In this section would like to shown their current logistics department annual expenses and tried to find out their loopholes and also shown how my proposed logistics helps to minimize the expenses and positively impacts on lafargeholcim sales volume. Lafargeholcim main expenses are their raw materials and production costs. Before they collect it from locally and boarder passing. Because of boarder restrictions and other issues . in before will shown the major expenses during production costs.

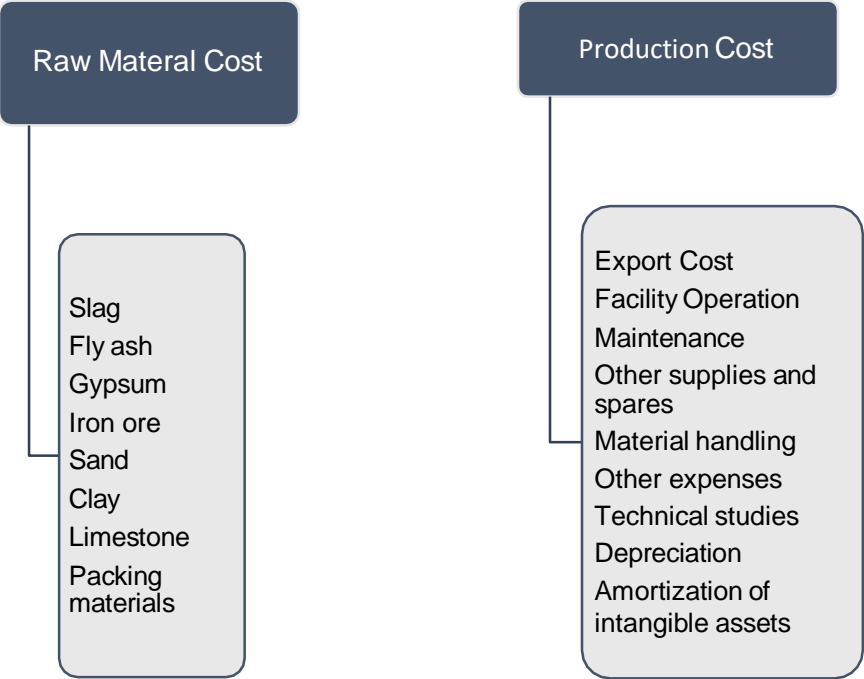


Figure 6: Production Cost of LHBL

If we compare last few years raw materials costs seen that, the rate increased 72% to 75%. In 2017 time the cost was 1,321,590,000 BDT and in 2020 2,2028,805,000 BDT. This is happened because of pandemic and global costs. In Bangladesh there have some free trade policies with some countries. if Lafargeholcim import by using that countries route, the organization can easily avoid the import taxation duty related problems and can produce cement within lower costs. If we seen their previous profit margin scenario seen that, each year the organization production costs raises and their overall profit margin goes down.

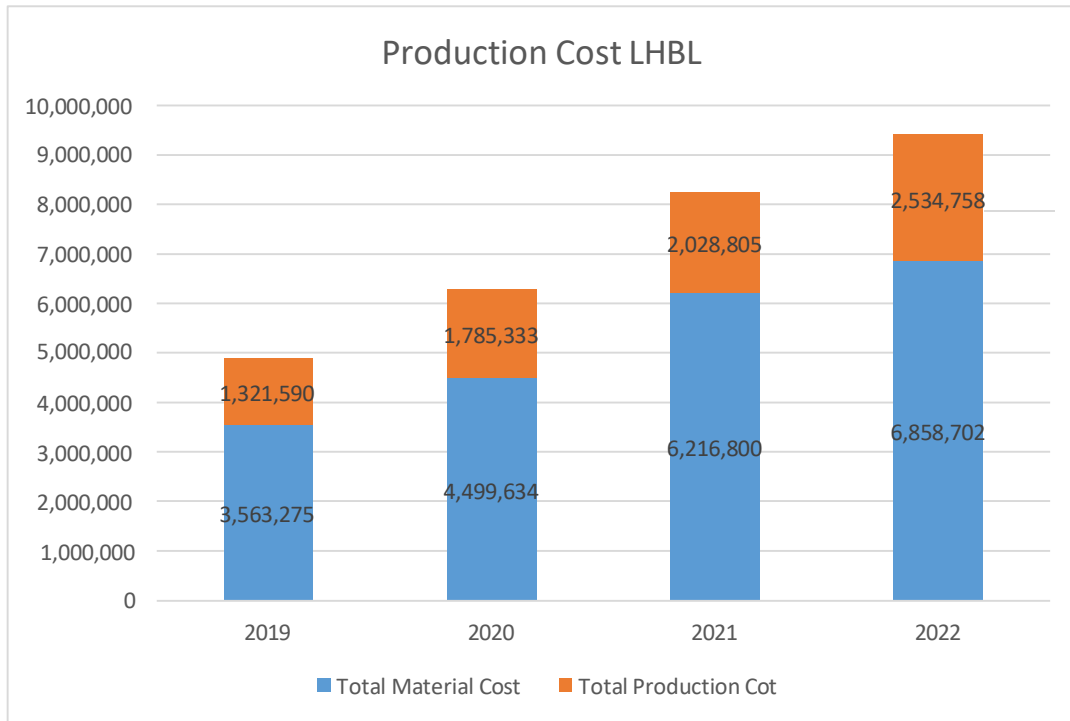


Figure 8: Total Production Cost of LHBL

From the above graph will seen that, each year the organization’s production cost and material costs increase because of import duty and cross boarder restrictions because of high production costs failed to grab customers attentional also lost cost reduction manipulation attitude.

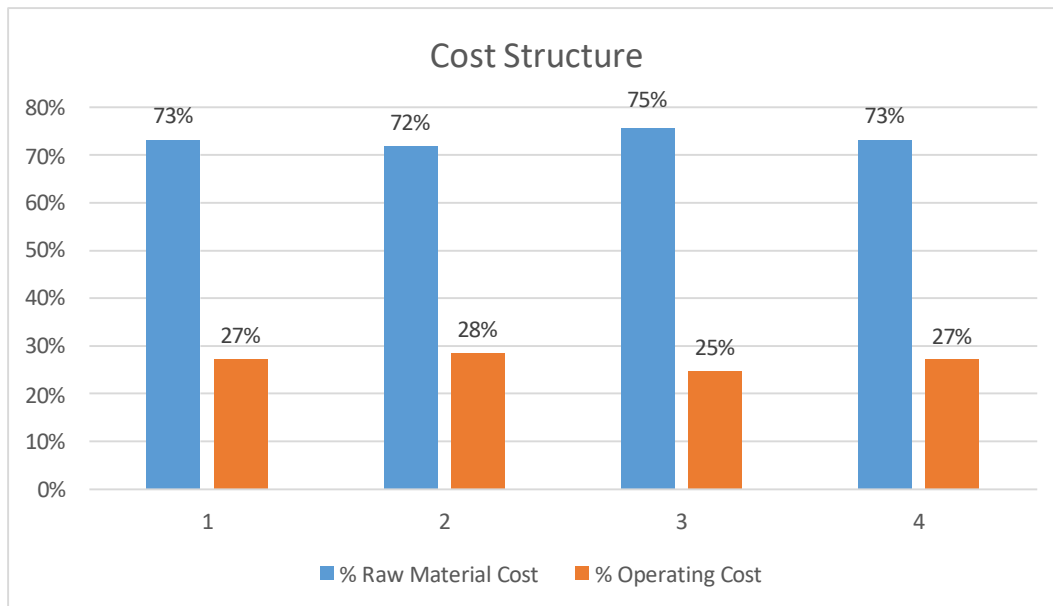


Figure 9: Total Production Cost of LHBL (in percentage)

If we compare last 4 years data seen that the operating costs remain same that means the organization didn't enjoy competitive advantage. If the system continued soon the organization may face huge losses.

Cost and Benefit Compare to Gross Profit

There is a very low increase in gross profit of the company compare to the total cost and expenditure.

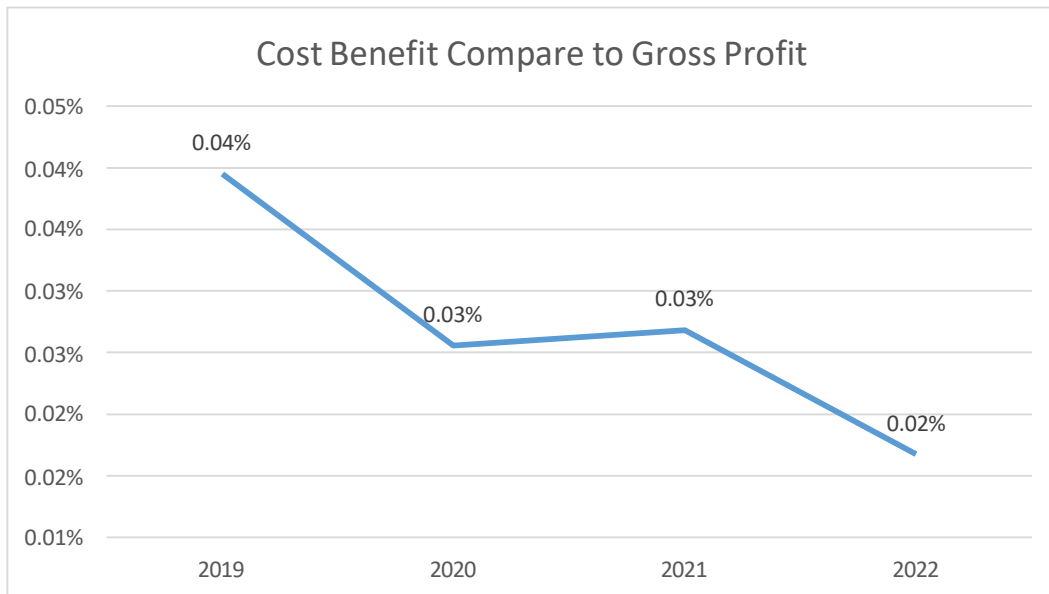


Figure 10: Cost Benefit Compare to Gross Profit

If we compare last few years data seen that each year the gross profit margin rate decreases. in 2019 the growth rate was .04%, in 2020 time the rate decreased at .03% and in 2022 the rate reached at .02%. that means each year the gross profit margin rate decreases which consider threat for the organizations.

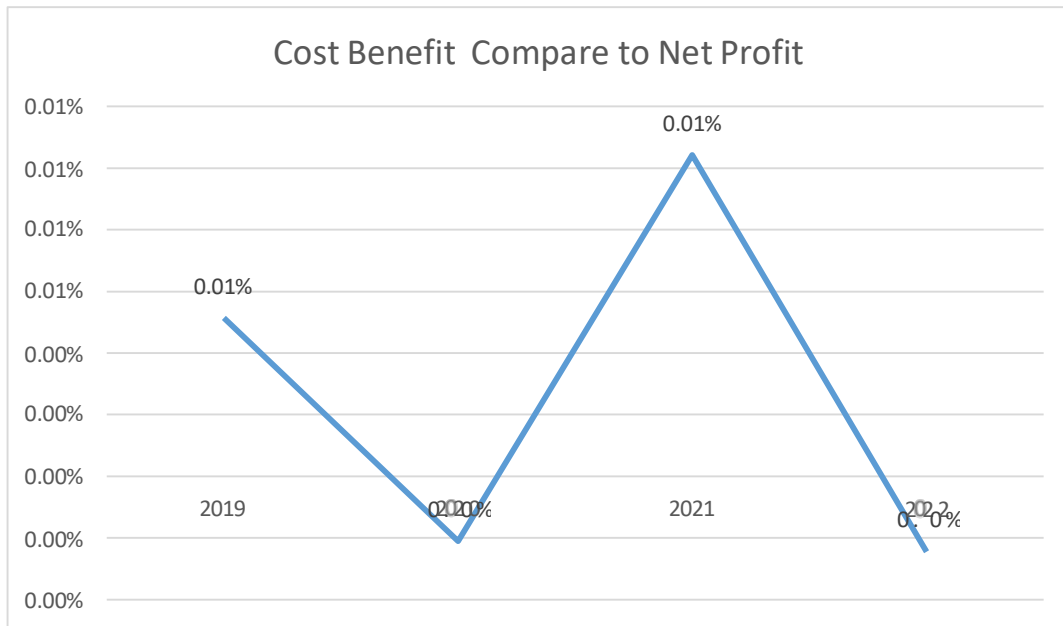


Figure 11: Cost Benefit Compare to Net Profit

The company has a very low return in gross profit compare to production cost of the company. In the year 2020 and 2022 the return from net profit was negative due to the low production and covid-19. After pandemic time the situation getting worse for their some decisions. But I recommend that if they implement my proposed supply chain system can able to earn a good amount of profit.

Recommendation for Logistics cost management and optimization

In this section will shown how my proposed supply chain management works and helps to reduce the costs and enhance overall organization efficiency.

- Use alternative route for raw materials import purpose- Bangladesh maintain a good bilateral relationship with some countries and there export import purpose govt. don't imposed export import duty if the manufacturer use that route may reduce their import related costs and import majority of the raw materials within cheap costs. Which enhance the organization overall profit margin. If we seen that, each year for import duty issues the raw materials costs enhance 40 to 50% if we can implement that strategy Lafargeholcim may produce 80 percent lesser than now that indicates a huge profit growth for the organizations.

- Getting logistics support from the third party- there are many organization who opponent their logistics responsibility to the third party. In some cases if the LafargeHolcim may opponent that responsibility to the third party may reduce their risks and expenses in many ways. From raw materials carrying till production the organization may use this third party. For internal and others purpose may use their own logistics team. For logistics support purpose they need to spend least 30 crore tk. if they take support from the third party may reduce their costs 50 percent. Which may enhance organizations efficiency.
- Online presence and take order from the website- they mostly sells their product by their own vendor or dealers. Most of the time they failed to connect to the end users directly and failed to gathered end users feedback and demand. in this perspective I recommend a website whether small dealers and buyers can directly ordered their product through online. In that case LafargeHolcim may offer a discount to the online buyers who may ordered a huge amount before. In that case, the organization easily accumulate their current ordered demand and based on that they can produce. When the organization able to produce right amount product on right time they don't have to stored long time which may reduce the store maintenance costs.
- Different category packaging system- Now LafargeHolcim offer 50 kg bag. If they offer 40kg or 60kg bags that might be lucrative for the customers. Because larger construction group looking for bulk package which may reduce their costs. Because of lack of variation they have to buy 50kg bag which sometimes causes loss for the users. In that perspective I suggest them to start this new different categories for small amount so that they can see the customers' acceptance rate. I found that, if they offer 40kg they may able to reduce the costs which may create positivity among the buyers. Because small project needs less cement. For small work to buy a 50kg cement is waste of money. And no other competitor still implement that strategy till yet.
- Use natural packaging system- for packaging purpose the LafargeHolcim mostly collect it from one of their package supplier who use 70 percent synthetic or plastic materials and 30 percent paper. Its true that, only paper packaging not secured for the cement because of its durability issue. In that case, I suggest them to use 50 50 paper and plastics so that

after using it, it will be easily decomposed with soil. Another alternative solution I also approached that, if any user used the cement and return the package within (minimum 50 and above empty package) in good condition will gave a good discount for their next purchase. Via this strategy the organization easily reduce their packaging cost via utilize those usage package. If the organization followed that strategy they may saves millions of tk via savings packaging costs.

- Automated default product detection system- now majority of the default product examined by quality maintenance department. There have no others default detection technology is available. As a result most of the time they failed to identify the default product and got return from the dealers. Most of the
- time, it enhance organization costs and reduce the brand image. In that perspective if they implement automated defaulter machine they can easily detect the default product instantly and take actions which may reduce their default rate and complain rate at a time. Now their current production default rate is 25%. If they implement the instant default detection system can easily identify the default product and able to take instant actions.

Limitations

The major limitations in this report I faces that-

- Time limitation- time was very limited within this short time really tough to find out the whole scenario of the supply chain management system of the LafargeHolcim
- Majority of the employer tried to avoid the loopholes of the current supply chain management.
- Don't have access to look after the official file details
- Don't have the access to use their official software portal. Through they asked me to data input but that was on normal excel.
- And have no chance to visit their other production site Charok, Sunamgonj and sylhet.

Conclusion

From our Cost Benefit Analysis, the cost incurred for procurement and production is very higher than the return and benefit the company is having. The challenge for the company is to optimize

and getting maximum benefit out of it.

The company incurred Net Loss in the year 2022 and 2020. Hence, it is not in a good condition in terms of revenue generation currently. So the company need increase the sales volume as well as minimize the cost as much as possible.

The organization always collect raw material to package everything on their fixed suppliers. In that case if they change their agreement and look after better source will be better for them.

In some cases they may gave the responsibility to the third person so that they can earn profit. During internship time I didn't get any positive grow in their overall business. if the situation continued sooner they have to face financial losses which may bound them to stop their operation system.

References

- Behra,J.(2021). A REPORT ON "SUPPLY CHAIN MANAGEMENT " Main functions of Supply Chain Management are as follows: · Inventory Management · Distribution Management · Channel Management · Payment Management · Financial Management · Supplier Management. Retrieved from https://www.academia.edu/9909769/A_REPORT_ON_SUPPLY_CHAIN_MANAGEMENT_Main_functions_of_Supply_Chain_Management_are_as_follows_Inventory_Management_Distribution_Management_Channel_Management_Payment_Management_Financial_Management_Supplier_Management
- Ahlestedt,D. & Hameri,A.P.(2004). Review of Supply Chain Management Research: Practical Business Value and International Aspects. Supply Chain Forum 5(1). Retrieved from https://www.researchgate.net/publication/263757480_Review_of_Supply_Chain_Management_Research_Practical_Business_Value_and_International_Aspects
- Naznin,M.H.(2012). Supply Chain Management of Coats Bangladesh Ltd. Retrieved from <https://core.ac.uk/download/pdf/61806838.pdf>
- Parkhi,S.(2015). A Study of Evolution and Future of Supply Chain Management. Retrieved from https://www.researchgate.net/publication/278029600_A_Study_of_Evolution_and_Future_of_Supply_Chain_Management
- Sukati,I.,Hamid,A.B. & Bahram,R.(2021). The Study of Supply Chain Management Strategy and Practices on Supply Chain Performance. Retrieved from <https://www.sciencedirect.com/science/article/pii/S1877042812006520>

Financial Statement. LHBL Annaul Report 2022. PP (218 to 226)

Financial Statement. LHBL Annaul Report 2021. PP (208 to 214)

Financial Statement. LHBL Annaul Report 2020. PP (217 to 229)

