ST 2187 COURSEWORK REPORT

GLOBAL SUPERSTORE ANALYSIS – PROBING THE CAUSES OF LOW MARGINS IN SOUTHEAST ASIA

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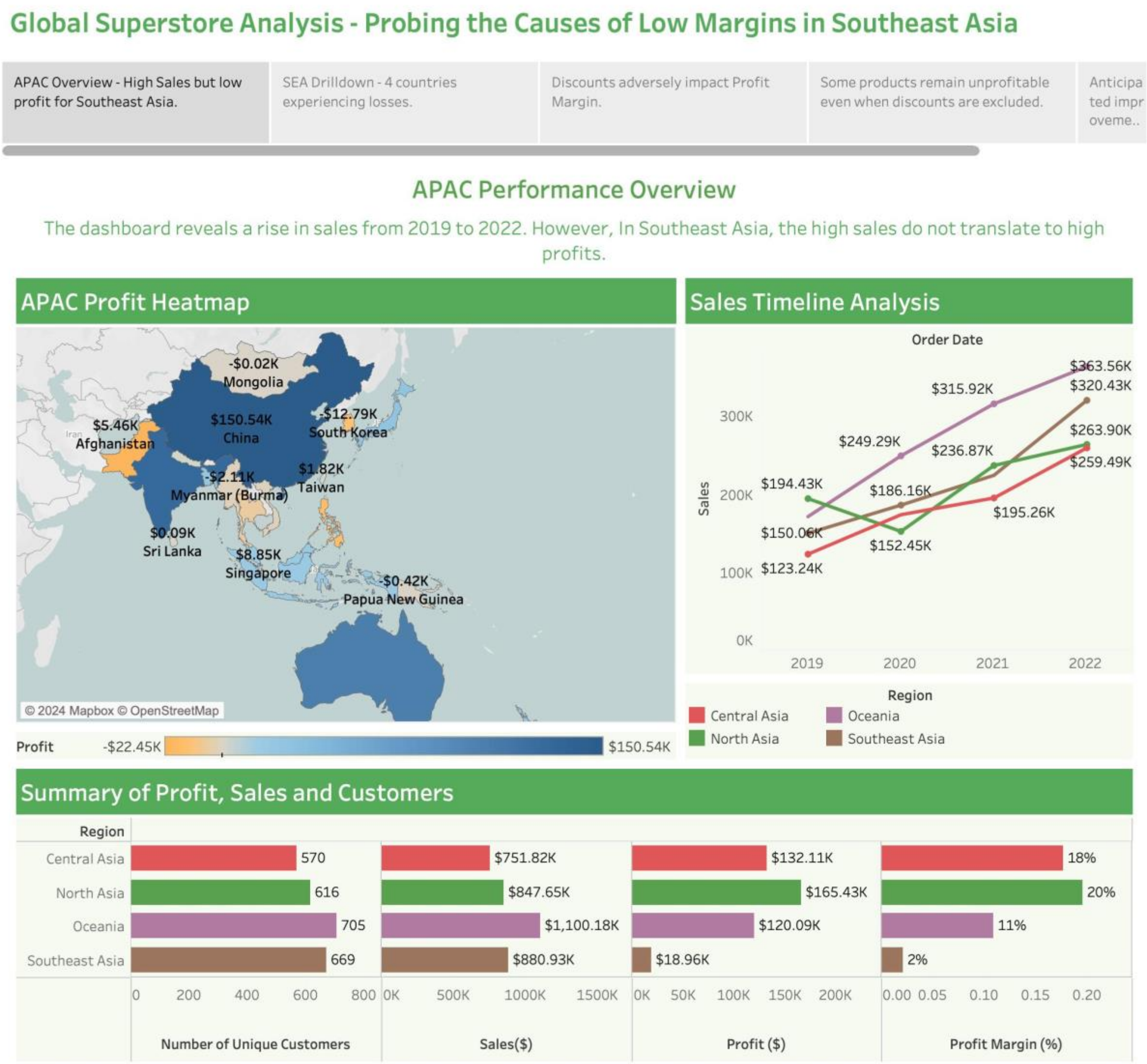
Executive Summary

Through an in-depth analysis of the Global Superstore data conducted using Tableau spanning from 2019 to 2022, this report delves into the Southeast Asia market, pinpointing areas of untapped potential and challenges. Utilising cluster analysis the Southeast Asia countries are categorised into 'Profitable Countries', 'Moderate Profitable Countries', and 'Non-Profitable Countries' clusters. The clustering addresses the unique characteristics of each cluster and facilitates tailored recommendations to improve financial performance through different marketing strategies. Additionally, insights into discount-profit margin analysis shed light into how discount adversely impact profit margin in Southeast Asia. A detailed examination of product profitability and shipping cost, coupled with recommendations to cost and pricing adjustments, aims at optimising financial outcomes. The report ends with a What-if time series forecast analysis, providing insights into the profit margins and sales prediction for 2023 based on the recommendations provided in this report.

[1500 words – excluding executive summary, table of contents and citations]

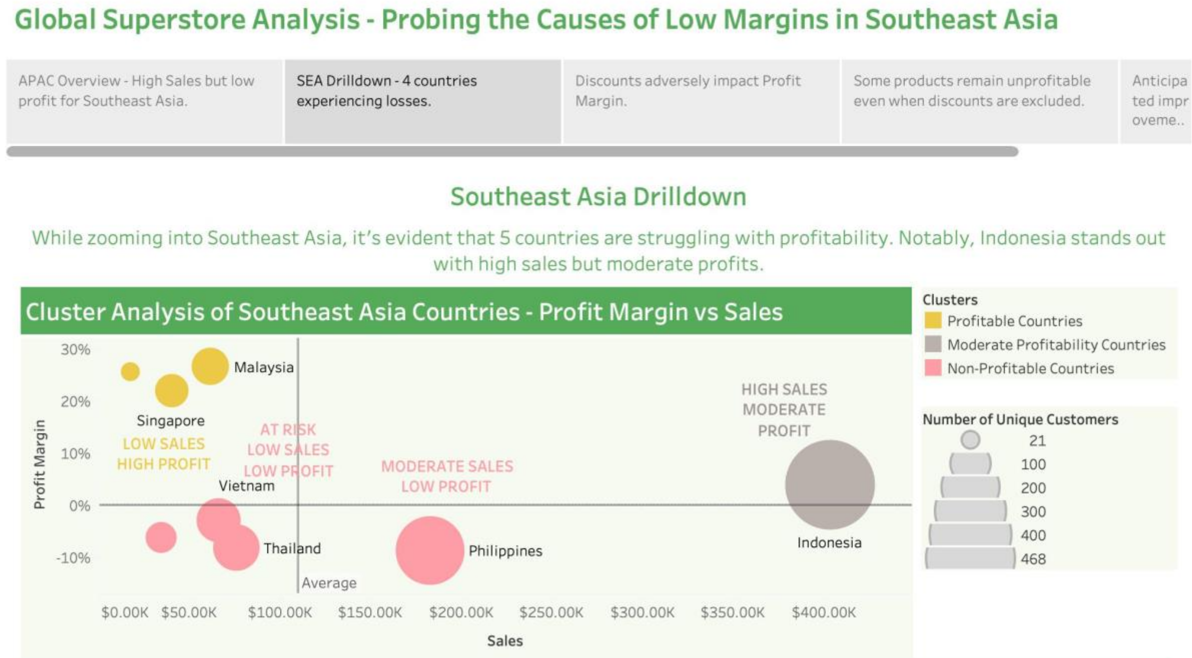
Dashboard 1



Observations

The sales performance across the APAC region from 2019 to 2022 demonstrates a positive trend. Notably, Oceania leads in both sales and customer base, followed by Southeast Asia. However, Southeast Asia lags behind in profits despite high sales figures. Interestingly, Central and North Asia, with lower sales, outperform Southeast Asia in profit, presenting opportunity for further exploration.

Dashboard 2



Profit Margins by Product Categories and Customer Segments across Southeast Asia Countries

		Clusters / Country								
		Non-Profitable Countries				Moderate Prof..	Profitable Countries			Grand Total
Category	Segment	Philippines	Thailand	Myanmar (Bur..	Vietnam	Indonesia	Singapore	Cambodia	Malaysia	
Furniture	Consumer	-9.64%	-22.06%	-17.22%	-1.55%	-0.53%	19.69%	26.14%	19.03%	-0.91%
	Corporate	-4.59%	-0.25%	-21.68%	-37.71%	-2.32%	21.02%	25.67%	20.86%	-3.18%
	Home Office	3.78%	-40.17%	-10.88%	-12.62%	-0.22%	42.24%	23.10%	9.27%	-3.25%
Office Supplies	Corporate	-7.92%	-9.42%	8.70%	18.17%	3.35%	19.44%	21.30%	28.44%	3.16%
	Home Office	-23.51%	-27.39%	8.47%	13.17%	2.58%	17.94%	21.15%	38.13%	2.52%
	Consumer	-17.14%	-18.18%	16.46%	11.21%	-0.46%	24.26%	29.04%	27.82%	0.46%
Technology	Home Office	-3.79%	9.15%	-5.17%	-6.81%	10.66%	30.02%	33.00%	32.39%	7.70%
	Consumer	-8.47%	6.65%	-11.97%	-11.36%	9.81%	20.15%	25.91%	26.53%	6.20%
	Corporate	-14.64%	-2.48%	-1.90%	-12.75%	11.52%	45.99%	18.42%	34.93%	5.83%
Grand Total		-8.77%	-8.15%	-6.18%	-2.84%	3.83%	21.98%	25.62%	26.61%	2.15%

Profit Marg.. -40.17% 45.99%

Observations

For dashboard 2, the focus shifts to an examination of the Southeast Asia Market to uncover factors that are contributing to its poor performance. The bubble chart identifies four 'Non-Profitable Countries'—Philippines, Thailand, Myanmar, and Vietnam. These countries face challenges with low to moderate sales and profit losses. The heatmap analysis indicates that the primary factor contributing to low profits is the underperformance in specific product categories and segments. Notably, the furniture category exhibits poor performance across all countries in the Non-profitable Countries.

Indonesia is the sole country in the 'Moderate Profitability Cluster' displaying both the highest sales and a unique customer base. This observation implies that there is untapped potential in the Indonesian market, indicating an opportunity for improvement and growth.

The 'Profitable Countries' cluster comprises Singapore, Cambodia, and Malaysia. Despite having relatively low sales figures, these countries exhibit a high-profit margin.

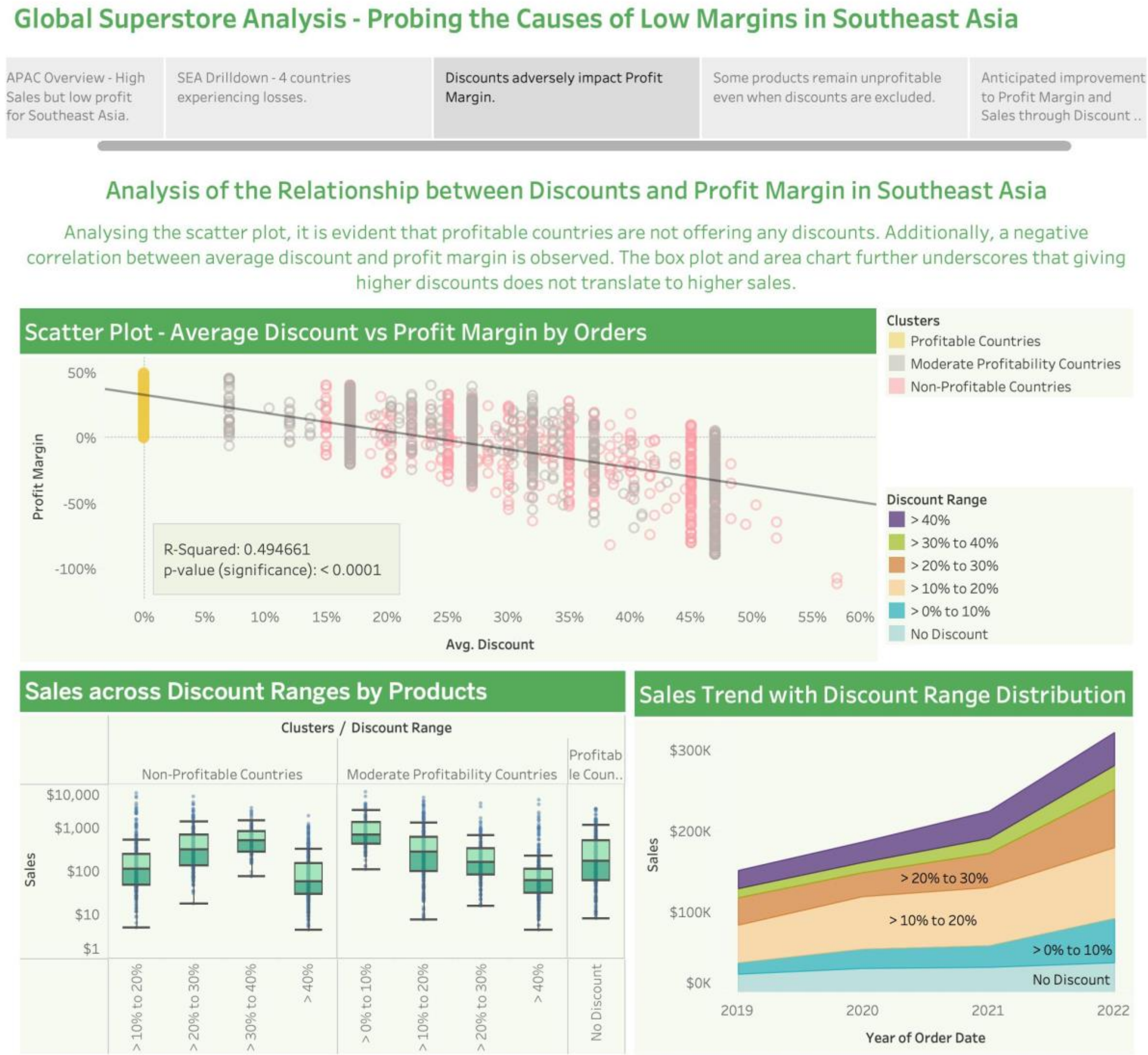
With the exception of the Philippines and Indonesia, the other countries in the region have fewer than 200 unique customers. Notably, Cambodia, in particular, has only 21 customers. This limited customer base might be a contributing factor to the low sales performance observed in these countries.

Recommendation 1 - Assessing the Marketing Mix to Improve Sales and Market Share

To drive further growth for ‘Profitable Countries’ and ‘Non-Profitable Countries’ clusters, assessing marketing mix is essential to ensure the offerings align with market demands. Considering the existing challenge of a low customer base in these countries, initiating market research can provide valuable insights into local buying behaviors. Building upon the insights from the market research, marketing strategies that resonate with the local culture can be developed. This includes active community engagement to bolster brand visibility, coupled with the utilisation of digital marketing and local advertising channels to generate awareness. This approach aims to not only boost sales and expand the customer base, it will also establish a sustainable and impactful presence in these markets.

Given the robust customer base and high sales in Indonesia, a different approach can be utilised, capitalising on these strengths for further market expansion and deeper penetration. This involves adopting a differentiated targeting strategy, segmenting the market based on demographics, behaviors, and preferences. The goal is to develop a tailored marketing mix for each segment, aligning with the unique characteristics of the diverse customer groups, and creating a sustainable and mutually beneficial relationship (Kotler and Armstrong, 2017, pg222). Loyalty programs such as memberships or reward schemes can also be introduced to foster customer loyalty, encourage repeat business, and increase the lifetime value of customers in Indonesia.

Dashboard 3



Observations

Dashboard 3 delves deeper into the analysis of the three clusters, focusing on the relationship between Discounts and Profit Margin in Southeast Asia. The scatterplot, illustrating the relationship between Average Discount and Profit Margin, demonstrates a significant negative correlation between the two variables, supported by a p-value of <0.0001. The low p-value indicates that the model is statistically significant, providing confidence that the observed correlation is not due to random chance. Furthermore, the R-square value of 0.494 signifies that 49% of the variability in profit margin can be explained by the model. This implies that the relationship between Average Discount and Profit Margin is meaningful, capturing almost half of the variance in profit margin across the dataset. The cluster of

'Profitable Countries' does not offer any discounts, which might be a factor that contributes to their high profit margins.

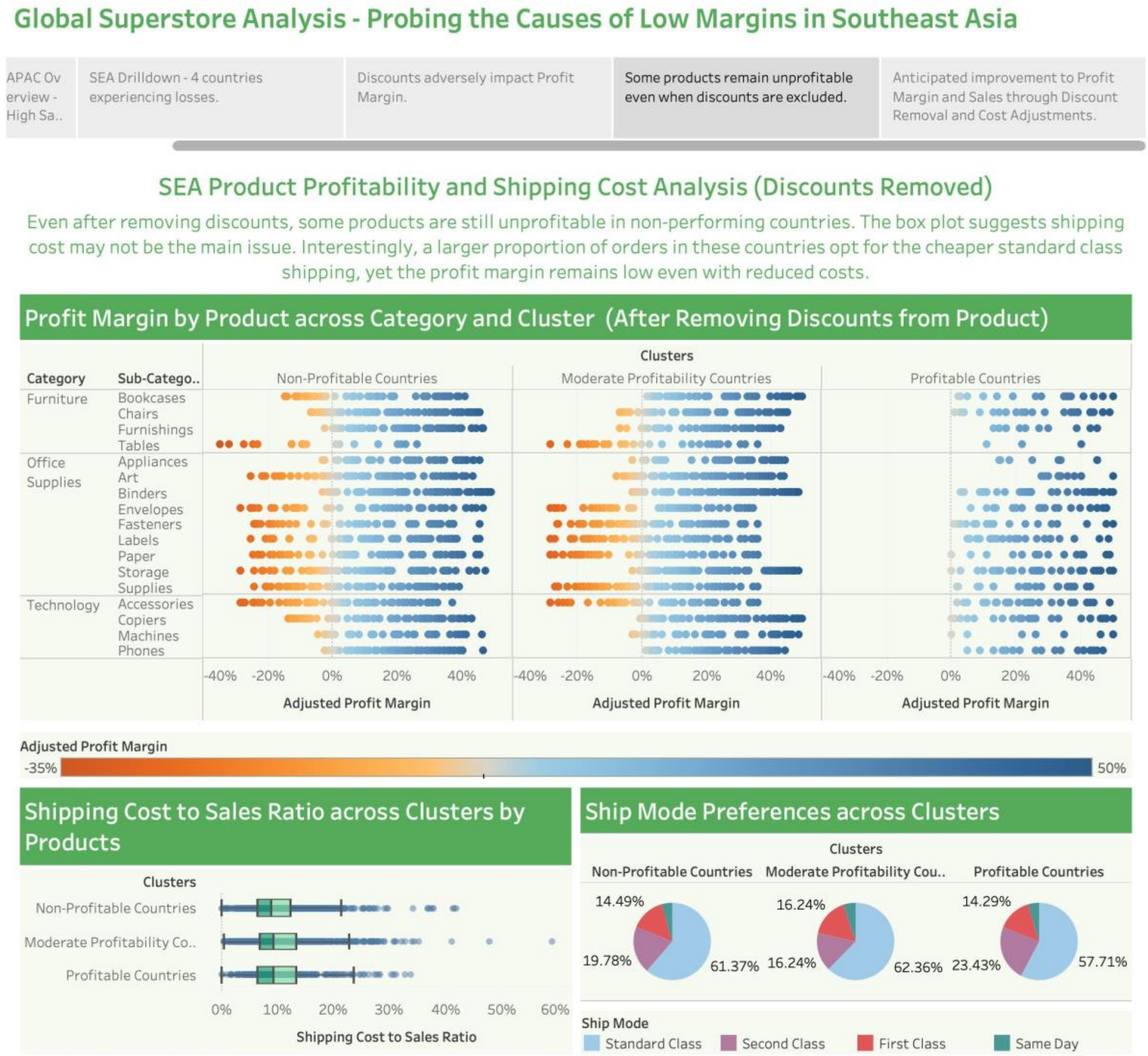
The insights from the box plot and area chart highlight the lack of a clear trend linking higher discount ranges to increased total sales over the years. Notably, the area chart shows that total sales for the 0% to 10% and 10% to 20% discount ranges are rising, evident in the expending area across the years. On the other hand, the 30% to 40% and >40% discount ranges exhibit fluctuation without a discernible growth pattern. A possible explanation for this phenomena might be countries are offering high discounts for underperforming products. Despite these discounts, there is no evident improvement in sales, possibly indicating a lack of demand for these products in the market. Another explanation could be that customers are accustomed to the discounts.

While the visuals allow us to identify patterns in the relationship between discounts and sales, it is important to recognise that the relationship is multifaceted and complex. Beyond discounting, elements such as product quality, brand loyalty, marketing strategies, and economic conditions can play pivotal roles in shaping sales outcomes.

Recommendation 2 - Evaluate Discount Strategies for 'Non-Profitable' and 'Moderate Profitability' Countries

The observations from dashboard 3 advocate for a refinement of discount structures in countries where profitability is a concern. Instead of adopting a one-size-fits all approach of giving discounts to all products, a more strategical approach involves implementing direct segment price discrimination (Kotler and Armstrong, 2017, pg336). This entails tailoring discount rates based on product, market conditions and customer segments. Alternatively, High-Low pricing approach can be considered by setting high prices daily but offer promotional discounts on selection items temporarily. The primary goals of these recommendations are twofold: firstly, to stimulate demand and enhance sales in countries grappling with profitability challenges, and secondly, to optimize profit margins even when discounts given.

Dashboard 4



Observations

In Dashboard 4, we conducted an analysis assuming a 0% discount for all products to evaluate product performance across the three clusters. Notably, even with the removal of discounts, some products remain unprofitable in non-performing countries, with a significant concentration in the office supplies category.

An examination of the box plot indicates a minimal difference (9% to 10%) in the median shipping cost to sales ratio across the clusters, with some outliers. This suggests that shipping costs may not be the primary factor contributing to the unprofitability of these items. Intriguingly, the pie chart illustrates that a higher proportion of orders in non-performing countries opt for the more economical standard class shipping. While this choice lowers the shipping cost to sales ratio, the profit margin remains low even with reduced shipping costs. Considering that shipping cost doesn't seem to be the predominant factor, a deeper examination into other costs and pricing aspects is warrant to uncover the underlying factors contributing to the low margins.

Recommendation 3 - Adjusting costs or prices for products that are not profitable.

Despite the removal of discounts in Dashboard 4, there are still products incurring losses. This suggests that the cost structures or pricing strategies need to be assessed to enhance the overall financial performance of these items.

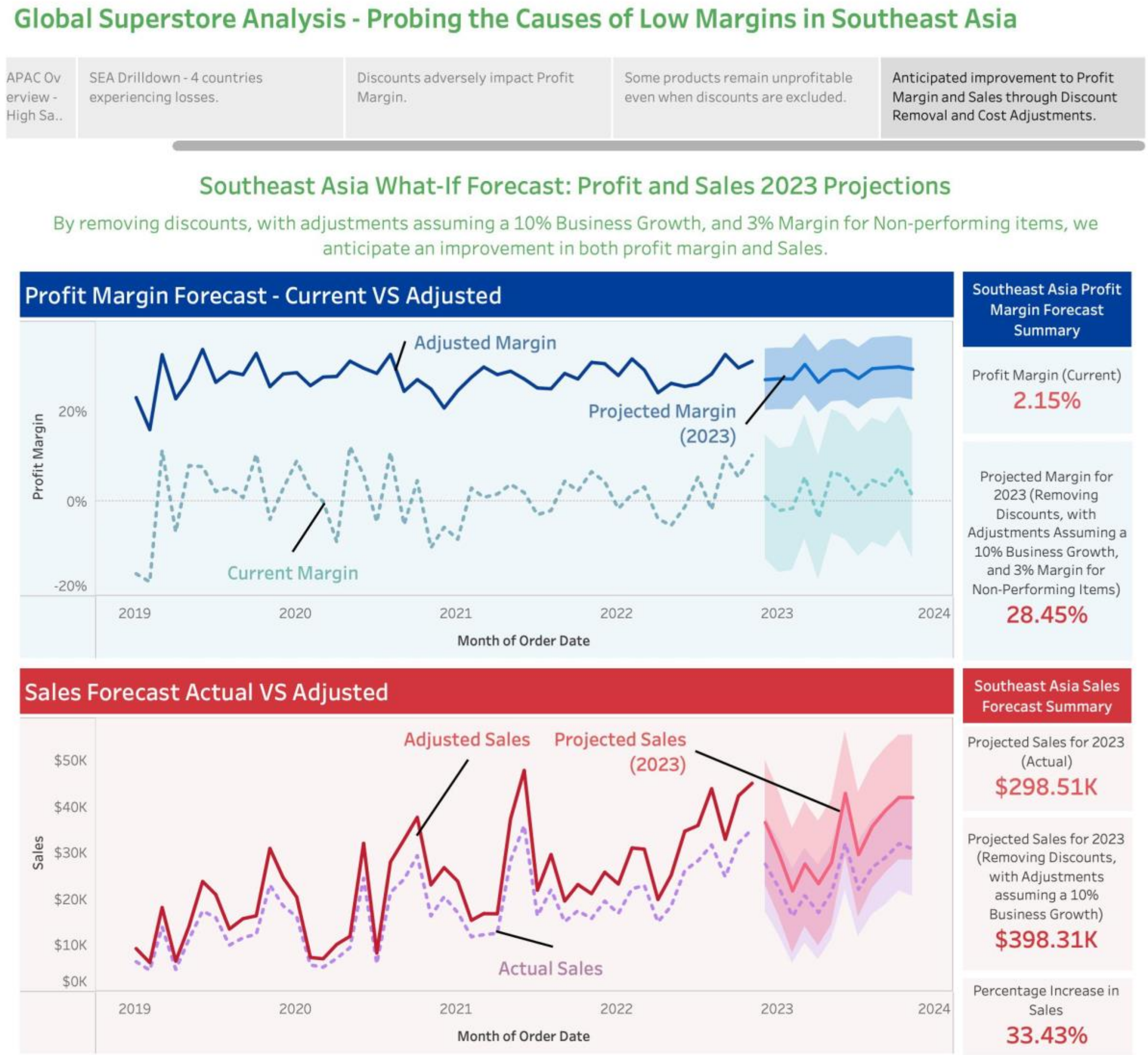
A thorough analysis can be conducted on the production costs, marketing costs, and any associated expenses in the supply chain. This could involve negotiating with suppliers for better rates, improving production efficiency, cutting down marketing cost, and consider alternative sources.

While acknowledging that shipping costs may not be the primary factor, it's important to note that some outliers exhibit a high shipping cost to sales ratio, reaching as much as 30% to 59%. Investigating and addressing these outliers can potentially lead to further cost reduction.

Pricing adjustment can also be considered to ensure that the selling price of these products are not only covering costs, but also contributes to a reasonable profit margin. This includes careful consideration of the market perception of the adjusted prices, analysing competitor pricing for similar products, and evaluating if the pricing aligns with the perceived value in comparison to competitors.

When efforts to improve profit margins through cost or price adjustments, the viability of these products in the market needs to be evaluated. If necessary, the decision to discontinue these products can be considered to minimise further losses. The resources saved from the discontinuation could be invested into more profitable products.

Dashboard 5



Observations

In Dashboard 5, a what-if time series forecast analysis was conducted using an additive time series model, aligning with the aforementioned recommendations. The analysis involved several adjustments, including assuming a 3% margin for products currently facing losses, anticipating a 10% business growth (assuming the marketing strategy is successful in improving sales), and removing discounts across all items. The findings reveal an increase in the estimated profit margin for 2023, increasing from 2.15% to 28.45%. Concurrently, the forecasted sales figure for 2023 is positioned at $398.31, indicating a 33.43% increase compared to the actual sales of $298.51k.

Conclusion

In conclusion, the analysis of the Southeast Asia market has presented valuable insights for strategic decision-making. In critically evaluating these forecasted outcomes, it is important to recognize the uncertainties and assumptions underlying the analysis. The success of the marketing strategy, the customer response to adjusted pricing, and the broader market dynamics are unpredictable variables. Therefore, while the estimated margin and forecasted sales present promising figures, a thoughtful consideration of potential unforeseen factors will be vital.

References

Kotler, P., Kotler, P. T., Armstrong, G., & Opresnik, M. O. (2017). *Principles of marketing*. Pearson Higher Education.