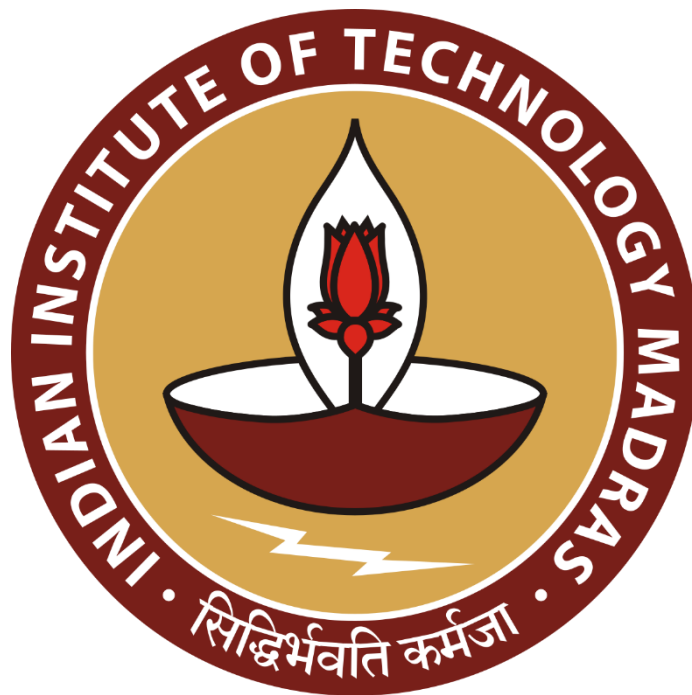# Analysis of Sales Data of Computech Computers

A Final Submission Report for the BDM Capstone Project

Submitted by

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Contents

1   Executive Summary and Title

The project's focus is on addressing the challenges faced by 'Computech Computers', a small B2C computer store located in Ernakulam, Kerala. They sell and repair computers, laptops, printers, modems, headsets, solar panels and CCTV cameras. The key issues, the store is currently dealing with include lack of visibility, growth stalls, poor inventory management and low customer retention rate. To overcome these challenges, a data-driven approach is proposed, focusing on the collection and analysis of sales data to identify market trends, popular products and customer retention rates.

The project highlights the huge potential of Influencer marketing to propel and strengthen Computech Computer's reputation, brand awareness, audience engagement and in turn lead to repeated orders, increased sales, credibility and kickstart its venture to new markets and go global. The project further recommends purchasing from local vendors instead of overseas export and collaboration with subsidiaries of Synthite Industries PVT.LTD such as Spice villa, Rivera retreat and vanilla grove to streamline Computech computer's business by lowering costs, increasing revenue and profits that will in turn lead to more significant contracts and better negotiated deals.

The report also provides a brief overview on powerful ideas such as unlocking global trade through ecommerce, enhancing customer retention by embedding a customer feedback loop into product delivery and launching new products as a systematic business expansion strategy.

To ensure data driven decision-making, the project proposes the collection and analysis of sales data over a fiscal year (Apr 22-Mar 23). By employing various techniques such as trend analysis, revenue growth, volume, product growth, revenue and customer contribution analysis, valuable patterns and insights were found.

The expected outcomes of this project include improved Scalability, Profitability, growth, customer satisfaction and expansion of the brand's physical presence and new client base by implementing powerful growth strategies.

By invoking the power of data and adopting innovative growth strategies, Computech Computers can overcome its stalling growth, fierce competitive market and boost business performance.

2 Detailed Explanation of Analysis Process/Method

The Analysis process or method for the Computech Computers sales analysis project involved a wide range of steps from gathering the data, processing, data exploration to ultimately finding valuable patterns, insights and making recommendations to improve sales performance. A detailed explanation of the processes involved are as follows:

➤ **Data Collection**

The sales data for a period of one fiscal year (April 2022-March 2023) was collected from Computech Computers in Ledger Format created with Tally software. The data obtained was then manually entered into excel.

➤ **Data Cleaning**

Once data collection is done, the data needs to be cleaned and processed for further analysis. Data cleaning involves handling missing and incorrect values, filtering out unwanted outliers, duplicates & irrelevant data and fixing structural errors. This improves the validity, accuracy, completeness, consistency and uniformity of data. Here, the organization both sells and repairs various devices, all these details were not separated in the Ledger. Since the objective is to analyze the sales data, the sales data and service data were converted into two tables and analysis was carries out separately on both.

➤ **Descriptive Statistics**

It involves using historical data to identify trends and gives us a deeper insight into the variables used and the potential relationships between them. Here, data analysis Toolpak was used for performing descriptive statistics. It gave information regarding measures of central tendency (mean, mode, median), measures of dispersion (variance, standard deviation, range), skewness, kurtosis etc.

➤ **Data Visualization**

Further data exploration and visualization was carried out using powerful tools like excel, google sheets and python. In this step, various visual representations such as graphs, charts and

tables were used to find various trends, patterns and outliers in the data. Here visualization was carried out to find trends in revenue growth, month-wise volume, product growth, revenue contribution and customer contribution.

> **Analysis of Sales & Service data**

In this step, sales and service data were analyzed to find crucial patterns and trends to improve sales performance, profitability, customer satisfaction, reliability and serviceability. In this project, revenue contribution analysis, month-wise volume analysis and month-wise product growth analysis etc were carried out to find the best-selling and least selling item, variation of sales over time etc. Further, the monthly trade volume pertaining to FY 22-23 was used to predict the quarter I sales performance of FY 23-24 using TREND function and revenue forecasting was carried out to understand the additional revenue generated through new initiatives such as influencer marketing and collaboration.

> **Interpretation**

Findings from the analysis were interpreted to draw valuable insights and conclusions. Here, growth stalls, high attrition and unsteady trade volume growth was observed & recommendations were made to attract more customers, increase sales, enhance customer satisfaction and unlock global trade.

> **Recommendation**

Based on the insights obtained from the analysis, recommendations were made to reverse the growth stalls. The recommendations made were to leverage influencer marketing for business growth, collaborate with subsidiaries, launching new products, embedding customer feed back loop, purchasing from local vendors instead of overseas export and unlocking global trade through ecommerce

> **Report presentation**

The results, findings and recommendations were compiled into a report. It contains the analysis and insights inferred and recommendations made to boost business performance.

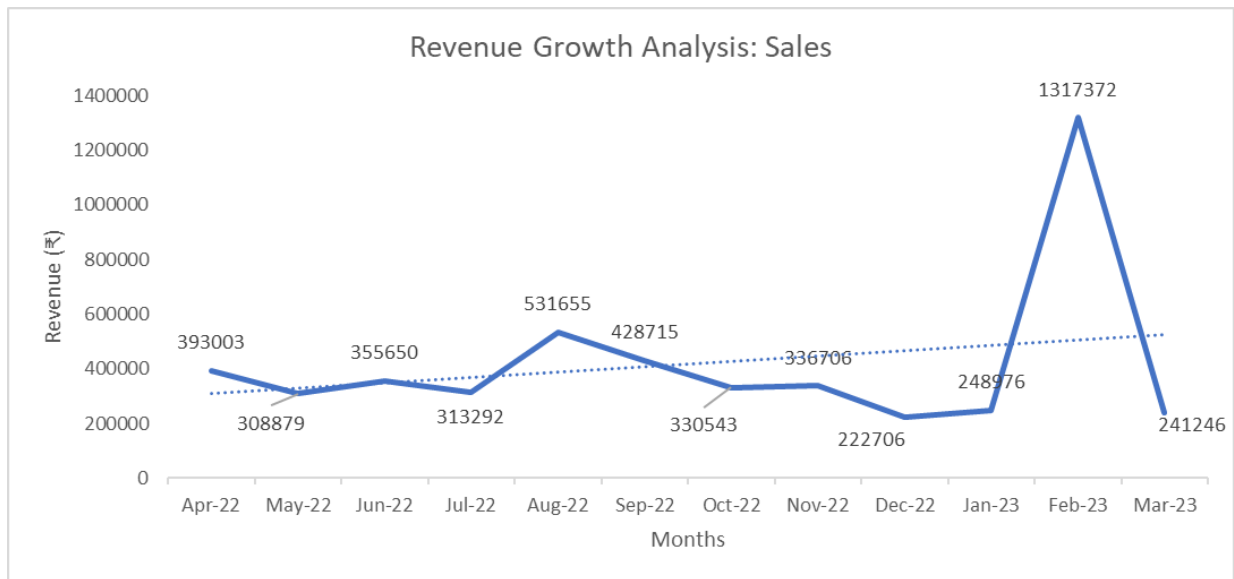# 3.Results and Findings

3.1 Revenue Growth Analysis

Figure 3.1 Month-wise Revenue Growth Analysis – Sales

The figure 3.1 provides an insight into the overall health of Computech Computer's sales over a fiscal year (FY 22-23). A decreasing trend in sales was observed from April to July 2022, followed by a slight increase in August 2022. However, the sales further dropped until January 2023. Although a considerable increase in sales was observed in February 2023 (Rs.1317372), it fell back to an all-time low in the following month (Rs. 241246). The total revenue distribution over the four quarters of FY 22-23 is as shown in figure 3.2:
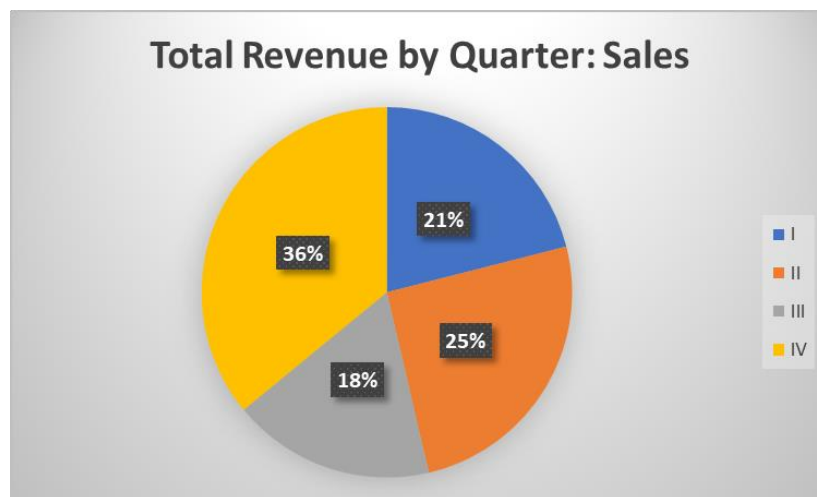

Figure 3.2 Quaterly Revenue Growth Analysis – Sales

The Highest revenue growth was observed during the fourth quarter (36%) and the lowest sales growth was observed during the third quarter (18%).
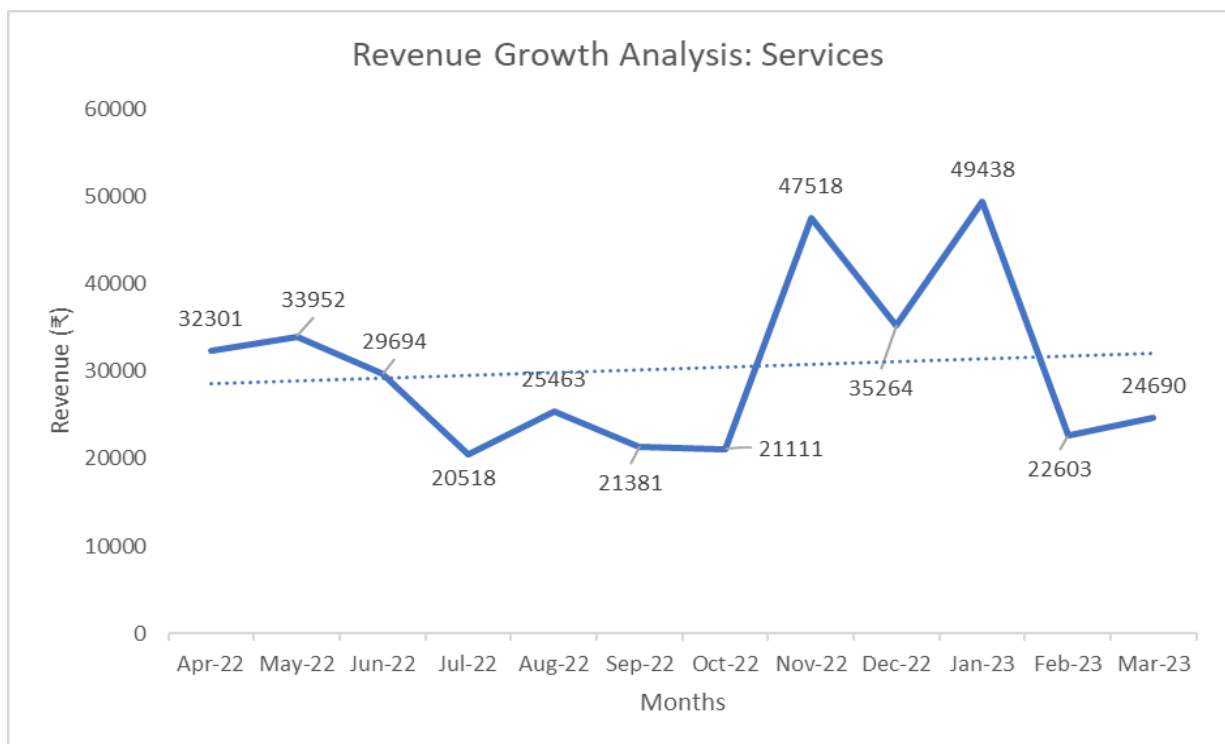
Figure 3.3 Month-wise Revenue Growth Analysis – Services

In case of services, a decline was observed from April to July followed by a slight increase in August 2022, which again depleted until October 2022. From October 2022 to March 2023, a very unsteady trend was observed.
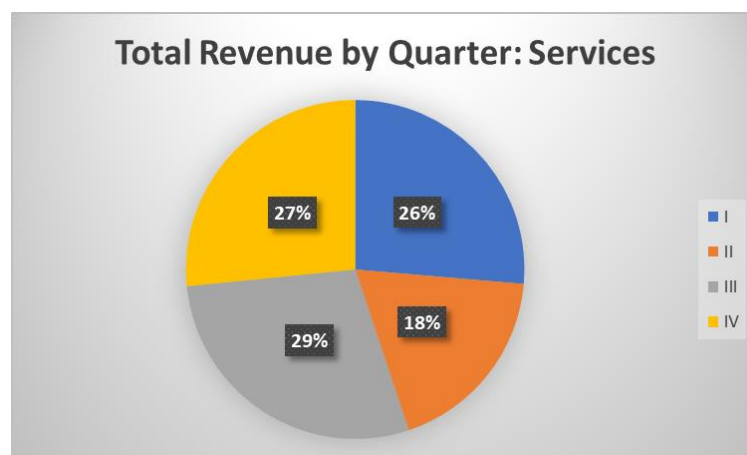

Figure 3.4 Quaterly Revenue Growth Analysis – Services

The figure 3.4 shows the total service revenue distribution over the four quarters of FY 22-23. Here, the highest growth was observed in third quarter (29%) and the lowest growth was observed in the second quarter (18%).

3.2 Month-wise Volume Analysis

The figure 3.5 represents the month-wise sales volume of FY 22-23. As we can see, volume precedes price. Hence the unsteady change in revenue can be directly correlated to the unsteady change in volume. The highest sales volume was observed in February 2023 (1136 Nos) whereas the lowest was observed in the following month, March 2023 (313 Nos)
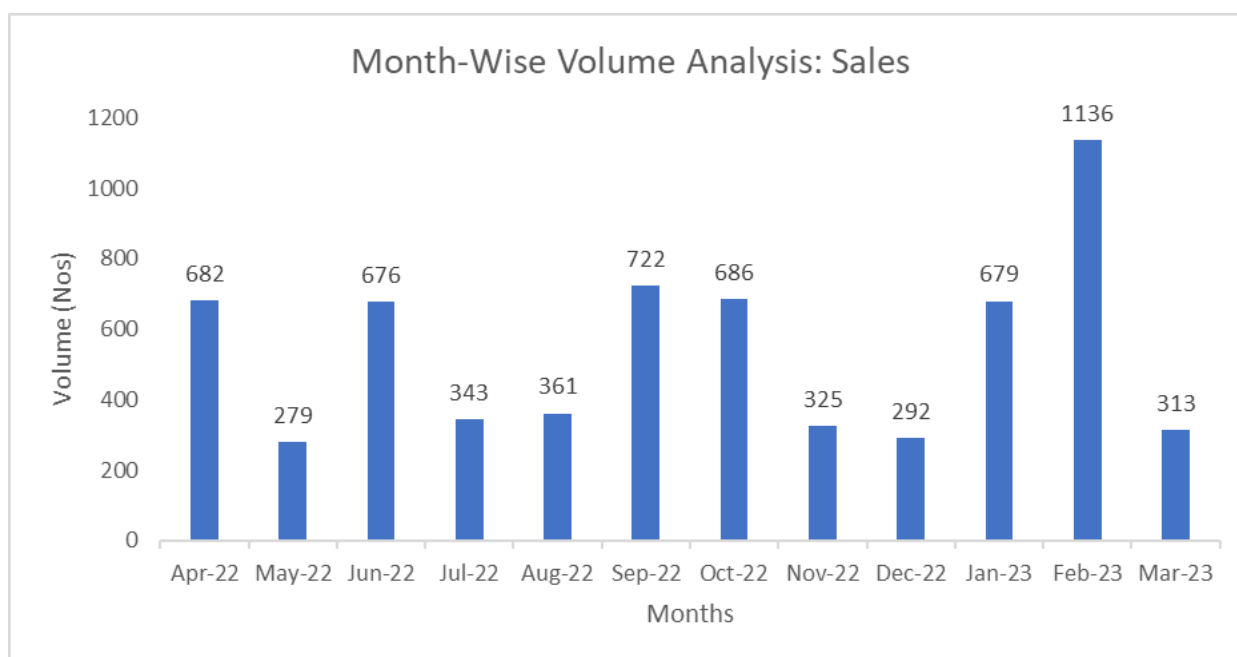

Figure 3.5 Month-wise Volume Analysis – Sales

From the quarterly sales volume analysis (figure 3.6), it can be inferred that the highest sales volume was observed in the fourth quarter (33%) whereas the lowest one was observed in the preceding quarter Q3 (20%).
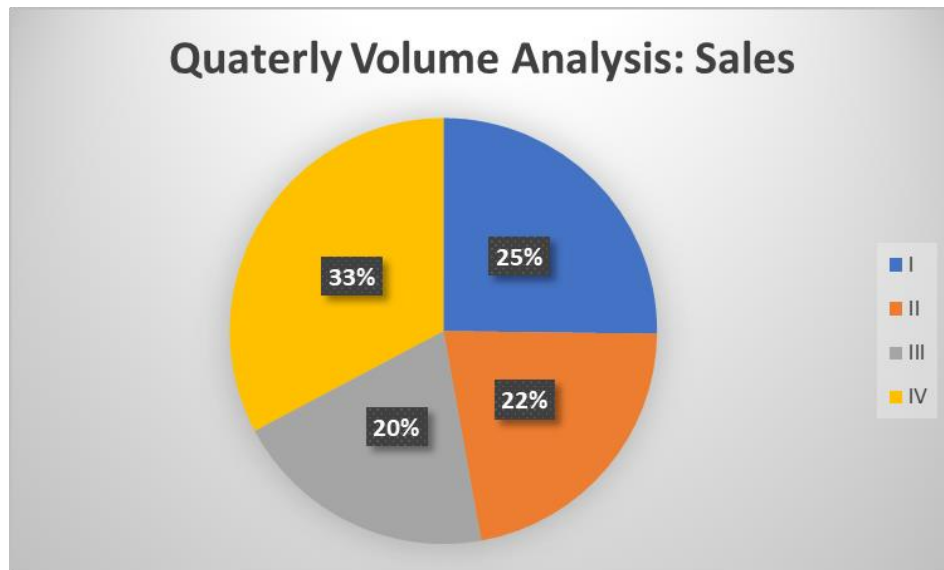
Figure 3.6 Quaterly Volume Analysis – Sales

3.3 Product Growth Analysis

The figure 3.7 depicts the total quantity of the top 5 best-selling products sold in FY 22-23. Out of the 515 items available in Computech Computers, the top 5 best selling items were Tonner refilling (136 Nos), remanufactured Compa (110 Nos), Laptop Keyboard (98 Nos), RJ 45 Connector JAC (45 Nos) and Dell USB Mouse (34 Nos) (figure 3.8). The worst selling items were Laptop CPU Fan (1 Nos), Geonix 128GB SSD HDD (1 Nos) and Zebronics USB speaker (1 Nos).
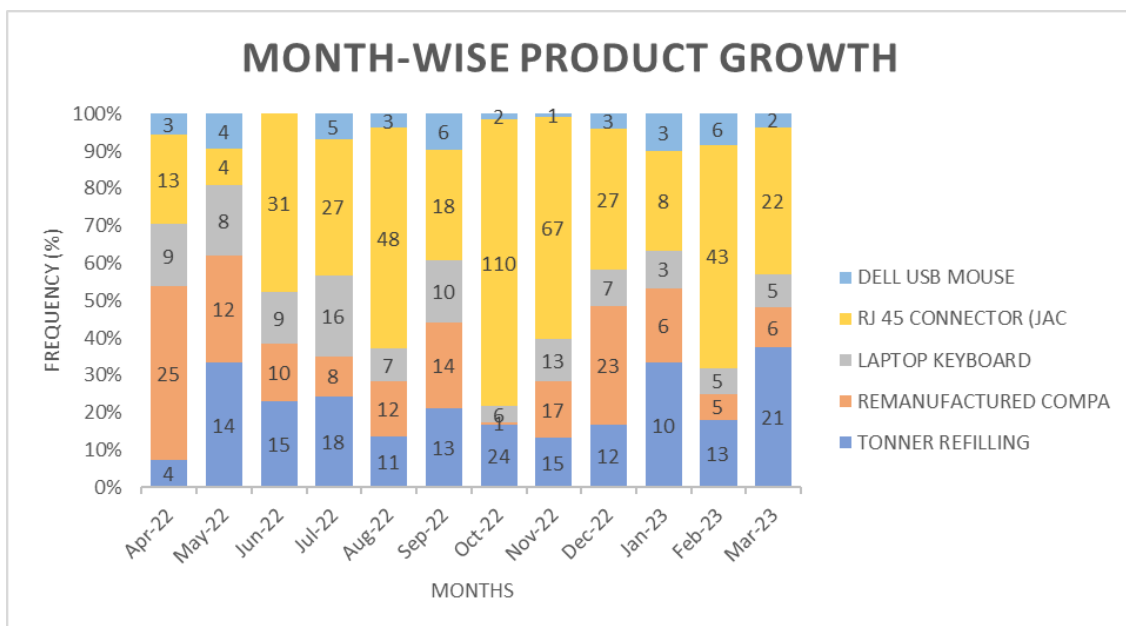

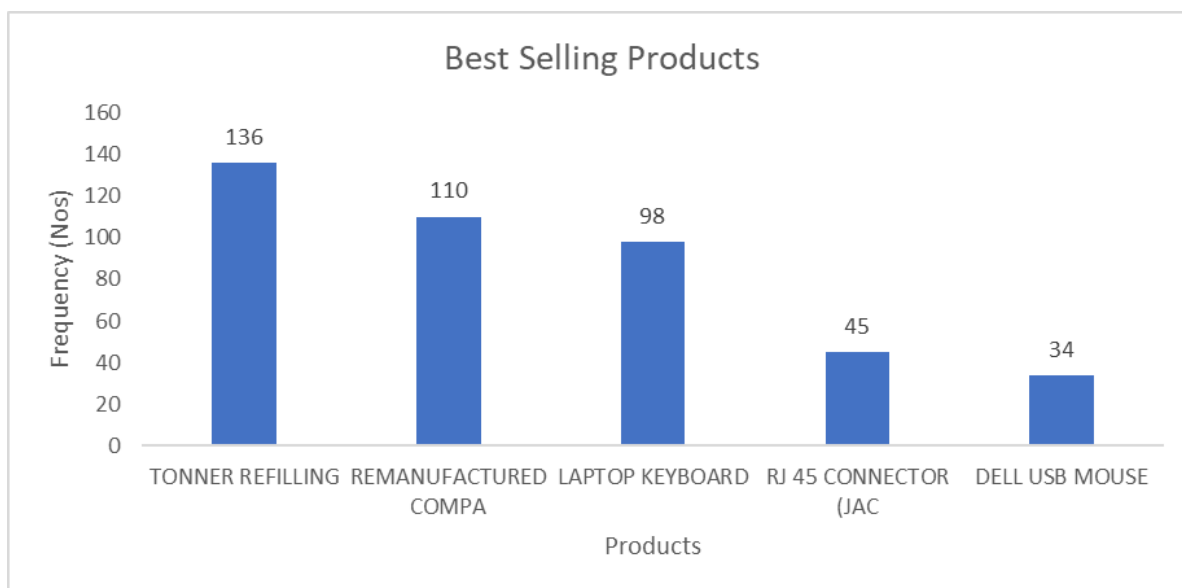*Figure 3.7 Month-wise product growth*

Figure 3.8 Top 5 best-selling products

3.4 Revenue Contribution Analysis

Figure 3.9 represents the total revenue contribution of the top five products during FY 22-23. Here, top five products based on their revenue generation potential were Laptop screen (Rs 10,10,401), D-LINK CAT 6 UTP LANC (Rs 1,92,441), Laptop Keyboard (Rs 1,20,404), Used Laptop (Rs 1,18,150) and Dell OptiPlex 3080DT (Rs 1,08,898). Also, the bottom five products based on the revenue were DELL E2422 24'' MONIT (0.02 paise), DELL 22'' SC2222H MON (0.06 paise), 25MM BEND (0.1 paise), 25MM PVC PIPE (0.2 paise) and GIGATECH-CR 2032 CIM (Rs 29.66).

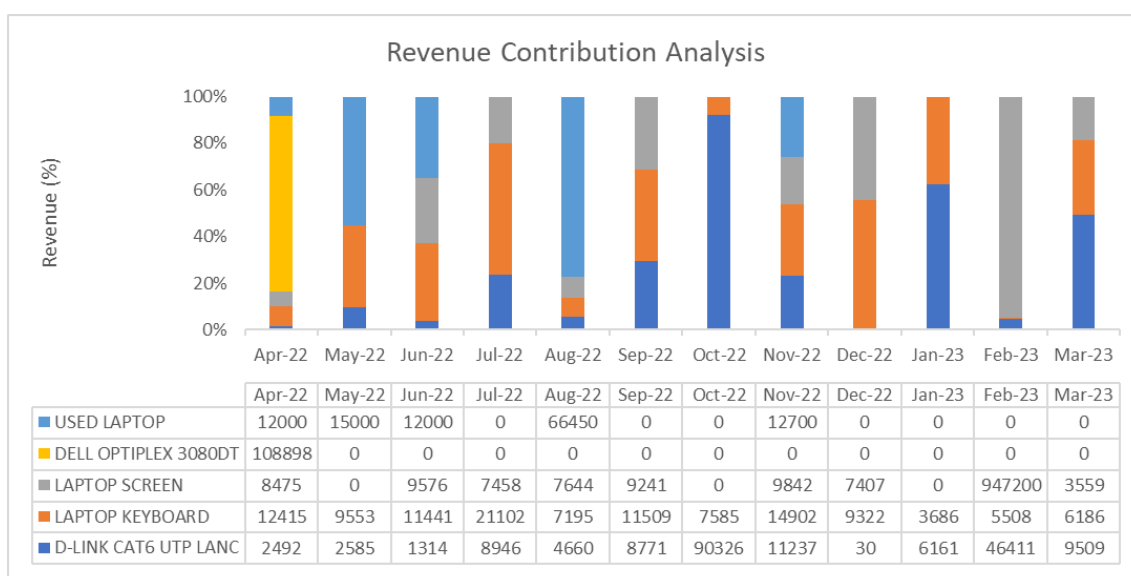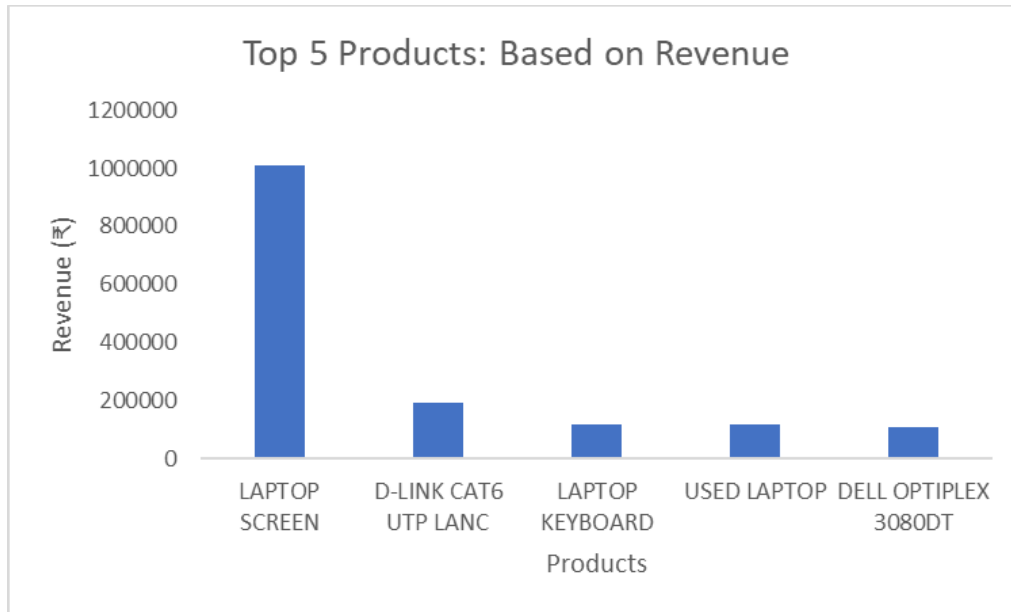|	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
■ USED LAPTOP	12000	15000	12000	0	66450	0	0	12700	0	0	0	0
■ DELL OPTIPLEX 3080DT	108898	0	0	0	0	0	0	0	0	0	0	0
■ LAPTOP SCREEN	8475	0	9576	7458	7644	9241	0	9842	7407	0	947200	3559
■ LAPTOP KEYBOARD	12415	9553	11441	21102	7195	11509	7585	14902	9322	3686	5508	6186
■ D-LINK CAT6 UTP LANC	2492	2585	1314	8946	4660	8771	90326	11237	30	6161	46411	9509

Figure 3.9 Revenue Contribution Analysis

Figure 3.10 Top 5 Products – Based on Revenue

Figure 3.10 and Figure 3.11 represents the top five and bottom five products respectively.
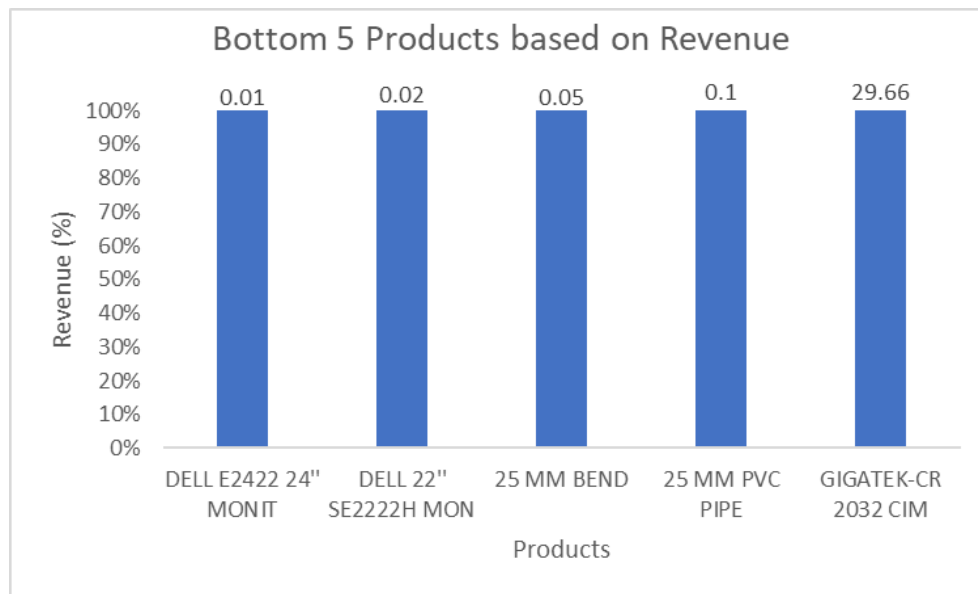

Figure 3.11 Bottom 5 Products – Based on Revenue

3.5 Customer Contribution Analysis
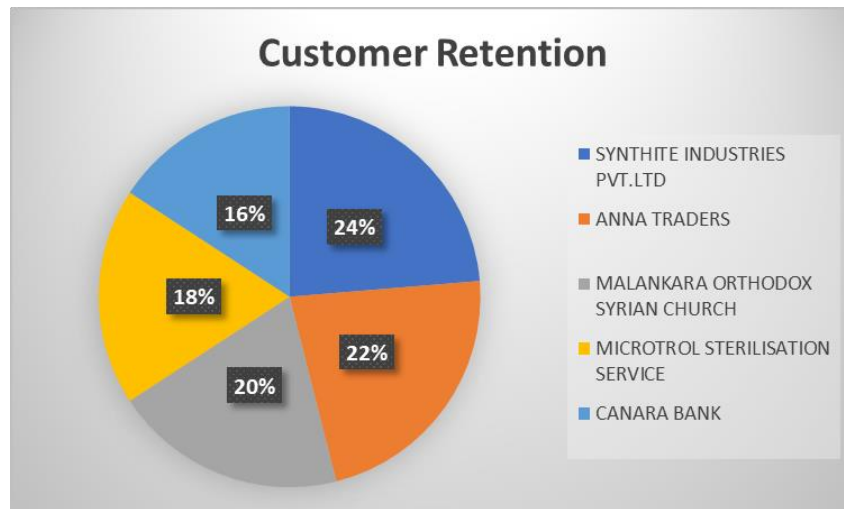
Figure 3.12 Bottom 5 Products – Based on Revenue

Out of the 179 unique customers who approached Computech Computers for their products and services in FY 22-23 majority seems to attrite. However, customer retention was observed in the case of organizations such as Synthite Industries PVT.LTD (24%), Anna Traders (22%), Malankara Orthodox Syrian Church (20%), Microtrol Sterilization Service (18%), Canara Bank (16%) and a few other individuals.

3.6 Trend Analysis

Figure 3.13 Trend Analysis

Trend Analysis can be effective in leading strategic planning as it uses historical data to predict the long-term direction of market sentiment. 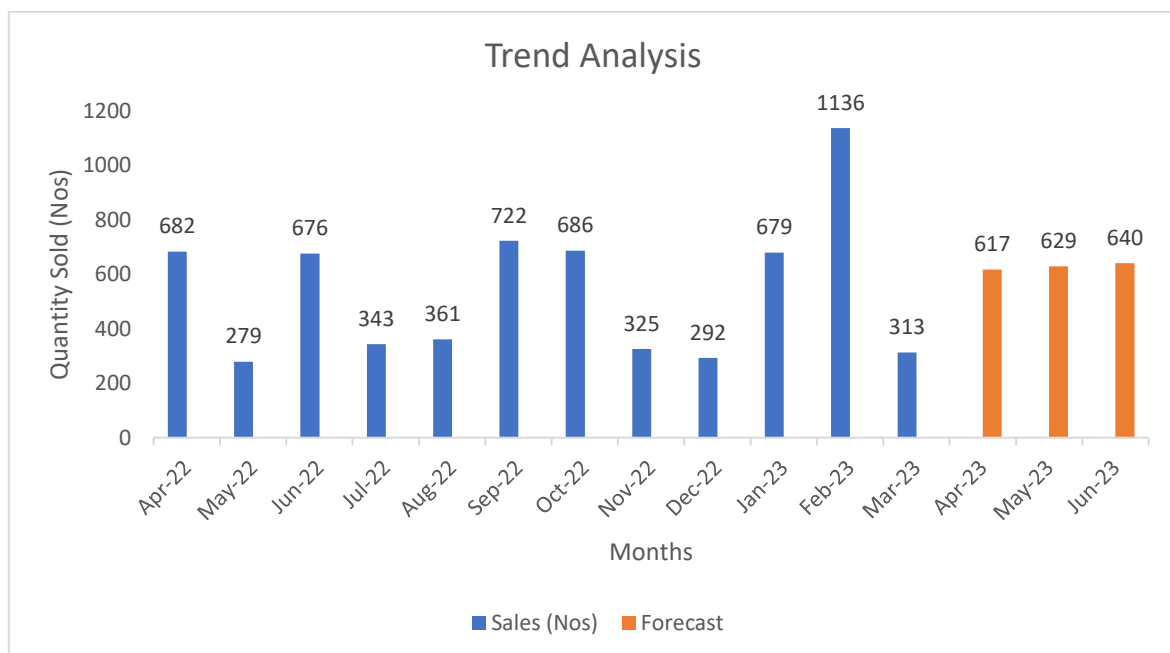Here, the monthly trade volume pertaining to FY 22-23 was used to predict the quarter I sales performance of FY 23-24. A stagnating growth was observed in the first quarter, highlighting the need for innovative marketing strategies and product diversification, to kick start into growth mode again.

3.7 Revenue Forecasting

A revenue forecast has been built, to plan and strategize the next phase of growth, for Computech Computers. Based on the data, estimation has been done to analyze the potential change in trade revenue and customer count through new initiatives such as influencer marketing and collaboration with subsidiaries of Synthite Industries such as Spice Villa, Riviera retreat, Vanilla Grove etc.

> **Initial Revenue**

Average revenue generated per month = Rs. 4,19,062

> **Influencer Marketing**

Assuming that Computech Computers partners with a nano influencer with approximately 10,000 followers and expecting a 2% increase in customers then,

Influencer marketing cost = Rs. 15,000

Expected increase in customers = 200

Revenue per customer = Rs. 500

Additional revenue from influencer marketing = 200 x 500 = Rs. 1,00,000

> **Collaboration with subsidiaries of Synthite Industries PVT. LTD such as Spice villa, Rivera retreat and vanilla grove**

Expected increase in customers: 130 x 500 = Rs. 65,000

> **The total revenue can be calculated as follows:**

Hence from the above calculations, it can be inferred that, through innovative initiatives and strategies such as influencer marketing and Industrial collaboration, the average revenue per month of Computech computers can be increased from Rs. 4,19,062 to a whooping Rs. 5,84,000.

4. Interpretation of Results and Recommendation

The case study presented here gives a detailed insight into the analysis of sales data over the fiscal year from April 2022 to March 2023. The following interpretations can be made from the above results:

> **Revenue Growth Analysis**

The revenue growth analysis clearly lends an insight into the declining health of Computech computer's business sales and highlights the need for a new business strategy. A decreasing trend in sales was observed from April to July 2022 followed by a slight increase in August 2022. The sales further dropped until January 2023 followed by a considerable increase in sales in February 2023 which again falls back to an all-time low in the following month. A similar unsteady revenue growth is observed in case of services too. The growth stalls must be given immediate attention and should be reversed by new innovative product launches and effective marketing strategies.

> **Month-wise Volume Analysis**

The month-wise volume analysis gives an insight into the quantity of items sold per month in FY 22-23. The highest sales volume was observed in February 2023 and the lowest was observed in the following month March 2023. The unsteady trend in trade volume growth highlights the need for more high-quality products and better inventory management. Fixing this underlying issue can in turn improve revenue growth as volume precedes price.

> **Product Growth Analysis**

The product growth analysis gives an idea about individual product contribution over each month of FY 22-23. The top five best selling products were Tonner Refilling, REMANUFACTURED COMPA, Laptop keyboard, RJ 45 CONNECTOR JAC and Dell USB

Mouse. From this it can be inferred that increasing the inventory of these products can lead to higher overall revenue generation.

➢ Revenue Contribution Analysis

The top five revenue generating products were Laptop screen, D-LINK CAT 6 UTP LANC, Laptop Keyboard, Used Laptop and Dell OptiPlex 3080DT. Cross selling items similar to these could contribute to higher revenue. The bottom five products based on revenue were DELL E2422 24'' MONIT, DELL 22'' SC2222H MON, 25MM BEND, 25MM PVC PIPE and GIGATECH-CR 2032 CIM. Which indicated the need for replacing these with more superior and innovative alternatives.

➢ Customer Contribution Analysis

Out of the 179 unique customers who approached Computech Computers for their products and services, majority seemed to attrite. This highlights the need for a more effective customer feedback loop system to enhance customer satisfaction.

➢ Trend Analysis

The monthly trade volume pertaining to FY 22-23 was used to predict the quarter I sales performance of FY 23-24. The stagnant monthly trade volume growth indicates inconsistency, reduced sales growth and uncertainty, signifying the need to take charge, uncover root causes and initiate growth strategies such as influencer marketing, new product launches etc.

➢ Revenue Forecasting

The average revenue per month generated by Computech Computech's was around Rs.4,19,062, influencer marketing strategies could boost revenue up to Rs 1,00,000 per month for an initial investment of Rs. 15,000. Collaboration with subsidiaries of Synthite Industries PVT.LTD such as Spice Villa, Rivera retreat and Vanilla grove could generate an additional revenue of Rs 65,000 per month.

The revenue forecast indicates that through innovative initiatives and strategies such as influencer marketing and industrial collaboration the average revenue per month of Computech Computers could be increased from Rs. 4,19,062 to Rs. 5,84,000.

Based on the above insights, the following recommendations are made to revive growth:

➤ **Leveraging Influencer Marketing for business growth**

Influencer marketing has become a global phenomenon and influencers are playing a pivotal role in swaying Genzers purchasing decisions. It also offers the second highest ROI of any marketing trend.

Computech computers could partner with a nano influencer with approximately 10,000 followers. Even a 2% increase in customers could increase the average sales per month by over Rs. 1,00,000.

Further, it has a huge potential to propel and strengthen Computech Computer's reputation, brand awareness, audience engagement and in turn lead to repeated orders, increased sales, credibility and kickstart its venture to new markets and go global.

➤ **Collaboration with subsidiaries of Synthite Industries PVT.LTD such as Spice villa, Riviera retreat and vanilla grove:**

Collaboration can streamline Computech computer's business by lowering costs, increasing revenue, profits and lead to more significant contracts and better negotiated deals. It could help the business thrive in today's disruption driven, fierce competitive market with ever expanding customer needs.

From the customer contribution analysis, the highest customer retention was observed in the case of Synthite Industries PVT. LTD. Synthite reality, one of its subsidiaries also contributes a significant proportion of Computech computer's sales volume. Computech Computer's could further increase its sales by collaborating with other nearby subsidiaries of Synthite Industries PVT.LTD in kolenchery such as Spice villa, Riviera retreat and Vanilla grove.This is expected to increase the average monthly revenue from Rs. 4,19,062 to Rs. 4,84,062.

➤ **Launching new products and improved inventory management:**

From our analysis it can be observed that laptop keyboards emerged to be one of the top five products both in terms of best sellers and revenue. Hence, adding more stocks of this product to the inventory could prevent shortages. Also, new types of laptop keyboards can be introduced based on popularity and market trends to further improve revenue.

The bottom five products based on revenue were found to be DELL E2422 24'' MONIT, DELL 22'' SE2222H MON, 25 MM BEND, 25 MM PVC PIPE and GIGATEK- CR 2032 CIM. All these five products together contributed only Rs. 30 to the annual revenue signifying the need for replacing these products with more profitable ones. Considering the high sales observed in case of DELL USB MOUSE, RJ 45 CONNECTOR JAC and TONNER REFILLERS, new products like Arctic Fox Wired USB Gaming Mouse, Lapster ethernet adapter USB, Mi Router 4A Gigabit, Zebronics LPC12A Laser Toner Cartridge, Portronics Miport 4D MPORT4D, POR 1634 USB Hub could prove to be better replacements.

New product launches could further attract more customers, target new markets, increase sales, revenue, customer loyalty and retention. It could also prove to be new opportunities for business expansion.

> **Embedding a customer feedback loop into product delivery**

Creating an effective customer feedback loop could help Computech computer's get data-driven insights into customer sentiment which can be used to drive superior product support, enhance customer satisfaction and track its progress in meeting customer expectations. It consists of collecting feedback from customers through various processes such as survey tools, social media monitoring and other reviewing platforms, then this data has to be analyzed, applied and tested. The loop should end with a follow-up with customers.

> **Unlocking global trade through Ecommerce:**

Currently, Computech computers only provide in-store services resulting in only providing services to nearby organizations and residents. They could venture new foreign markets and expand globally by invoking the power of e-commerce and social media. Their sales could be further enhanced by selling their products online through existing e-commerce platforms such as Amazon, Flipkart, eBay etc, they could also create their own customized website and increase brand value.

➢ **Purchase from local vendors instead of overseas export**

According to Mr. Sony, overseas imports are extremely expensive and the vendors trick them into purchasing cheap quality products due to linguistic barriers. They could instead opt to purchase more high-quality products from local vendors at better costs. This could lead to an increase in trade volume which in turn results in an increased revenue. It could also lead to minimized cost price since the cost of overseas import has been eliminated.