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THE LONDON SCHOOL  
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# Business Analysis Report



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## **EXECUTIVE SUMMARY**

The following report covers a critical analysis of an online retailing firm that ships a broadened selection of goods to an expansive range of consumers internationally, providing recommendations and insights regarding the five crucial components outlined below;

- **Market Overview**

A comprehensive analysis of all markets, covering key performance indicators such as profit, sales, customer base, and discounts.

- **Canadian Market Study**

A study on the Canadian market, the least profitable market with the lowest customer base.

- **Customer Analysis**

Inspection on the variation of customer base over time, and most profitable customers.

- **Product Analysis**

Analysis of the performance of products and product categories.

- **Shipping Analysis**

An evaluation of the relationships between order priority and order status, and the impact of shipping cost and ship mode on net profit.

## **INTRODUCTION**

The dataset provides information over the course of 4 years (2019-2022), and has been used to obtain key insights on the company's position in terms of important aspects such as profits, customer base, etc. Certain assumptions were made during the analysis:

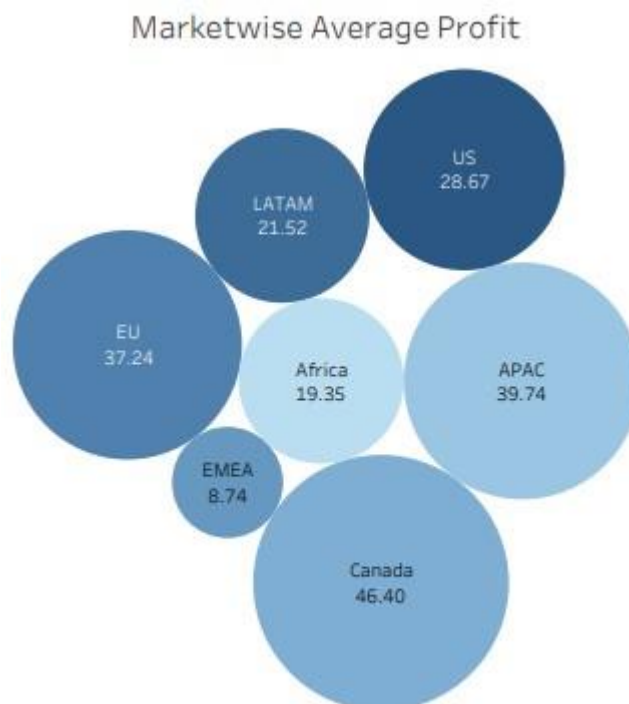
- The **Net Profit Margin** was calculated using the following equation:  
$$([\text{Sum}] \text{ Profit} / [\text{Sum}] \text{ Sales}) \times 100\%$$
  
([Sum]Profit was assumed to be equivalent to Net Profit).  
([Sum]Sales were assumed to be equivalent to Total Revenue).
- The field '**Order status**', was created under the following assumptions:  
If 'Ship Date' – 'Order Date' = 0, then 'Early'.  
If 'Ship Date' – 'Order Date' > 0 and <= 4, then 'On Time'.  
If 'Ship Date' – 'Order Date' > 4, then 'Late'.
- It's also assumed that the **Ship Modes rank from best to worst** in the following order. 'Same day, First Class, Second Class, Second Class, Standard Class.'

## KEY FINDINGS AND ANALYSIS

### Market Overview



The APAC market surpasses all the other markets in terms of Profits, Sales, and Discounts, although the number of customers in the US, EU, LATAM, and APAC markets is approximately the same. The performance of the EMEA and African markets appears to be unsatisfactory in comparison to the other markets. The Canadian market stands out as an outlier, displaying the lowest total profit and customer base across all markets, and the absence of discounts.



Avg. Shipping Cost



## The relationship between Order Priority and Shipping Cost

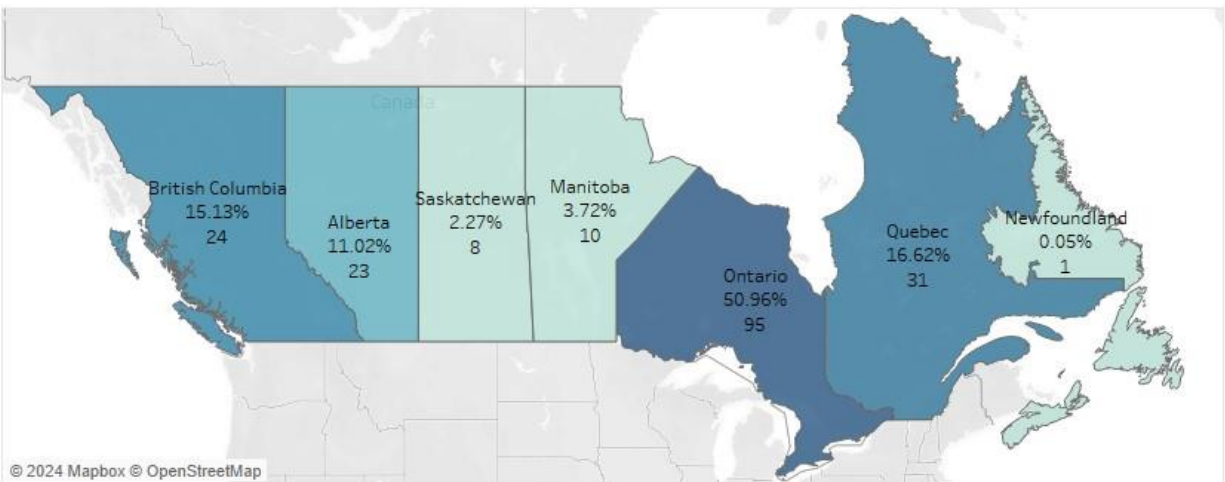
Order Priority	APAC	EU	US	Market LATAM	Africa	EMEA	Canada
Critical	81.98	69.21	50.82	49.85	46.72	45.25	40.81
High	43.36	39.57	30.54	28.49	22.17	21.04	22.55
Medium	24.73	21.30	16.57	16.17	13.49	12.09	14.23
Low	36.14	32.59	23.44	23.52	21.73	16.95	4.54

While the APAC market has the highest average shipping costs, an intriguing observation is the comparatively high shipping costs in low priority orders than medium priority orders in all other markets except for Canada.

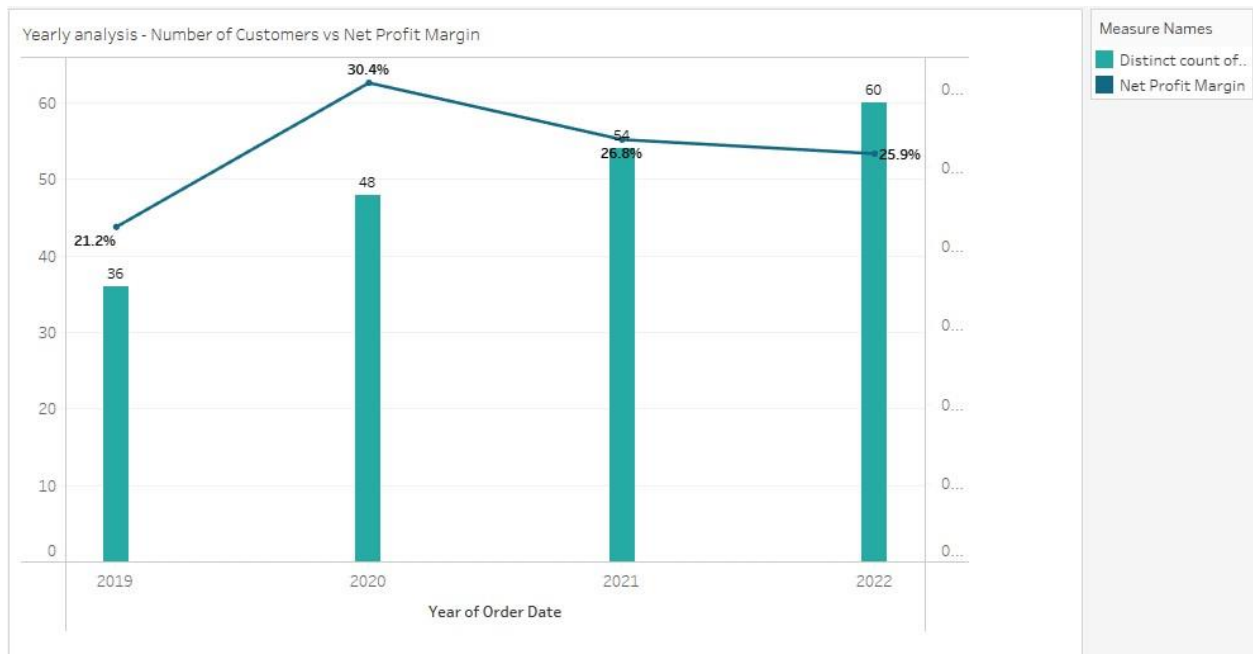
## Canadian Market Study

This market has the smallest client base and makes up only 1.22% of the company's total profit, but what sets it apart is that it commands the highest average profit across all markets. Notably, another distinguishing characteristic is that the Canadian market is the only market that does not provide any discounts, a feature that may have an impact on the low client base and total profit.

(Statewise) Percentage of Total Profit and Customer Base

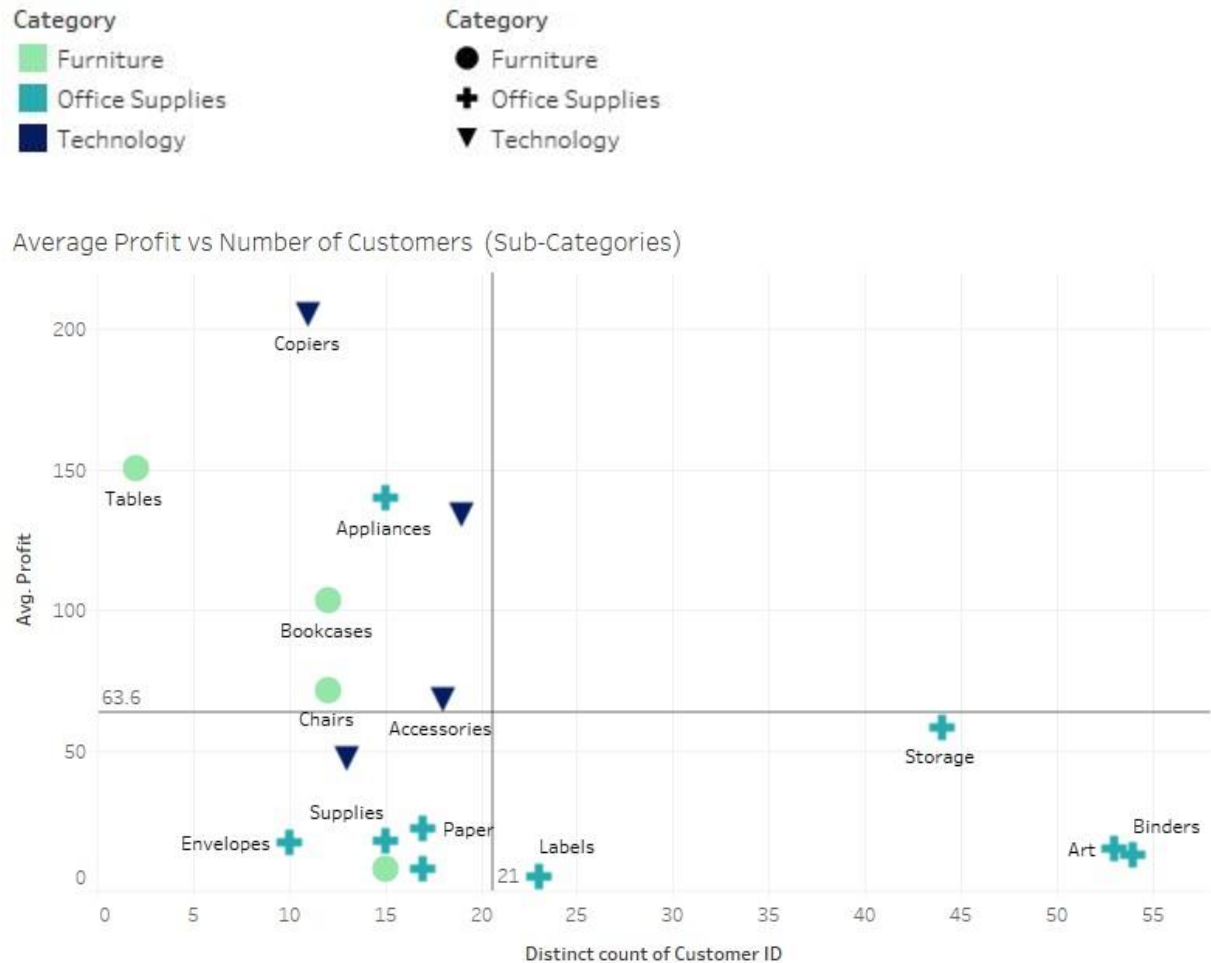


Within the expansive Canadian landscape, comprising seven states, Ontario draws the highest total profit, accounting for a whopping 50.96% of the overall profit. Its imposing presence is explained by the noticeably greater number of customers compared to other states. Newfoundland, on the other hand, contributes to only 0.05% of the total profit, justified by the existence of only one customer across the entire state. British Columbia, Quebec, and Ontario stand out for displaying high net profit margins in addition to making significant contributions to profits.



While Canada shows a steady increase in the number of customers each year, the subsequent decrease in the net profit margin raises concerns. This could be attributed to several factors such as market saturation, inflation, increased cost of production, and increased competition.





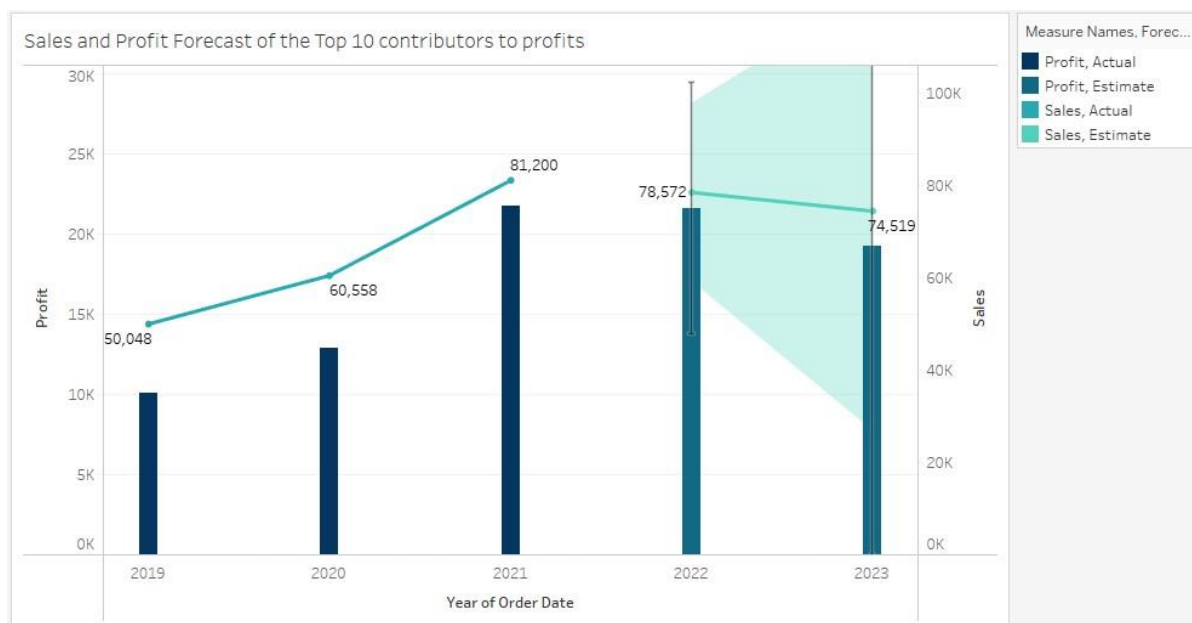
The sub-categorical analysis of the Canadian market indicates a significant trend in the relationship between average profit and the number of customers across various product sub-categories. Notably, sub-categories such as storage, art, and binders display a relatively high number of customers but low average profit. Conversely, tables, copiers, and appliances showcase high average profit but have a relatively low client base. The insight provided by this analysis is that the company should strive towards ensuring that the markers showcasing the sub-categories are displayed in the unoccupied region (top right) of the graph, partitioned by the average lines.

## Customer Analysis

Yearly Analysis - Incoming Customers vs Repeating Customers



The analysis reveals a significant decrease in the yearly inflow of new customers, but a moderate increase in the number of repeat customers can be identified at the same time.



The total profits and sales from the top 10 profit contributors saw an upward trend in the years 2019-2021. However, a decline in total profit and sales is anticipated for the years 2022-2023.

### Number of Customers vs Avg. Profit (Seasonal analysis)



A seasonal analysis carried out on the number of customers indicates that there's an increase in the number of customers in the fourth quarter of each year. Nonetheless, the company hasn't capitalized on the seasonal increase of customers in the years 2020 and 2022, since the average profit has seen a decreasing trend in these years.

## **Product Analysis**

Percentage of Profits & No. of orders(Categorical Analysis)



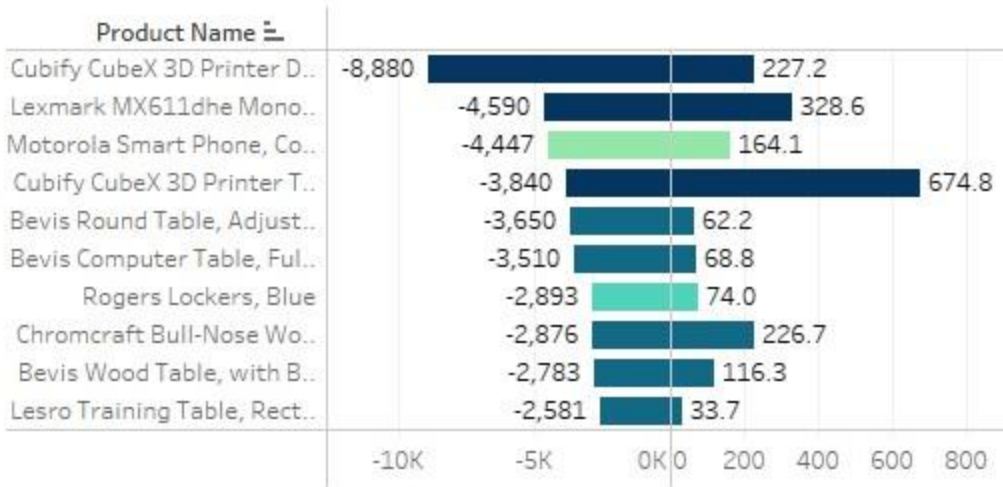
A categorical analysis of the firm's products indicates that technology is the most profitable category, occupying 45% of all profits, while office supplies and furniture occupy 35% and 20% each. Nonetheless, office supplies have a higher number of orders (18977), while technology and furniture approximately have the same number of orders (8000).



This visualization depicts the marketwise distribution of the top 5 most profitable products. The Canon imageCLASS 2200 Advanced Copier, which stands out as the product accumulating the highest total profit, has only been sold in the US market. The Hoover Stove, despite having net profit margins of 50%, 50%, and 48.9% in the African, EMEA, and EU markets, has not been sold in the US and Canadian markets, and also exhibits a very low net profit margin in the APAC market. The company would benefit from promoting and marketing the relevant products better in the relevant markets, thereby boosting overall profits.

Sub-Catego... ■ Machines ■ Phones ■ Storage ■ Tables

## Most Unprofitable Products vs Avg. Shipping Cost



The analysis of products causing the highest losses highlights a few notable sub-categories. Machines, for instance, are one of the significant contributors to the company's losses, possibly due to the high average shipping costs in comparison to other products. Furthermore, tables have regularly proven to be unprofitable for the company as a sub-category.

## Shipping Analysis

Analysis of the shipping aspect of the company indicates that the APAC market has the highest average shipping cost, while the EMEA market has the lowest. The EU, LATAM, and US markets have higher average shipping costs, in comparison to the African and Canadian markets' relatively lower average shipping costs.

Relationship between Order Priority and Order Status

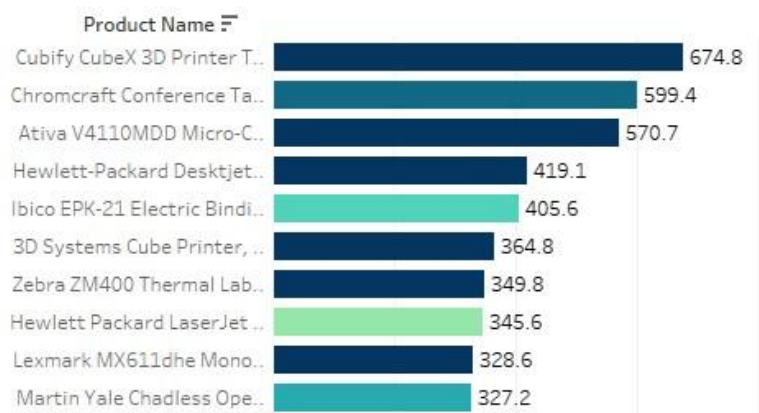


A significant relationship between order priority and order status is illustrated by this chart. All low priority orders have resulted in delayed shipments. Furthermore, the majority of shipments have been late for medium priority orders. The existence of late shipments for high priority orders is also a matter that requires immediate attention. Despite the criticism, it is commendable that the company has zero late shipments for critical priority orders.



A significant statistic is revealed by the analysis of net profit margins and average costs of all ship modes for **'tables'**, the sole sub-category in the company that has a negative profit. Notably, standard class (-8%), second class (-13%), and first class (-6%) ship modes all contribute to a negative net profit whereas the same day (4%) ship mode displays a positive net profit.

#### Products with the Highest Shipping Costs



This graph highlights the products with the highest average shipping costs in the company. It also showcases that **'machines'**, in comparison to other sub-categories, incur significantly higher shipping costs.



## **RECOMMENDATIONS AND CONCLUSION**

### **Market Overview**

- The firm could capitalize on the APAC market's strong performance by expanding the products available and investing in marketing strategies in order to sustain and increase profits.
- Investigate the reasons behind low priority orders having higher shipping costs than medium priority orders across all markets except Canada.
- The company would benefit from taking initiatives to reduce overall shipping costs without compromising the quality of service.

### **Canadian Market Analysis**

- Provide discounts in the Canadian market, potentially increasing the customer base and overall profits.
- The firm could exploit Ontario's high performance in comparison to other states by implementing marketing strategies and promotions, further increasing sales.
- Explore opportunities in the market in order to increase the customer base in Canada. Diversifying the range of products available may help the cause.

### **Customer Analysis**

- Invest in marketing, promotion, and discount strategies to attract new customers and neutralize the declining trend in new customers.
- A customer loyalty program could be initiated in order to retain and appreciate the top contributors, potentially mitigating the predicted decline in profits.
- Establish seasonal marketing strategies in order to capitalize on the seasonal increase of customers.

## Product Analysis

- Strategically market and promote high-performing products (Canon imageCLASS 2200 Advanced Copier, The Hoover Stove, etc.) in markets where their potential isn't fully realized to maximize overall profits.
- Evaluate and revise strategies for loss-making sub-categories such as tables and machines, concerning factors such as shipping costs and demand.
- The firm could also consider shifting towards marketing different products in different markets employing tailored strategies that align with the preferences of the consumers in those markets.

## Shipping Analysis

- Resolve the issue of the existence of late shipments in medium and high priority orders and improve customer satisfaction.
- The company can address the problem of incurring high shipping costs for certain sub-categories such as machines by investing in package optimization and outsourcing to third-party logistics providers.
- The factors contributing to the positive net profit in the 'Same Day' mode of shipment could be analyzed thoroughly, and those qualities can be replicated in other ship modes generating negative net profit.

This report emphasizes the importance of market-specific strategies, customer retention initiatives, product and shipping optimization, and the recommendations presented above focus on assisting the firm strengthen its position in the market, and maximize total profitability in all aspects of its operations.