

University of London
London School of Economics and Political Science

Coursework – EMFSS ST2187 – Business Analytics,
Applied Modelling and Prediction

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Global Super Store Analysis Report

Worldwide -
Overview

United States -
Overview

United States -
Profits

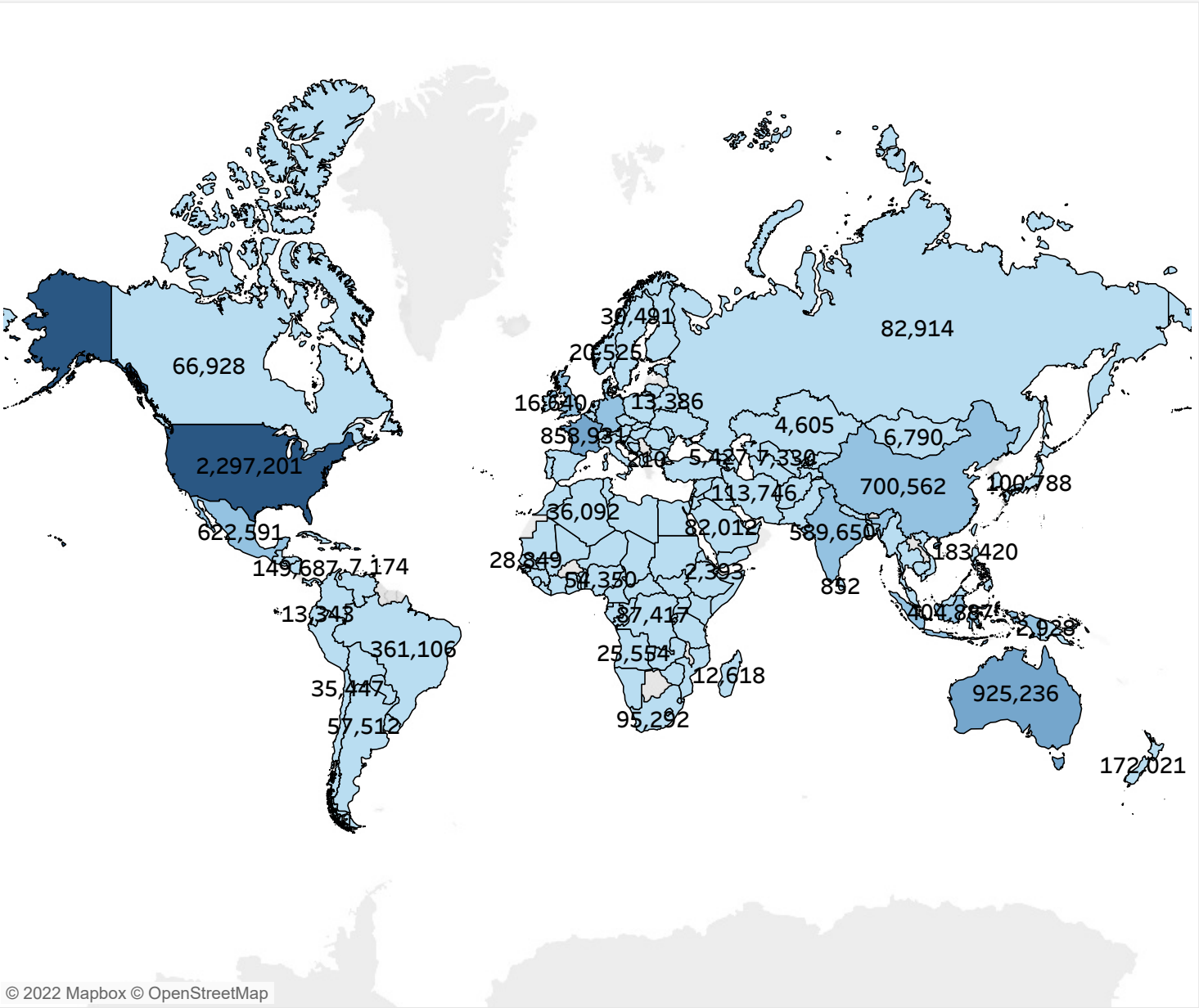
United States -
Shipping

United States -
Customers

Overall Summary Worldwide(2016-2020)

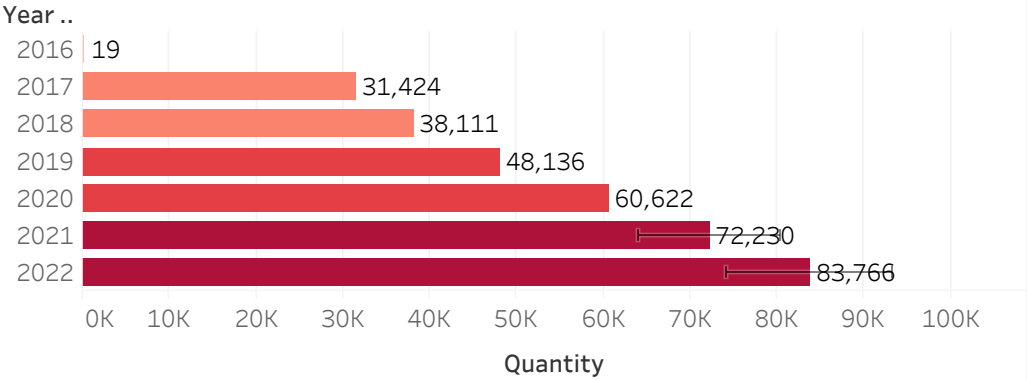
Sales(\$)	Quantity Sold	Profit(\$)	Total Shipping Cost(\$)	Profit Margin	Avg Discount per order(%)
\$12,642,502	178,312	\$1,467,457	\$1,352,816	11.61%	29.28%

Worldwide Sales(2016-2020)

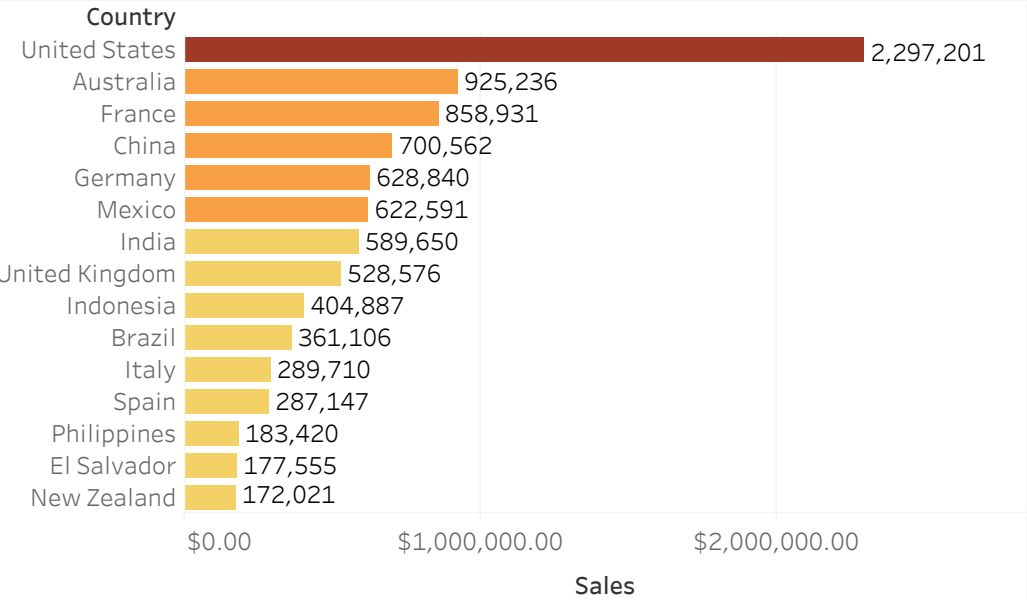


Quantity sold over years (2016-2020)

+ Forecast(2021-2022)



Top 15 Countries with highest sales



Global Super Store Analysis Report

Worldwide - Overview

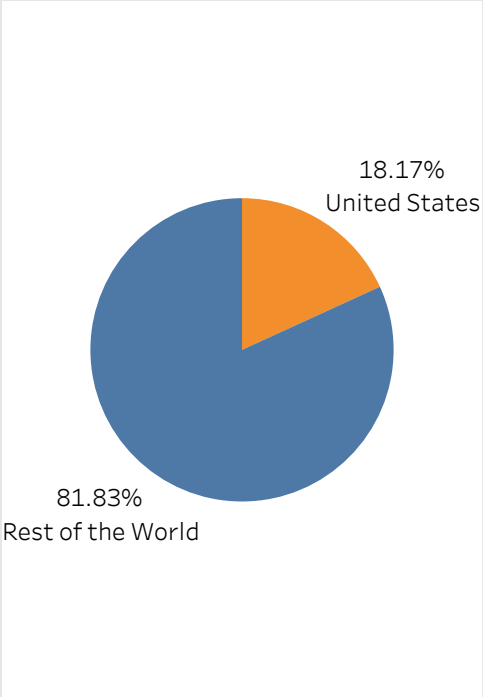
United States – Overview

United States – Profits

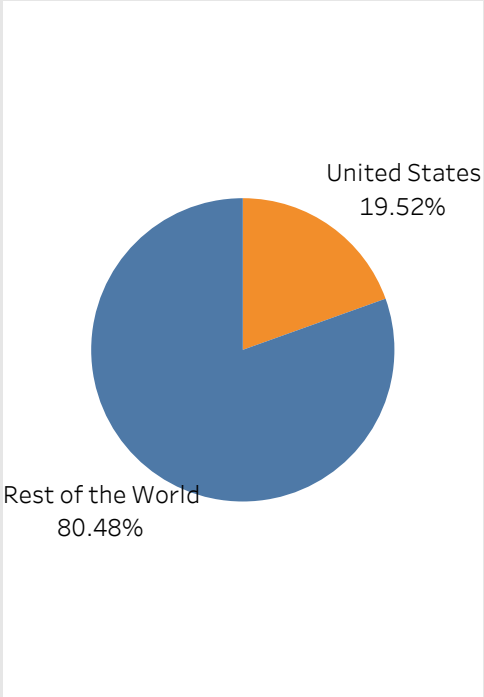
United States – Shipping

United States –
Customers

Sales in US vs Rest of the Countries



Profit in US vs Rest of the Countries



Sales across US sates (2016-2020)

Legend: Sales

920 457,688

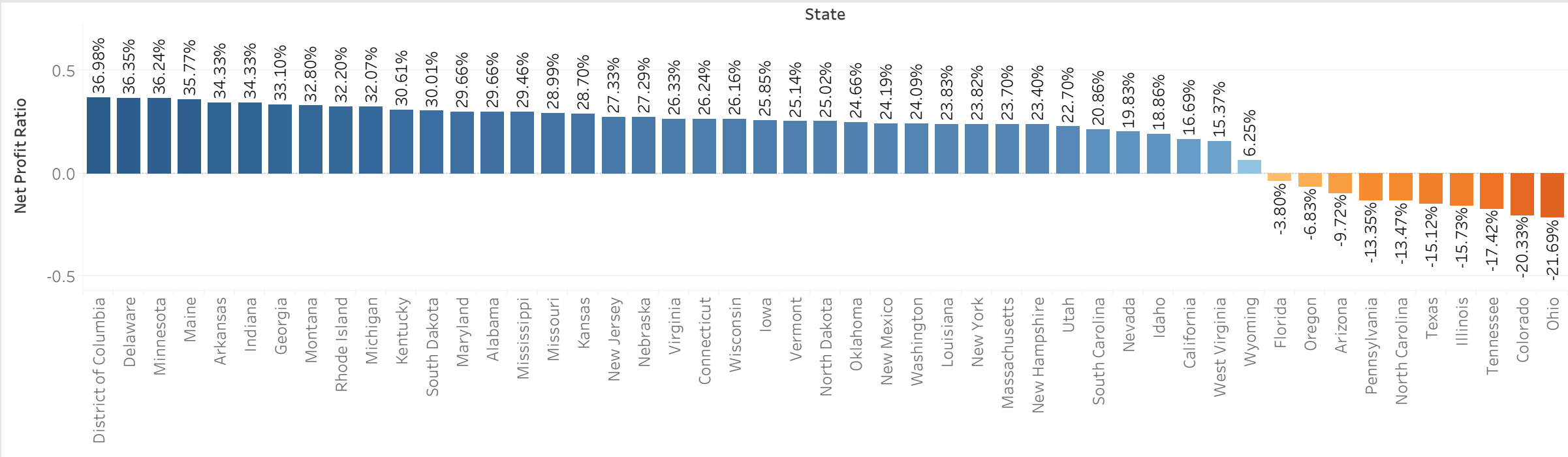
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State	Sales
Washington	138,641
Oregon	17,431
Idaho	4,382
Montana	5,589
North Dakota	920
South Dakota	1,316
Wyoming	1,603
Nebraska	7,465
Kansas	2,914
Oklahoma	19,683
Utah	11,220
Colorado	32,108
Arizona	35,282
New Mexico	4,784
Texas	170,188
Wisconsin	32,115
Iowa	4,580
Missouri	22,205
Illinois	36,592
Kentucky	2,865
Michigan	76,270
Ohio	2,865
Pennsylvania	2,865
District of Columbia	2,865
Virginia	10,771
North Carolina	8,482
South Carolina	8,482
Georgia	9,217
Louisiana	9,217
Mississippi	10,771
Alabama	9,217
Florida	89,474
California	457,688
New Hampshire	7,293
Rhode Island	22,628

Profit/Loss ratio over US states
2016-2020

Net Profit Ratio

-0.2169 0.3698



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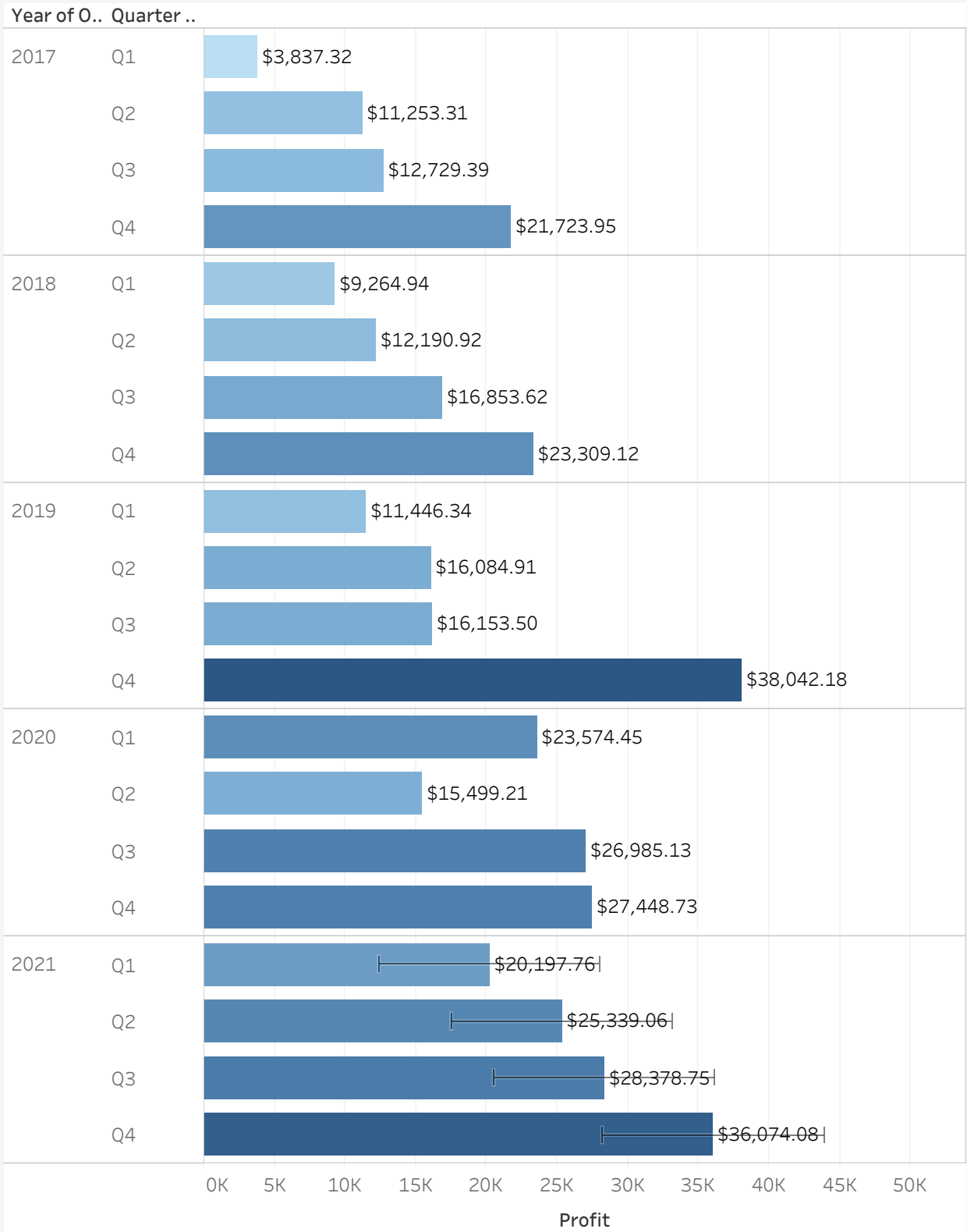
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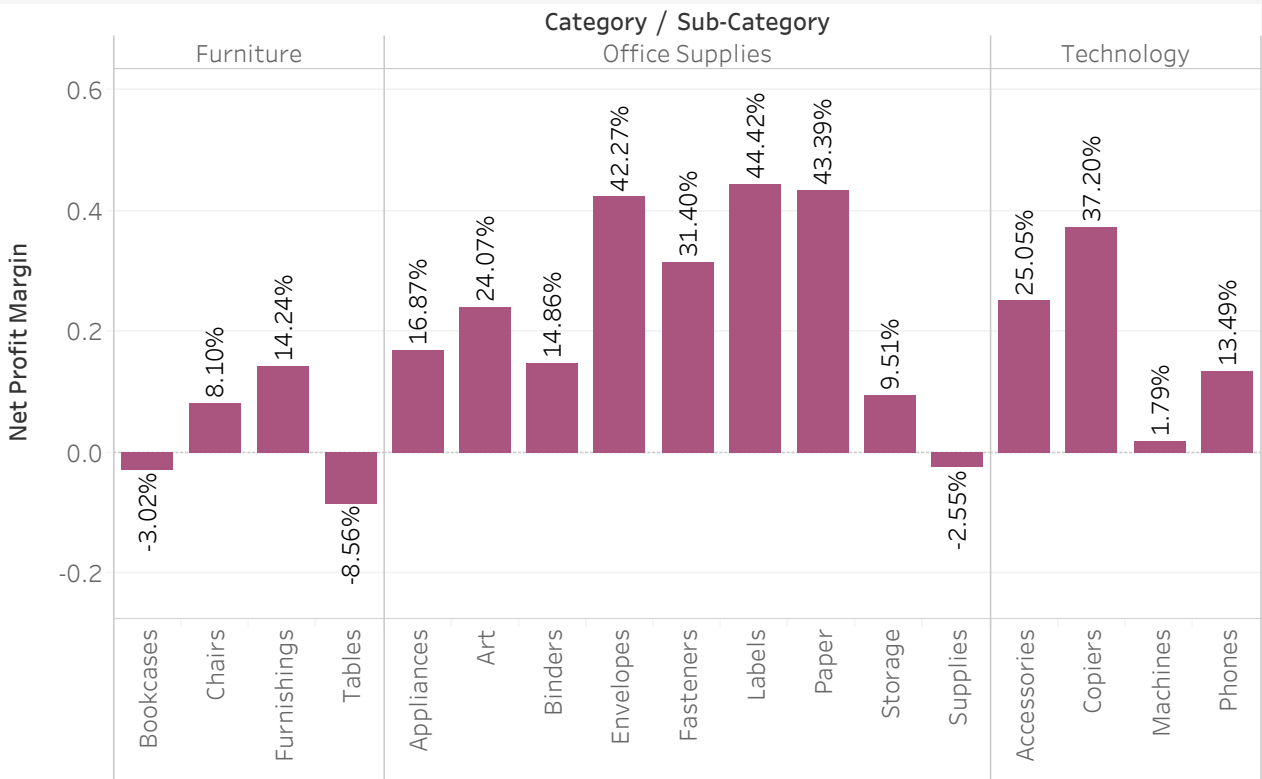
United States -
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Quarterly profits over the years US(2017-2020) + Forecast 2021



Profit breakdown according to category US



10 least profitable items sold in US

Product Name	Category	Sub-Catego..	Profit	Sales	Net Profit Ratio
Eureka Disposable Bags for Sanitaire Vibra Groomer I Upright ..	Office Supplies	Appliances	(\$4.47)	1.6	-275%
Bush Westfield Collection Bookcases, Dark Cherry Finish, Full..	Furniture	Bookcases	(\$190.85)	90.9	-210%
Euro Pro Shark Stick Mini Vacuum	Office Supplies	Appliances	(\$325.63)	170.7	-191%
Okidata B401 Printer	Technology	Machines	(\$251.99)	180.0	-140%
Zebra GK420t Direct Thermal/Thermal Transfer Printer	Technology	Machines	(\$938.28)	703.7	-133%
GBC Plasticlear Binding Covers	Office Supplies	Binders	(\$68.42)	68.9	-99%
Brother MFC-9340CDW LED All-In-One Printer, Copier Scanner	Technology	Machines	(\$319.19)	342.0	-93%
			-1000	0	0
			Profit	Sales	Net Profit Ratio

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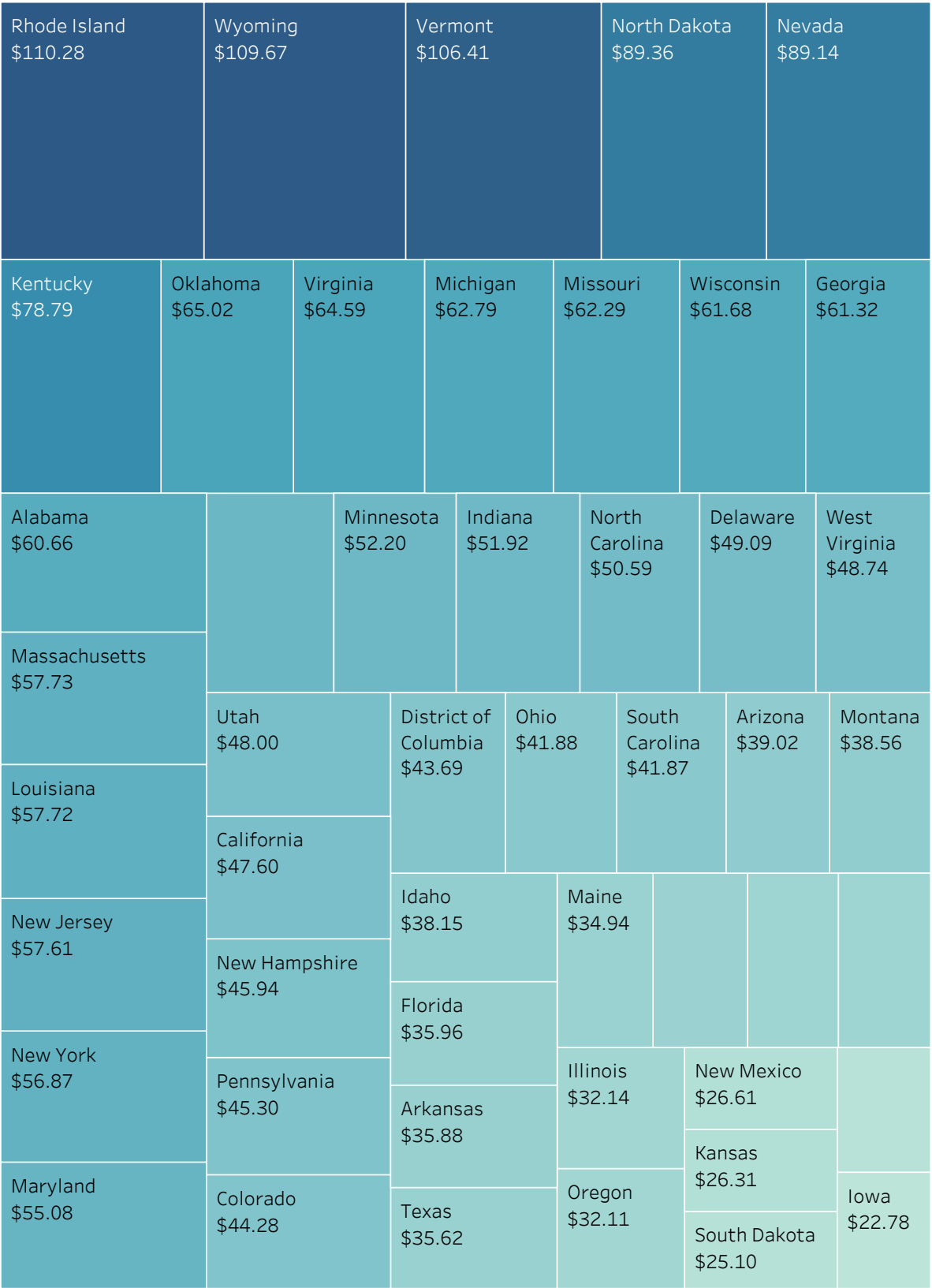
Quantities shipped over the years(2017-2020) in US

Ship Mode	Year of Order D..	Ship Date				
		2017	2018	2019	2020	2021
First Class	2017	1,031	8			
	2018		1,100			
	2019			1,441	12	
	2020				2,101	
Same Day	2017	356				
	2018		383			
	2019			556		
	2020				665	
Second Class	2017	1,446	20			
	2018		1,533	32		
	2019			1,804	16	
	2020				2,554	18
Standard Class	2017	4,578	142			
	2018		4,877	54		
	2019			5,879	102	
	2020				7,032	133

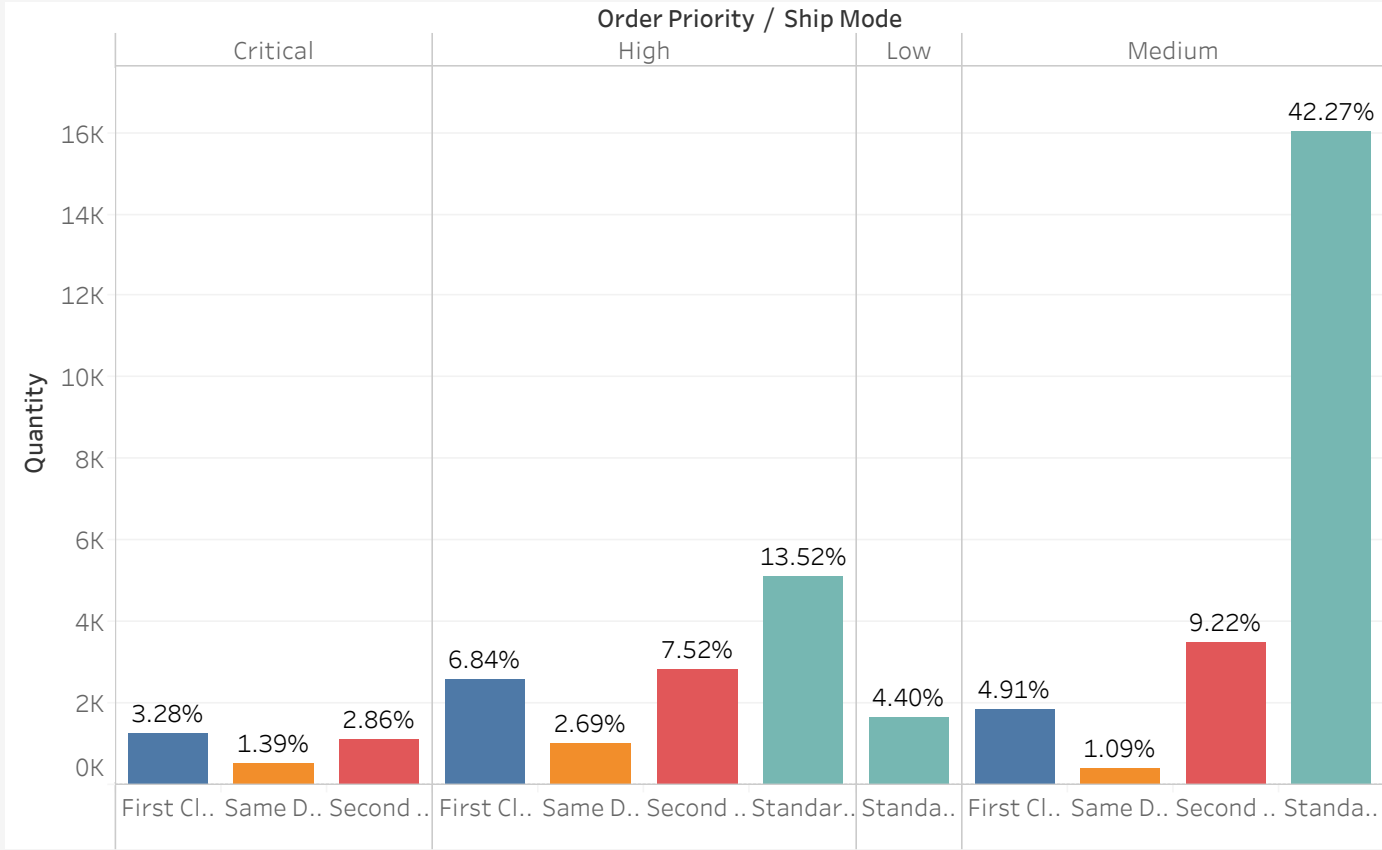
Order date vs Shipped date in 2020 US

Ship Mode	Year of Order D..	Quarter of Order..	Ship Date 2020			
			Q1	Q2	Q3	Q4
First Class	2020	Q1	274	5		
		Q2		494	14	
		Q3			496	48
		Q4				770
Same Day	2020	Q1	89			
		Q2		97		
		Q3			228	
		Q4				251
Second Class	2020	Q1	392	58		
		Q2		433	12	
		Q3			727	5
		Q4				927
Standard Class	2020	Q1	1,010	44		
		Q2		1,382	119	
		Q3			1,819	61
		Q4				2,597

Shipping cost per order for each US state



Shipping Mode according to order priority



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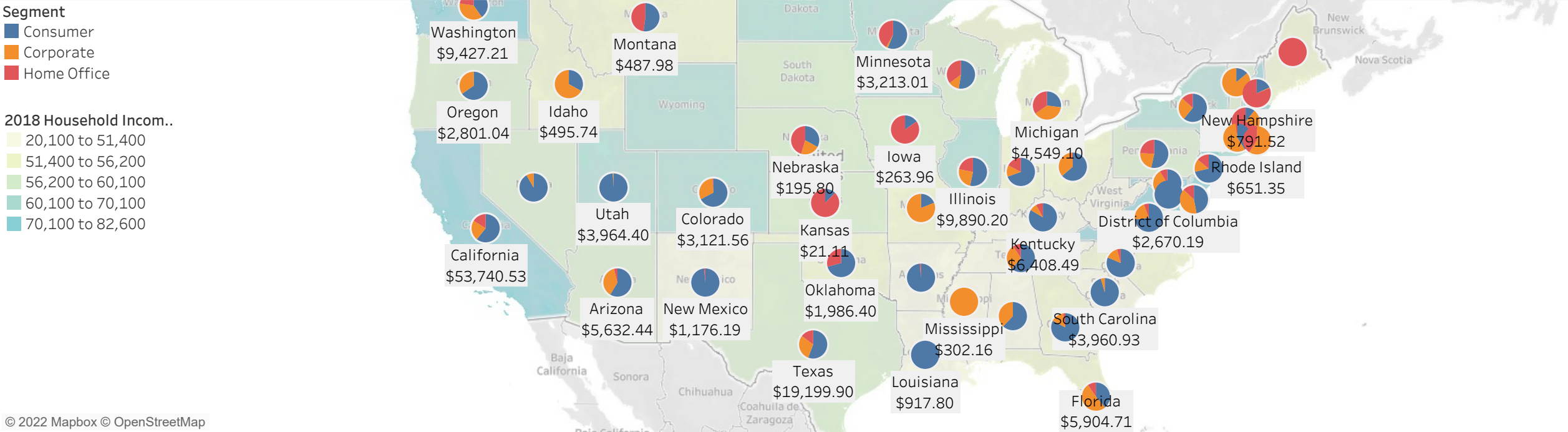
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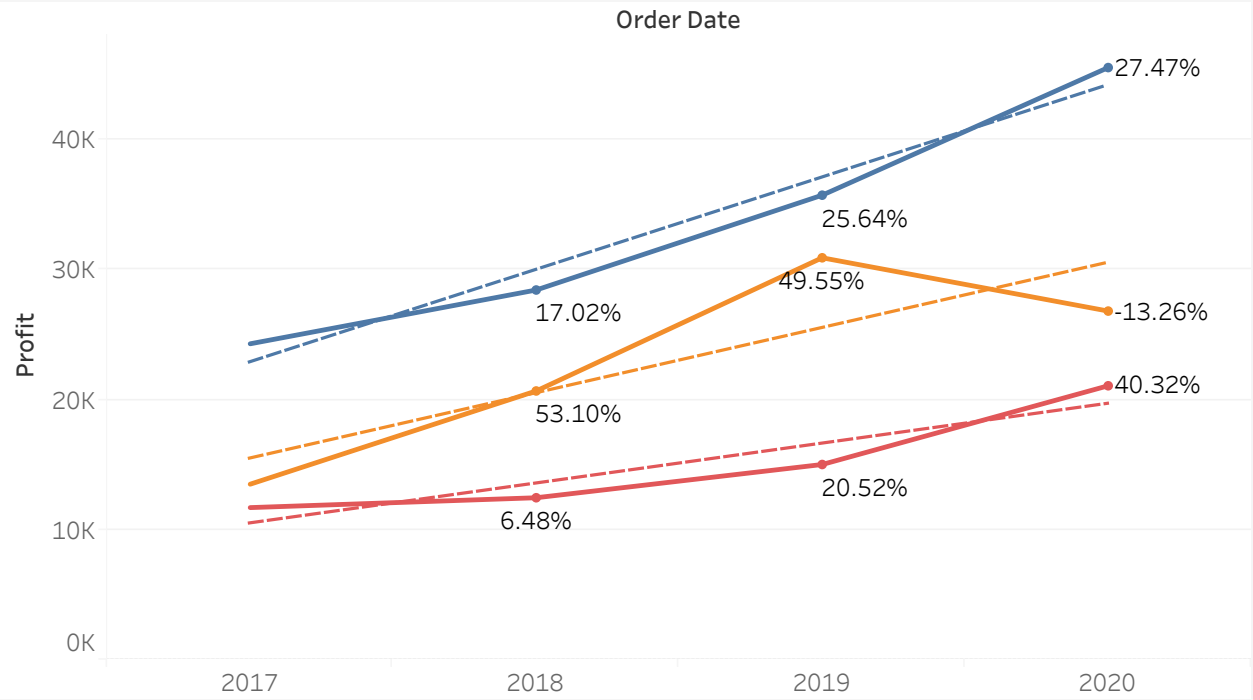
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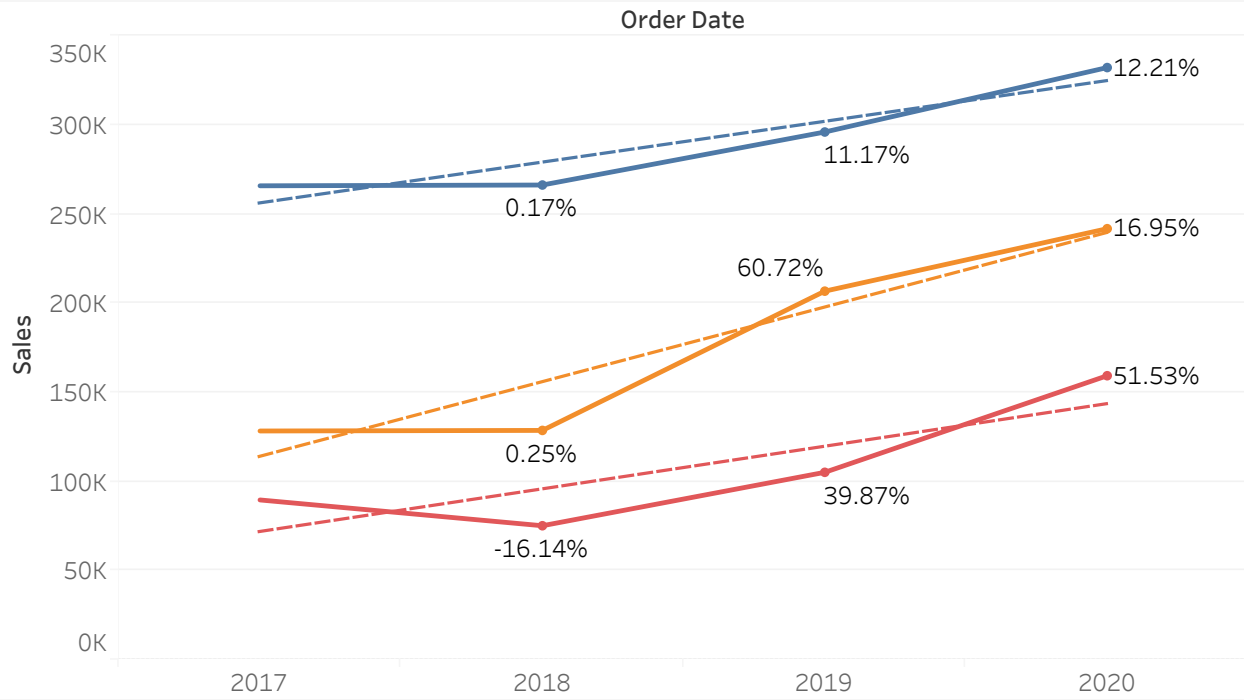
US - Statewise sales based on customer segmentation and household income in year 2018



US - Profit by segment over the years(2017-2020)



US - Sales by segment over the years(2017-2020)



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Executive Summary

The purpose of this study was to analyze the market distribution of the Global Superstore and conduct an in-depth analysis of United States which is the single largest country that dominates nearly one fifth of the global market in terms of sales and profits. This report mainly focuses on investigation of geographical distribution of sales and profits, products, logistics and the customer structure in the US market.

The main expectation of this report is to provide valuable inferences and recommendations which could be helpful for senior management to plan their business strategies and supplement their decision-making process.

Introduction

There has never been as much demand for global e-commerce and worldwide shipping stores in the world, nor has there been so much competition.

Thriving and surviving in this contemporary ecommerce landscape will require unique insights and special action. The purpose of this extensive research is to recognize the most valuable market and to analyze its profits, customer patterns and shipping trends in order to identify the capabilities and potential of the market, pinpoint areas of improvement, and predict future outcomes. Unless mentioned otherwise, all the illustrations of statistics in this report are based on data from a 5-year period from 2016 to 2020.

Worldwide - Overview

Looking at the statistics of Global superstore, we can see that for years 2016 -2020, the superstore has made a total revenue of \$12,642,502 with United States, Australia and France being the top 3 countries contributing to that.

The popularity of the store had increased over the time as the quantity of items sold had increased from a mere 16 units in 2016 to 60,662 units in 2020 resulting a total of 178,312 units sold during this period. Following the trend, the expected quantity to be sold for the years 2021 and 2022 are forecasted to be 72,230 and 83,766 respectively.

The overall profit made during this period is \$ 1,467,457 with a 11.61% profit ratio. The total expenditure spent on shipping by the store sums up to \$1,352,816 in the span of 5 years. Average discount percentage given per order is 29.28%.

Looking at the top 3 countries with most sales it is evident that sales in United States are greater than sales in both Australia and France combined. Therefore, it is necessary to scrutinize the US market in depth.

United States – Overview

Out of the 147 countries that store operates, US accounts for 18.17% and 19.52% of global sales revenue and global profits respectively.

Looking at the State-by-State breakdown of sales revenue in US, we can see that in States such as California, New York, and Texas the store was very popular among customers. On the other hand, North Dakota, West Virginia, and Maine showed the lowest sales revenue in these years. While sales revenue is not a good indicator of store's success in each of these States, it can be used to get an idea about the exposure of the store to customers.

Obvious conclusion from above statistics is that States with higher population have a tendency to do well in sales and vice versa. Therefore, senior management should focus on improving States which has relatively low sales compared to its number of inhabitants. For example, a highly populated State such as Florida (3rd highest populated State in US) may have the potential of more growth in sales.

In terms of profitability, States District of Columbia, Delaware, and Minnesota are on the top, whereas Ohio, Colorado and Tennessee showed the biggest losses. The profit dissection will be further analyzed in the next part.

United States – Breakdown of profits

Looking at the quarterly profits in US over the years 2017 to 2020, a clear pattern can be identified. In each year quarterly profits tends to increase as year goes on i.e., Q1 shows the lowest profits in the year and Q4 the highest. Possible reason for these high profits in Q4 is that US customers' buying patterns are likely to be influenced by Black Friday deals and festival season discounts during this time. The only exception from this pattern is in 2020, when Q2 profits (\$ 15,499) were less than Q1 profits (\$23,574). A possible explanation for this drop is the impact of covid 19 which reached its peak during April-June disrupting supply chains all around the globe. However, growth of profits in the following quarters of 2020, mean company had slowly managed to sustain despite the prevalence of the pandemic. Based on this past statistics, quarterly profits for 2021 have been forecasted. It follows a similar trend as of previous years, but it would still not surpass the max profit earned in Q4 2019.

Looking at the net profit margin according to category of goods, the most profitable items that were sold during this period were office supplies, especially stationary items such as labels (44.27% profit margin), papers (43.39% p.m) and envelops (42.27% p.m). It is noteworthy that none of the technological items showed a loss during the period. The product category that showed most losses are Furniture, especially tables were overall sold at a loss (-8.56% p.m).

The single least profitable item sold during this period is "Eureka Disposable Bags for Sanitaire Vibra Groomer" which caused a profit margin loss of 275%. Senior management should consider finding suitable alternatives to or discontinue items which has showed substantial negative marginal profits during the period.

United States – Shipping analysis

Looking at the quantities shipped over the period, there is a clear pattern that in each shipping mode. The number of shipped goods have increased over the years, resulting 2020 to be the year that shipped most items.

The comparison between order date and the shipped date is a good indicator of the efficiency of the order processing unit of the store. Let's consider 2020. There's considerable number of items specially in the First Class that were ordered in a specific quarter but have been shipped in the preceding quarter (For example for goods ordered in Q3 2020, 48 items were shipped in Q4 indicating a possible delay in shipping). As First Class is considered as the premier mode of shipping it's recommended to improve the time gap between order date and shipping date.

When we look at the priority of orders, majority have chosen the cheaper option Standard Class S.C as the preferred mode of shipping if their order priority is Low (4.40% has opted S.C) or Medium (42.27%). Surprisingly, even for high priority orders Standard Class is preferred over Same Day or First-Class

modes. A possible explanation to this scenario is that the affordability of Same Day and First-Class modes is low, hence, people opt the cheaper modes even for high priority orders. Therefore, it would be a wise move to optimize the prices in a way that customers with high priority and critical orders are attracted to use more premium tier shipping modes.

In regard to shipping cost per order in each State in US, Rhode Island, Wyoming, and Vermont seems to be the most expensive States with costs \$110.28, \$109.67, and \$106.41 respectively. Therefore, it recommended to find cheaper shipping methods to those States.

United States – Customers distribution

Looking at the customer segmentation for the year 2018, there is a visible pattern that States with higher household incomes had spent more on consumer goods compared to States with lower incomes in most parts. For example, in California majority of customers belongs to consumer section whereas in Mississippi all customers are from cooperate.

When profits and sales revenues are decomposed by customer segmentation, all 3 segments Consumer, Corporate and Home Office show year by year growth throughout the period of 2017 to 2020 with the exception of 2019 where profits of corporate segment had declined by 13.26%. Therefore, the most significant growth in both profits and sales is shown in the Home Office segment in year 2020 with an increase of 40.32% and 51.53% in profit and sales respectively from the previous year.

Conclusion

In conclusion, United States is one of the most important singular markets in the world for the Super Store. In general, sales and profits of the store are expected to be increased in coming years without any hindrance despite prevalence of a global pandemic. However, in order to thrive in this highly competitive business landscape following recommendations are made based on the above analysis.

1. In this analysis a common trend is identified that more populous States had much bigger sales. A special focus should be given to the few States that has a large population but had generated relatively lower sales revenue.
2. Some products have been sold for a considerable loss over the span of 5 years. Some of these items were recognized in this report. For such products and find suitable alternatives or discontinue selling these items.
3. In some states shipping cost per orders are relatively high and these states are identified in the report. It is important to find alternative shipping methods in order to cut costs so that overall profit from these states may improve.
4. There is room for improvement in order processing time for premium shipping modes such as First class Also, prices of the shipping modes should also be restructured so that customers would get optimal service for their requirement.

