Summer Internship Project

Phase II Report

on

Havmor Ice cream Pvt. Ltd.

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*Date of Submission***:** 5th July, 2020

ACKNOWLEDGEMENT

I would like to take this opportunity, to express my immense gratitude towards **Havmor Ice creams Pvt. Ltd.** and **Institute of Management, Nirma University** for facilitating me with the summer internship opportunity.

I would like to thank my mentors **Mr. Ankit Jambusaria,** Asst. General Manager (Supply chain - Replenishment Team) and **Ms. Pooja Mulani,** HR Manager of Havmor Ice creams Pvt. Ltd. and my faculty mentor **Prof. Nikunj Patel** for their constant support and time. It would not have been possible to complete my internship without their constant inspiration and continuous guidance throughout the two months of my internship. I am extremely thankful to my mentors for the numerous opportunities provided to me for acquiring knowledge during the course of this internship. The proficiency, skills acquired and the understanding of real life situations gained during this internship will help me in my career.

EXECUTIVE SUMMARY

This project report reflects on the enriching experience I have gained during the summer internship by working as an operations intern at Havmor Ice creams Pvt Ltd under the supply chain department.

Havmor Ice creams is one of the leading ice creams brands in the country. It was founded in 1944 by Mr. Satish Chandra Chona and later acquired by a South Korean conglomerate, Lotte Confectionary in 2017. The company is in the business of manufacturing and distribution of milk-based ice cream and frozen desserts. It operates in both retail as well as franchise parlour model.

The company has more than 160 varieties of ice cream and frozen desserts (SKU) to offer in different styles and forms ranging from cones to bars, cups to family packs. The brand has a production capacity of more than 2.5 lakh litres of ice cream per day at its three manufacturing facilities in Ahmedabad, Faridabad and Solapur. It has its presence in almost 16 states in the country with its products available across more than 45000 retail stores and 250 company branded outlets.

The project was undertaken to study the cold chain logistics required for the industry and understand the costing system to identify any cost saving opportunities. The project was aimed at doing a cost benefit analysis for the company between owning assets or leasing it from third party vendors.

The summer internship at Havmor Ice creams provided me with the opportunity of applying theoretical knowledge learned at Institute of Management, Nirma University into the practical corporate world. This experience enhanced my learning about various concepts and also added to my existing skills.

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Part A: Profile of the Organization

Havmor Ice Creams was founded in 1944 by Mr.Satish Chandra Chona in Karachi (Pakistan). The company re-started its operations post-independence in Ahmedabad, India. It became a wholly owned subsidiary of the South Korean conglomerate Lotte Group in 2017. The company is in the business of manufacturing and distribution of milk-based ice cream and frozen desserts. It operates in both retail as well as franchise parlour model.

The core values of the company have been "ACHHAI SACHAI SAFAI" which means 'Goodness, Truthfulness and Purity'. This vision sets it apart from other frozen desserts / ice cream brands available in the market. The concept of the company has been to position the brand under milk based ice creams. The company provides its customers, ice cream products that are completely natural with no added preservatives, synthetic food colours, artificial sweeteners or flavours. It was among the first few to provide this healthier variant to its consumers in the country. Their products are made from the goodness of pure milk, skim milk powder, dry fruits & nuts, sugar, fruits, chocolate etc.

The company offers a myriad of products constituting of more than 160 varieties of Ice creams and frozen desserts. The products offered are available to be enjoyed in different styles and forms ranging from cones to bars, cups to family packs. They also have novelty products such as ice cream cakes, ice cream pastry, sundaes and other exclusive products offered at their numerous outlets across the country.

The company has adapted to changing times by constantly innovating and experimenting with its products and flavours. It has offered new products regularly to the consumers. The company has also included the concerns of more health conscious consumers and have started providing healthier options like "Sugar Free" and "Green Tea".

The products have been reasonably priced keeping in mind a diverse target group with the ice cream cup ranges starting from Rs.10/- to the bars and cones costs starting from Rs.20/- to 30/-. The 1 Litre packs costing around Rs.140/- while the more exclusive products like sundaes at their outlets cost almost Rs.400/- for a large serving.

The brand today produces more than 2.5 lakh litres of ice cream per day at its three manufacturing facilities in Ahmedabad, Faridabad and Solapur. It has presence in almost 16 states in the country with its products available across more than 45000 retail stores and 250 company branded outlets.

The brand reputation of the company is extremely strong. The brand personality of the company has been built on the promise of offering products made from the goodness of pure milk. They have designed their marketing campaign keeping in sync with this philosophy and came up with the famous "Cool Gaiz", "#RealDoodhDude", "Made of Milk" campaign.

Havmor has been bestowed with numerous awards and accolades by various institutions and associations over the years. The consumers' trust in the brand and its values has taken the company on the path of growth and success for the brand.

In 2017, Havmor had 7.2% market share by volume[1] and it ranked 4th in terms of volume in the domestic ice cream and frozen desserts industry. Today it is one of the most renowned ice creams brands in India offering wide variety of products across various segments.

In a drive to keep up with the current times and technology, the brand also has an app and website based delivery system apart from making the products available on various food delivery apps and platforms.

[1] Source - Global Data

Part B: Project Work

1. Title

Study of supply chain & logistics network and identifying cost saving opportunities.

2. Deliverables

The deliverables of the project are -

- Performing a cost benefit analysis between owning an asset or leasing / renting it
- Benchmarking the logistics costs to identify various cost saving opportunities
- Studying the changing delivery pattern across various CFA

3. Objectives

The various objectives of this project are as follows -

- To have a complete overview about the logistics pertaining to the ice cream industry
- To understand how the various costs would affect the pricing of the products
- To equip us with decision making ability based on research & analysis of various factors
- To help us in deciding which areas to service from which manufacturing facility i.e. transportation problem
- To understand the impact of COVID-19 on net sales and volumes for a given month

4. Project Description

The project falls under the area of Supply Chain Management and is being carried out under the replenishment team of Havmor Ice Cream Private Limited. The project happens to be a combination of both research and problem solving project. The work requires us to -

1. Research on cold chain logistics and get insights on the following points -
    - Type of equipment / assets currently in use in the industry
    - Primary, Secondary, Tertiary Transportation
    - Various manufacturers providing completely built products along with pricing details of the various models
    - OEM manufacturing reefer containers (size, specifications, costs etc.)
    - Running costs of the equipment - asset (including maintenance, insurance etc.)
2. Analyse in detail the various costs and classify them into Fixed vs Variable
3. Derive the carrying cost on per km basis for the products
4. Understand how the pricing of products is done under various segments
5. Study the current logistics and distribution network of the company
6. Analyse the change in Sales and Volumes across various CFA between June 19 & June 20
7. Suggest measures to optimize allocation of resources and increase efficiency

5. Introduction

Ice Cream is a frozen dessert and has a very limited shelf life as it is a highly perishable food product. Thus, the ice cream industry requires a temperature controlled supply chain.

This means that right from the origin point i.e. company's manufacturing facility till the final destination i.e. the end retailers or parlours, the product has to be stored at dedicated temperature controlled warehouses or distribution centres and it has to be moved across these locations in special type of vehicles called reefer vehicles with adequate temperature being maintained throughout.

There can be no relaxation in the temperature requirements at the storage facilities or even during the transportation of the product. The essential low temperature of around -22°C or lower is required to be maintained while the product is being stored, loaded or transported from one place to the other.

5.1 Classification of Transport

Transportation is one of the crucial parts of any supply chain. In manufacturing sector, it is required to bring the raw materials to the manufacturing facility and then for dispatch of finished goods. Today material goods can be transported via air, sea, land (which includes both rail and road).

For ice cream industry, mostly the goods are moved through road transport and for this reefer vehicles are used.

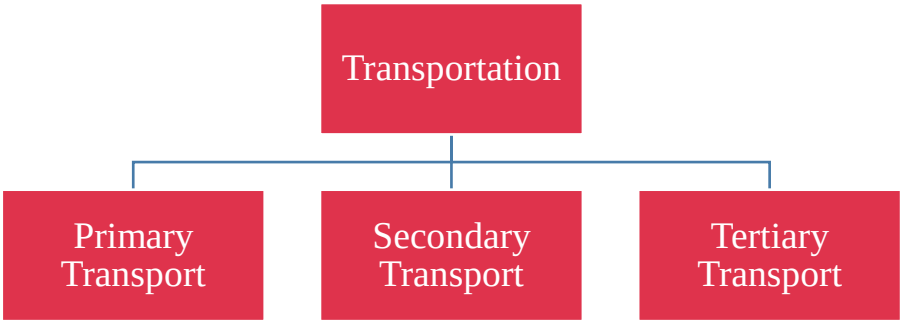

Fig 1. Classification of Transport

These reefer vehicles are of various sizes and load carrying capacity. As shown in fig 1, the transportation can be classified into the following categories -

- **Primary Transport -**

  The is the first leg of the transport which is used to dispatch the product from the manufacturing facility to the various regional warehouses or storage facilities.

Larger vehicles called heavy commercial vehicles (HCV) are used as primary transport as these vehicles are used for dispatching variety of products. In India, vehicles that are used as primary transport ply large distances like between states.

- **Secondary Transport -**

  The transport that is used to move the products from the regional storage facilities to local distribution centres. Mostly medium size vehicles called medium commercial vehicles (MCV) are used in secondary transport as they carry lesser variety of products and typically deliver to one or two distributors. These vehicles comparatively cover less distance which is usually within state.

- **Tertiary Transport -**

  This is the last leg of the transport and the products are moved from distributors to end retailers or parlours. Vehicles of smaller size are used as tertiary transport as the products are to be delivered to retailers. They usually ply short distances such as within city limits.

5.2 Size of Reefer Vehicles

There are reefer vehicles of different sizes and load carrying capacity available in the industry as shown in fig 2.

Fig 2. Reefer Vehicles of different sizes [2]

Some of the standard sizes and popular models offered in the category are as follows -

Category	Size	Load Capacity	Model
Primary Transport	32ft. to 40ft.	400 to 600 crates	Tata multi - axle trucks
Secondary Transport	14ft. to 24ft.	150 to 250 crates	Eicher Trucks, Tata 407
Tertiary Transport	6ft. to 8ft.	60 to 80 crates	Tata Ace, Mahindra Bolero

Table 1. Popular models in different sizes & load capacity

[2] Image source – www.icemakeindia.com

5.3 Manufacturer of Reefer Vehicles

There are various manufacturers present in our country that manufacture reefer vehicles or the cooling unit.

5.3.1 Fully Built Units -

These are the vehicles which are completely manufactured by one single company. These companies offer products which include not only the chassis, frame and body of the truck but also the temperature controlled container on top of the body along with the cooling unit and the auxiliary fuel tank which is required to run the cooling unit.

Some of the manufacturers offering FBUs are -

- Tata Motors
- Eicher Motors
- SML Isuzu
- Mahindra & Mahindra

5.3.2 Custom Built Units -

These are the vehicles which are custom built as per the specifications of the end customer. The truck manufacturer offers only the vehicle which includes the chassis, frame and body of the truck. The temperature controlled container along with cooling unit and the auxiliary tank are fabricated by OEMs (other equipment manufacturer).

Some of the OEMs fabricating the reefer containers are -

- Ice Make Refrigeration Ltd.
- TRC Cold Chain Solutions Private Limited

Fig 3. Reefer Vehicle

5.3.3 Cooling Units -

The cooling units are responsible for maintaining the adequate temperature in the refrigerated containers as shown in fig 4. Some of the OEMs manufacturing these cooling units are –

- Carrier
- Thermo King
- Hwasung Thermo

Fig 4. Cooling Unit

FBU	CBU	Cooling Unit
Tata Motors	Ice Make Refrigeration Ltd.	Carrier
Eicher Motors	TRC Cold Chain Solutions Pvt. Ltd.	Thermo King
Mahindra & Mahindra		Hwasung Thermo

Table 2. Manufacturers in reefer vehicles industry

5.4 Transportation Costs

The costs involved in transportation can be classified into two heads namely Fixed costs & Variable Costs. The various costs components involved are as follows –

Fixed Cost	Variable Cost
Cost of Asset	Fuel cost - vehicle & cooling unit
EMI / Lease Amount	Loading / Unloading charges
Insurance Costs	Parking & Waiting charges
Basic Maintenance Costs	Maintenance costs - Tyre cost, Oil change etc.
Driver & Helper Salary	Additional trip allowance
Taxes & Permits, PUC etc.	Toll Taxes

Table 3. Classification of cost

The costs that are fixed and which are be borne by the company irrespective of the number of kilometres for which an asset is being used come under the head of **fixed costs**.

Some of the costs under this category are -

- **Cost of Asset**

  It is the outright purchase cost that is borne by the company for purchasing the reefer vehicle which comes as either FBU or CBU. It includes the on-road price of the vehicle inclusive of GST which is charged on sale of vehicle & the reefer container.

- **EMI / Lease Amount**

  When a company purchases an asset on loan and pays the purchase cost including the interest over a period of time then these periodic payments are called EMI (easy monthly instalments).

  Many a times companies decide to not buy an asset and instead lease it on a contractual basis from a transporter. In such situations, the company has to pay a fixed lease amount to the transporter irrespective of the number of kilometres clocked by the vehicle in a month.

- **Insurance Costs**

  It is a form of risk management where the Insurance companies provide some reimbursement in case of any loss to the company for the insured object.

It is the cost of insuring the vehicle and the goods carried by the vehicle so as to have financial protection against any sort of losses arising from any unfortunate incident. The companies pay premium on annual basis for the vehicles and on lump sum basis for the goods transported.

- **Basic Maintenance Costs**

  It is the cost that is incurred by the transporter or company that owns an asset for the periodic service and maintenance of the vehicle so that it safe to ply on road. Also the refrigerated container needs to serviced so that it operates as per the specifications and goods can be stored in the right conditions.

- **Driver & Helper Salary**

  Each transport vehicle typically has a driver and a helper. The transporters or the companies that own these transport vehicles have to pay a fixed monthly amount as salaries to them.

- **Taxes & Permits**

  The transporters or companies have to pay road taxes before these transport vehicles can ply on the road. They have to also pay for permits depending upon the region where the vehicle shall be used. Most of the transporters opt for a national permit which is valid pan India.

- **PUC**

  It stands for Pollution Under Control. It is a certificate which has to be carried by motor vehicles that acts as validation that the vehicle's emission levels is as per the norms set by the government and the transport department. These certificates are renewed on a periodic basis so as to assure that the vehicle adheres to the emission level norms during its lifetime.

The costs that are not fixed and which are borne by the company depending upon the running of vehicle i.e. the number of kilometres or number of trips for which an asset is being used come under the head of **variable costs**. Some of the costs under this category are –

- **Fuel cost -**

  The companies operating the reefer vehicles have to bear the cost of fuel for running the vehicle as well as operating the refrigerated unit.

- **Loading / Unloading charges**

  There are certain charges which are associated with loading and unloading of the goods.

For instance, in Maharashtra the transporters have to pay charges like **'*Warai*'** to the **'*Mathadi*'** workers. These charges are charged on individual trip basis based on the amount of goods being carried.

- **Parking & Waiting charges**

  There are certain designated areas which have been marked for parking the vehicles. Some of these parking areas charge a fee on hourly basis and depending upon the size & type of vehicle.

  Different parking lots collect different parking charges depending upon the size and number of hours the vehicle is parked in their area.

  The companies or warehouses need not be operational 24 x 7 and most of these companies have specific timings for any loading or unloading activity. So if a vehicle reaches the company or warehouse outside these hours or if the loading / unloading bay isn't free cause of another vehicle(s) then the incoming vehicle has to wait for a while. The transporters provide limited amount of free waiting time but once it expires they charge a waiting fee to their clients.

- **Maintenance costs -**

  There were certain maintenance costs that were fixed but there are certain costs which depend upon the number of kilometres a truck is run. For instance, the tyres of a truck can last anywhere between 30,000 to 60,000 kilometres. The more a truck is run the more frequently its tyres will have to be changed.

- **Additional trip allowances**

  These are the additional allowances that the transporter or the company gives to the driver and helper of a transport vehicle apart from the fixed salaries. This is in lieu of overtime, meal or reward charges.

- **Toll Taxes**

  It is the additional tax that has to be payed a vehicle owner for using a particular stretch of road. It is used to recover the cost that was invested in building the infrastructure project, maintaining and carry out repair works, paying salaries of the staff etc.

  They are collected by different agencies and vary as per size of vehicle. Even different toll plazas have different toll tax for the same vehicle.

It is important to have an understanding of all these costs as it helps the transporters or the companies to determine the overall freight cost of an asset on a per km basis. In case of leasing, the transporters can then add their profit margin and give freight quotes to companies. Companies get an estimate of transportation costs involved in the movement of goods. This cost can be further used to determine the carrying cost which can be added to the cost of product. This also helps companies during negotiations with transporters in case of leasing trucks.

5.5 Deployment of Transportation

There are various factors involved that must be kept in mind while deploying a truck for movement of material -

- **Order Size -**

  The order size is calculated in terms of crates in the ice cream industry.

  So, if it is a bulk order and the material has to be transported large distances then bigger vehicles have to be deployed. These vehicles can typically carry 400 - 600 crates depending upon the type of model.

  For smaller order size and when the material has to be moved from CFAs to local distributors or even end retailers, vehicles with lesser load capacity are used. These vehicles can typically carry 150 - 250 crates falling under secondary transport and 60 - 80 crates under tertiary transport depending upon the type of model.

- **Consumer Demand -**

  The demand from the consumers for various products determines the time-period in which the said product will have to be replenished at the storage warehouses. Fast moving products or flavours have to be replenished frequently so as to keep up with the demand and avoid any stock out situation.

- **Number of orders -**

  If the vehicle will be carrying multiple orders and service multiple distributors en route then larger vehicles with higher load carrying capacity will have to be used.

- **Turnaround Time -**

  This is another factor which has to be considered while calculating the transportation costs. The material is moved in crates and the empty crates have to be brought back to the originating location.

- **Regional Factors -**

  Certain regional factors have to be considered while deploying an asset for material movement. For instance, within Delhi commercial vehicles have to run on CNG and so only specific type of models can be put to use for tertiary transport.

  Similarly, if the material has to be sent to remote locations which have narrow roads then then the type of vehicle will have to be selected accordingly.

6. Research Methodology

6.1 Sources of Data

The data for the purpose of the research about the running costs was collected through primary sources. For this purpose, a rough questionnaire with predetermined questions was prepared to interview the various participants through telephone. This method was chosen as the project had to be carried out from our current location itself without any travelling due to the lockdown in the entire country because of coronavirus pandemic.

The responses of the participants were then recorded and it proved to be a vital source for collecting the requisite data. The participants were chosen by first defining the target population who could provide the information needed. For this, transporters and truck drivers were identified to be the suitable target population of interest.

After determining the target population, sampling had to be done for which a combination of snowball and convenience sampling was used. In **snowball sampling**, an initial respondent / group of respondents is selected and after interviewing these respondents they are asked for referrals. I was able to get the contact of few transporters from my contacts and secondary sources listed on the internet. They gave me referrals and connected me to other transporters and truck drivers.

In **convenience sampling** only those respondents are selected because it is convenient to select them. Due to time limitations and the lockdown not all referrals could be contacted so only a small group of respondents were interviewed as per convenience.

The results have of some of the respondents have been shown in **Annexure 1**.

The data for analysing the change in sales and volumes across various CFA locations was provided directly by the company. Since these files are confidential to the company they have not been attached under Annexures.

The files contained order information for a given month such as plant code, plant name, client code, client name, date, vehicle number, e-way bill number, quantity (crates, litres) and amount (net amount, taxes and bill amount).

7. Data Analysis

Based on the analysis of the data collected and other secondary sources we can determine the asset cost and operational cost as follows -

7.1 Asset Cost

This comprises of the outright purchase of the Base Vehicle and the Refrigerated container. Vehicles of different sizes and load carrying capacity would vary in prices. The cost for some of the popular models have been gathered from the internet -

Eicher 1100 series Truck + 14ft. reefer container unit - 12.5 + 7.5 Lacs (approx.)

Tata 407 series Truck + 14ft reefer container unit - 9.5 + 6.5 Lacs (approx.)

7.2 Running Cost

The running cost can be determined based on the fuel consumption of the cooling unit. The fuel consumption would vary depending upon models and different temperature requirements. On average these cooling units consume around 2litres per hour.

7.3 Maintenance Cost

The maintenance costs include a wide variety of charges. For instance, the tyres will have to be replaced at least once a year and for the above-mentioned models that itself would cost around ₹50,000 for a set of four tyres. Apart from this there would be periodic maintenance costs such as servicing the vehicle and cooling unit, engine oil change etc.

7.4 Insurance Cost

The insurance cost varies depending upon the size and model of the vehicle. For the above mentioned models the insurance premium amount would be around ₹30,000 per annum.

7.5 Driver Expenses

The drivers of the reefer vehicles receive a fixed salary on monthly basis. The pay structure may vary from company to company. Based on the interview reports the average salary for a driver would be around ₹13,000 to ₹15,000 each month. The helper is paid less than the driver and their average monthly salary ranges between ₹8,000 to ₹10,000.

7.6 EMI Cost

If we take the tenure of loan for around 5 years with rate of interest as 10%, the EMI cost of a vehicle works out to around ₹2,125 per lac.

7.7 Operational Cost

The operational costs have been calculated based on average monthly running of 5000 kms with full load utilization.

Head	Charges
Fuel Cost	₹ 17.5 per km (diesel price of ₹70 and fuel economy of 4km/l)
Running Cost	₹ 3.5 per km (approx.)
Maintenance	₹ 2 per km (lumpsum)
Insurance Cost	₹ 0.5 per km
Driver Expense	₹ 4.2 to 5 per km
EMI Cost	₹ 8.5 per km (principal amount of ₹20 lakhs)
Misc - Doc Charges	₹ 1 per km (approx.)
Total	₹ 38 per km

Table 4. Operational cost for Eicher Vehicle (per km)

As we can see in Fig 5, the fuel costs constitute 46% of the total operational costs. The EMI of the reefer vehicle comprise of 23% of this cost. The driver and helper's salaries is 13% followed by running cost of 9%, maintenance cost of 5%, doc charges and other miscellaneous expenses of 3% and insurance premium of 1% of the total operational costs.

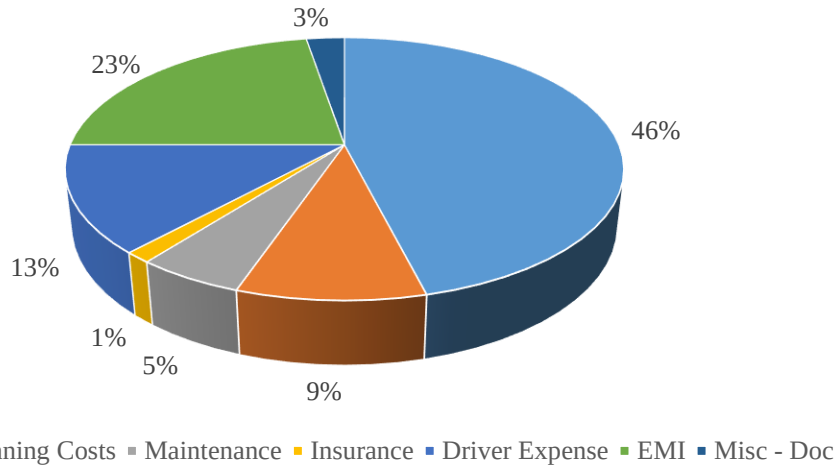

Fig 5. Split up of operational costs

7.8 Freight Cost

The freight charges that are quoted by transporters to the companies depend upon the size of vehicle, load to be carried, number of hours to service the delivery. Based on these factors the average rates charged by the transporters were as follows -

KM.	Rate
Less than 500km	₹60 to ₹75 per km
500 to 1000km	₹55 to ₹70 per km
More than 1000km	₹50 to ₹60 per km

Table 5. Rate chart

These freight charges mentioned in table 5 are on the basis of single trip. However, in the ice cream industry the goods are moved on a regular basis so the ice cream manufacturers enter into long term contracts with transporters. This not only result in a significant cost saving for the companies but they can also be assured of the availability of the vehicles whenever required.

The transporters on the other hand don't have to worry about their vehicles being parked when not getting trips as they would be getting the minimum amount as per the contract. It also saves them from the hassle of assigning vehicles to multiple clients.

7.9 Change in Net Sales & Volume

The data provided by the company included pin codes of both the CFA plant and the end client so the distance between the pin codes was calculated using the e-way portal of Govt. of India. Then the entire data was grouped by keeping an interval of 100kms to understand the delivery pattern. The computed and consolidated data for the change in volume for the month of June 2020 and June 2019 is shown in table 6 and graphically represented in fig 6.

All Plants - June 2020

Distance	Total_Litres	Total_Litres (%)
0-99	872235.19	53.76%
100-199	354147.50	21.83%
200-299	293826.68	18.11%
300-399	49798.62	3.07%
400-499	30057.25	1.85%
500-599	10111.91	0.62%
800-900	12334.90	0.76%
Grand Total	16,22,512.03	100.00%

All Plants - June 2019

Distance	Total Litres	Total Litres (%)
0-99	1654648.34	59.94%
100-199	581244.46	21.06%
200-299	395369.77	14.32%
300-399	76520.46	2.77%
400-499	45353.51	1.64%
500-599	5170.77	0.19%
600-700	2244.88	0.08%
Grand Total	27,60,552.19	100.00%

Table 6. Consolidated data for change in volume - June 2020 & June 2019

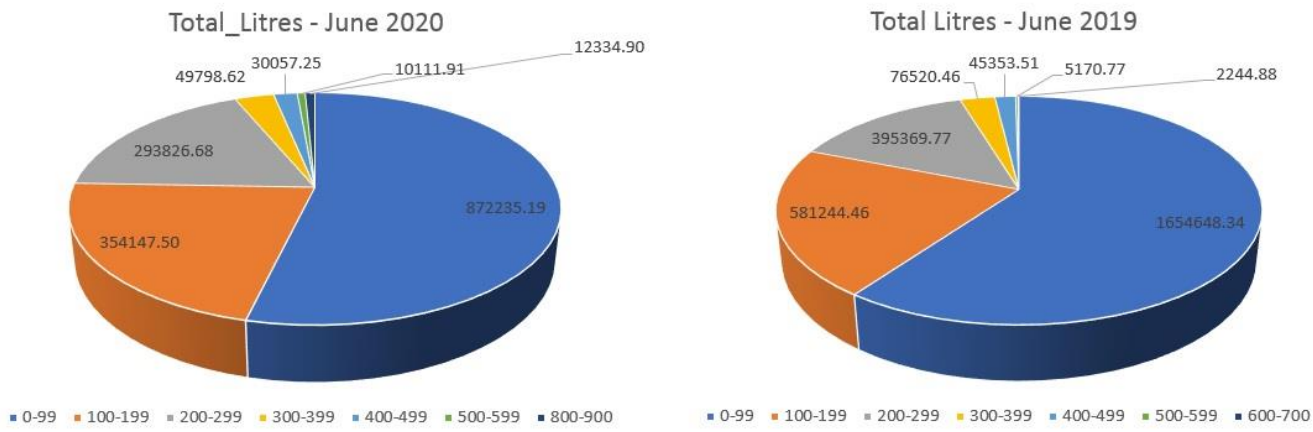

Fig 6. Change in volume - June 2020 & June 2019

Similarly, the computed and consolidated data for the change in net sales for the month of June 2020 and June 2019 is shown in table 7.

All Plants - June 2020

Distance	Net_Sales (Rs.)	Net_Sales (%)
0-99	129837914.73	53.94%
100-199	51932333.66	21.57%
200-299	43213323.54	17.95%
300-399	7363688.16	3.06%
400-499	4511298.27	1.87%
500-599	1652550.25	0.69%
800-900	2206856.84	0.92%
Grand Total	₹ 24,07,17,965.45	100.00%

All Plants - June 2019

Distance	Net Sales (Rs.)	Net Sales (%)
0-99	239808319.42	60.10%
100-199	83035819.82	20.81%
200-299	57222968.87	14.34%
300-399	11108795.60	2.78%
400-499	6598143.94	1.65%
500-599	857789.10	0.21%
600-700	386350.12	0.10%
Grand Total	₹ 39,90,18,186.87	100.00%

Table 7. Consolidated data for change in net sales - June 2020 & June 2019

The same information is graphically represented in fig 7.

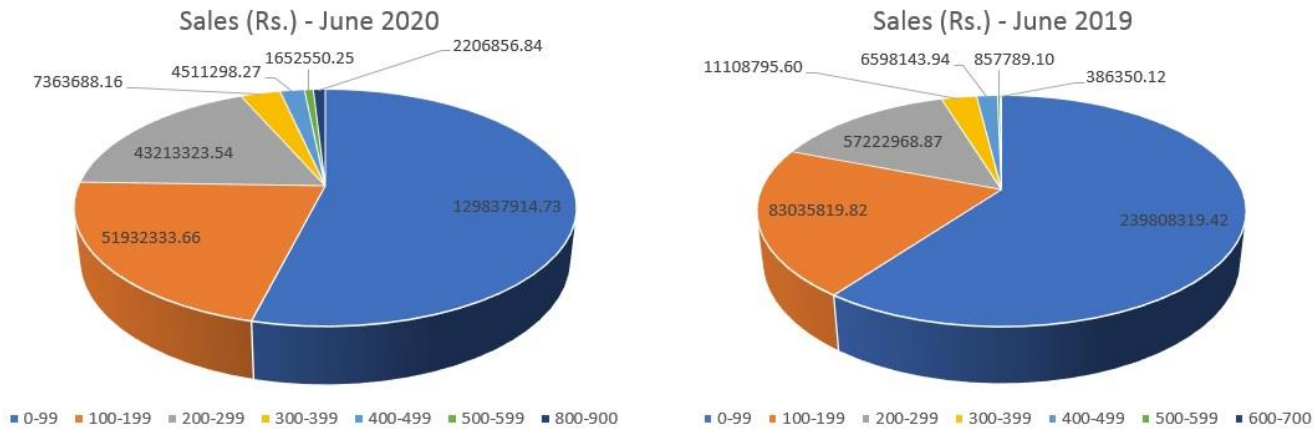

Fig 7. Change in net sales - June 2020 & June 2019

8. Conclusions

We can conclude that the margin between the operational cost calculated in table 4 and the freight charged by transporters as seen in table 5, is around ₹22 per km. Thus, with an average monthly run of 5000 km of a truck it translates to about ₹1,10,000 extra during the peak seasons. The company has to pay bear this extra amount per month when they lease out the vehicle from a third party transporter.

Also, we can see that the demand has gone down in June 2020 as compared to June 2019 due to COVID-19 pandemic by almost 40%. The sales have reduced by ₹16 crores as seen in table 7 and the volume has reduced by 11.38 lakh litres as seen in table 6, across various CFA locations.

8.1 Suggestions

The project was carried out to do a cost benefit analysis for the company to suggest that whether they should buy an asset or lease it out from transporters.

The company has been using the services of third party transporters and I would suggest that it should continue using third party logistics or transporter's services for transporting goods over long distances. There is clearly an extra cost attached to it but transportation isn't the core competency of any ice cream company and so they should focus on other areas to have a competitive edge over their competitors.

Moreover, a pattern can be seen that for some CFA locations a major percentage of sales is coming beyond 300kms distance so if this pattern reflects in the forthcoming months then the CFA re-location might have to be considered.

8.2 Recommendations

Based on the analysis I would make the following recommendations -

- For shorter distances, the company should consider making an investment for having its own dedicated fleet of vehicles of different sizes. This would help the company to save operational costs in the long run. Also, the company can reduce its tax liability by taking into account the depreciation of the asset.

- The company should have long term contracts with multiple transporters and not do business exclusively with one or two transporters as there is an added risk involved with it. If the entire supply chain in dependent on these one or two transporters then they would have the bargaining power in their hands and in case of any fall out between the company and the transporter the entire supply chain can be disrupted.

- The company has been servicing only few clients which are more than 300kms from the CFA location. So focus has to be given in increasing sales in those regions so as to explore the possibility of having new CFAs and reducing the transportation costs incurred in such large distances.

Part C: Learnings from the summer training project

Supply chain and logistics network forms the backbone of any company. It is thus very important to make it efficient and optimize it further as per the requirements of the company and other external factors.

Manager working under the supply chain are responsible for sourcing the raw materials that are required for manufacturing of the products by a company and then making sure that the finished product reaches the end customer.

The project under the replenishment team of Havmor Ice Creams Pvt Ltd helped me in understanding the importance of timely replenishment of the products at various CFAs across the country in order to avoid any stock out situations. It made me aware that it is very crucial to work in complete coordination with the production and sales department so that there is no gap between the demand and supply.

Some of the skills developed as a part of this project were -

- Understanding the principles of accounting, finance and supply chain management.
- Understand the logistics network in the ice cream industry.
- Ability to use the data to determine the various costs in logistics.
- Analytical skills to understand the margins in order to negotiate with external transporters.
- Evaluate the various alternatives and undertake projects to optimize cost
- Analytical skills to understand the changing demand pattern in terms of sales and volumes.
- Soft skills to build relationships with various stake holders

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Annexures

Annexure I: Interview Reports

**Trip Allowance is the amount that is directly paid to the driver which covers the fuel expenses, running costs, toll expenses, parking & waiting charges and even personal expenditure of the driver and helper. In case of third party transporters they charge an added amount over and above the trip allowance.

- **Interview 1**

  Model - Ashok Leyland Cargo 912

  Monthly run - 4000 to 5000kms

  Payload - 9 Tons

  Capacity - 280 crate

  Fuel Mileage (Truck) - 6 to 7km/l (empty)

  Earning -

  Driver Salary - ₹13,500

  Trip Allowance - ₹18/km

  Client Company - Amul Ice cream

- **Interview 2**

  Model - Eicher 1105

  Monthly run - 2000 to 3000 kms (peak), 1000 to 1200km (off-season)

  Capacity - 210 crate

  Earning -

  Driver Salary - ₹15,000

  Trip Allowance - ₹14/km

- **Interview 3**

  Model - Tata 1613

  Size - 24ft (6 tyre)

  Payload - 7 to 8 Tons

  Fuel Mileage (Truck) - 6km/l (empty), 4km/l (full load)

  Unit consumption - 2.5ltr / hr (depends on +/- temp)

  Earning -

  Driver Salary - ₹15,000

  Trip Allowance - ₹21/km

- **Interview 4**

  Model - Eicher

  Monthly run - 5000 to 6000 kms (within Gujarat)

  Capacity - 250 crate

  Fuel Mileage (Truck) - 8km/l (empty)

  Earning -

  Driver Salary - ₹10,000

  Trip Allowance - ₹13/km

- **Interview 5**

  Model - Eicher 1059

  Monthly run - 2000 to 3000 kms (off -season), 5000 to 6000km (peak)

  Capacity - 210 crate

  Earning -

  Driver Salary - ₹13,000 (approx)

  Trip Allowance - ₹14/km

  Client Company - Amul Ice cream

  Owner - Mr. KOOL

- **Interview 6**

  Model - Swaraj Mazda

  Fuel Mileage (Truck) - 5km/l (with load)

  Earning -

  Driver Salary - ₹15,000

  Additional allowance - ₹200 / day (all inclusive)

  Client Company - Vimal Ice-cream (Mehsana)

- **Interview 7**

  Model - Eicher

  Monthly run - 5000km (peak)

  Size - 22ft.

  Capacity - 400 crate

  Earning -

  Driver Salary - Nil

  Trip Allowance - ₹70/km (all incl.)

❖ **Interview 8**

Model - Eicher / Mazda

Monthly run - 7000km (peak)

Capacity - 200 crate

Earning -

Driver Salary - N.A.

Trip Allowance - ₹12 to ₹13/km

❖ **Interview 9**

Model - Eicher 1110

Monthly run - 4000 to 5000 kms (peak), 1500 to 2000km (off-season)

Capacity - 200 crate

Earning -

Driver Salary - ₹13,000

Trip Allowance - ₹15/km

❖ **Interview 10**

Model - Tata 407

Monthly run - 3000 km (peak), 1000 km (off-season)

Capacity - 200 crate

Earning -

Driver Salary - ₹12,000

Trip Allowance - ₹16/km