

SALES AND PROFITABILITY

OF SOUTHEAST ASIA (SEA)

FROM 2017 TO 2020

OW ZI LYNN

200615190

ST2187 Coursework 2021/2

TABLE OF CONTENTS

1. Executive Summary -----	3
2. Introduction -----	4
3. Findings	
3.1 Profitability of SEA was impacted by its lowest profit margin -----	4
3.2 Subcategories losses contributed to negative profit margin -----	5
3.3. Investigating the impact of discount and shipping cost on profit margin-----	6
3.3.2 High discount had more significant impact on profit margin compared to high shipping cost -----	6 - 7
3.3.3 Discounts had different impacts on different countries and different subcategories --	8 - 10
3.4 Forecasting models for sales and profit margins of each subcategory that incurred loss -----	11
3.4.2 Low or negative past and forecast profit margin despite sales and profit margin growth -----	11
3.5. Grouping customers in 8 customer segments -----	12
4. Recommendations	
4.1 Increase profit margin by lowering discount-----	13 - 16
4.2 Increase sales by cross-selling and bundling sales -----	17
4.3 Revise production cost and selling price for subcategories -----	17
4.4 Marketing strategies for each of the 8 customer segments -----	17 - 18
5. References -----	19
6. Appendix -----	20 - 31

EXECUTIVE SUMMARY

Mou is a multinational enterprise with multiple operations which aggregate based on regions. The regions are Central, North, North Asia, South, Central Asia, Oceania, West, East, Africa, EMEA, Caribbean, SouthEast Asia and Canada. *Mou* offers 3 categories of products which are office supplies, technology and furniture. Upon investigation, SouthEast Asia was found to generate low profit despite high sales due to lowest profit margin among other regions. The losses from subcategories contributed to low profit margin. The subcategories are supplies, paper, art, envelopes, fasteners, labels, accessories and tables. Countries like Indonesia, Myanmar, Philippines, Thailand and Vietnam which made losses in these subcategories were found to generate low or negative profit margins. High discounts had a significant impact on profit margins. However, high shipping costs did not seem to impact profit margins as the overall shipping cost was a lower percentage of the sales compared to discount. The average shipping cost over sales ranged from 9.93% to 11.48% whereas average discount ranged from 14.45% to 48.00% for all subcategories. The past and forecast profit margin were low or negative despite profit margin growth. In order to increase profit margin, discounts should be decreased and varied across countries and subcategories due to difference in price elasticity of demand (PED). For Indonesia , lower discount to less than 27% except furnishings as subcategories started making loss at 27% discount or more except furnishings. For Myanmar and Thailand , offer discounts less than 27%. For Vietnam, provide discounts less than 37%. For the Philippines, give discounts less than 25% except chairs, furnishings and phones. Past and predicted profit margins were low despite sales growth, indicating insufficient sales to generate high profit. Sales could be increased by cross-selling and bundling sales of products with high sales with products with low sales. Selected products for cross-selling and bundling sales should have functionalities which complement each other. Production cost and selling price should be revised for subcategories which incurred loss so that selling price could cover production cost for higher profit margin. Customers were segmented into 8 groups based on recency, frequency and monetary score to perform relevant marketing strategies in order to increase sales, profit and profit margin. In short, SouthEast Asia could generate not only high sales but high profit by increasing its sales and profit margin with suggested marketing actions to different customers segments, lowered discounts based on countries and subcategories, revised production cost, selling price and sales strategies such as cross-selling, upselling and bundling sales.

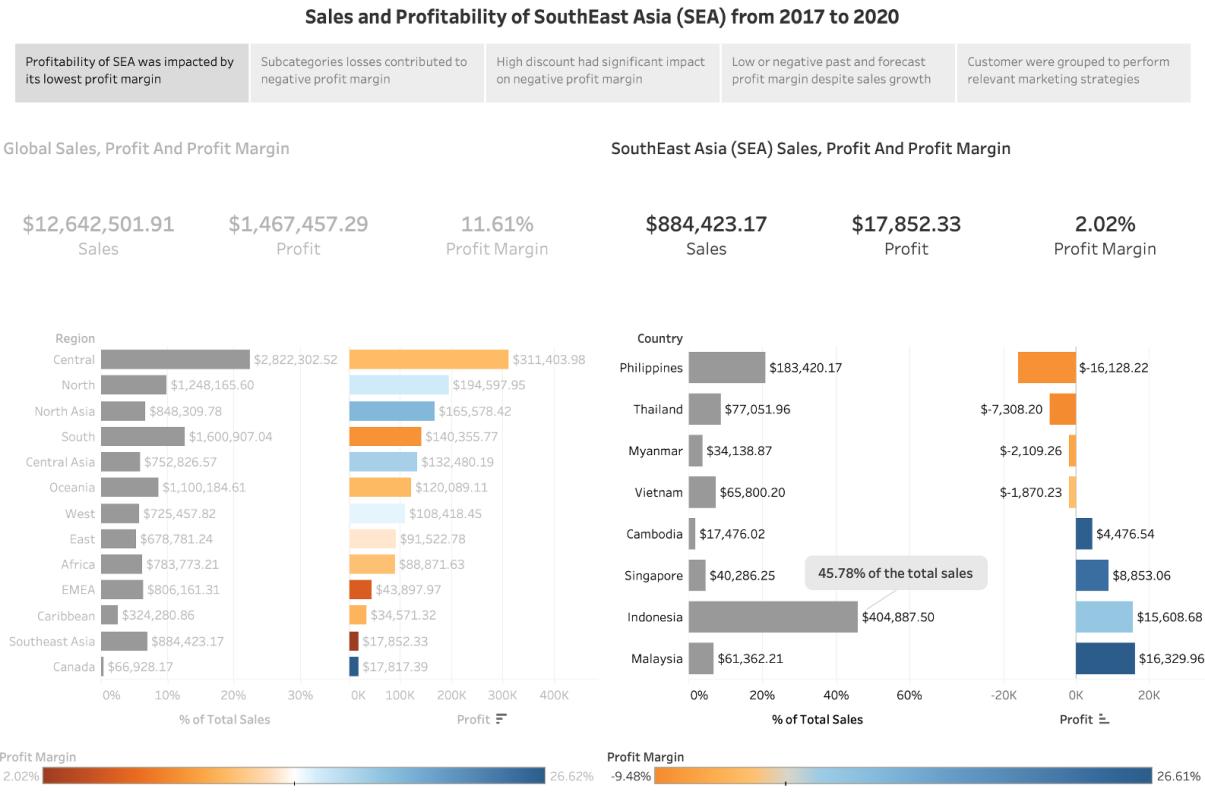
INTRODUCTION

This report focuses on sales and profitability of SouthEast Asia (SEA) comprising Philippines, Thailand, Myanmar, Vietnam, Cambodia, Singapore, Indonesia and Malaysia from 2017 to 2020.

FINDINGS

3.1. Profitability of SEA was impacted by its lowest profit margin

SEA merely generated \$17,852.33 profit with \$884,423.17 sales due to lowest profit margin of 2.02% among all regions. SEA countries which made low profits or losses had low or negative profit margins. Indonesia had low profit compared to its sales of \$404,887.50 due to low profit margin. Philippines, Thailand, Myanmar and Vietnam made losses due to negative profit margins [Dashboard 1].



[Dashboard 1]

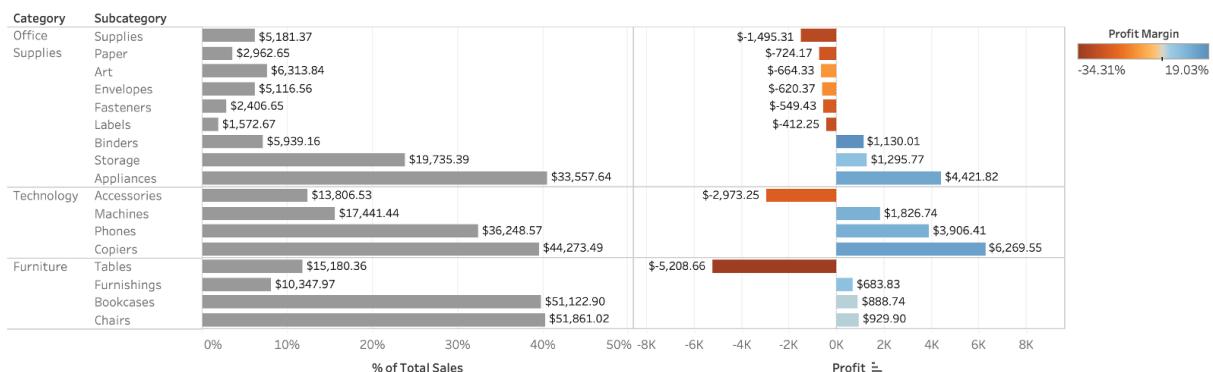
3.2 Subcategories losses contributed to negative profit margin

Losses from supplies, paper, art, envelopes, fasteners, labels, accessories and tables result in negative profit margins. Tables and accessories incurred 47.14% and 21.88% of the total loss respectively despite moderate sales. Profit margin of Indonesia, Thailand and Philippines were low or negative due to losses in all subcategories that generated loss. Myanmar and Vietnam with low negative profit margins incurred losses in tables and accessories which contributed to more than 50% of losses in SEA.

Sales and Profitability of SouthEast Asia (SEA) from 2017 to 2020

Profitability of SEA was impacted by its lowest profit margin	Subcategories losses contributed to negative profit margin	High discount had significant impact on negative profit margin	Low or negative past and forecast profit margin despite sales growth	Customer were grouped to perform relevant marketing strategies
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Sales, Profit And Profit Margin Of Each Subcategory



Total Losses Made By Countries For Subcategories That Generated Loss



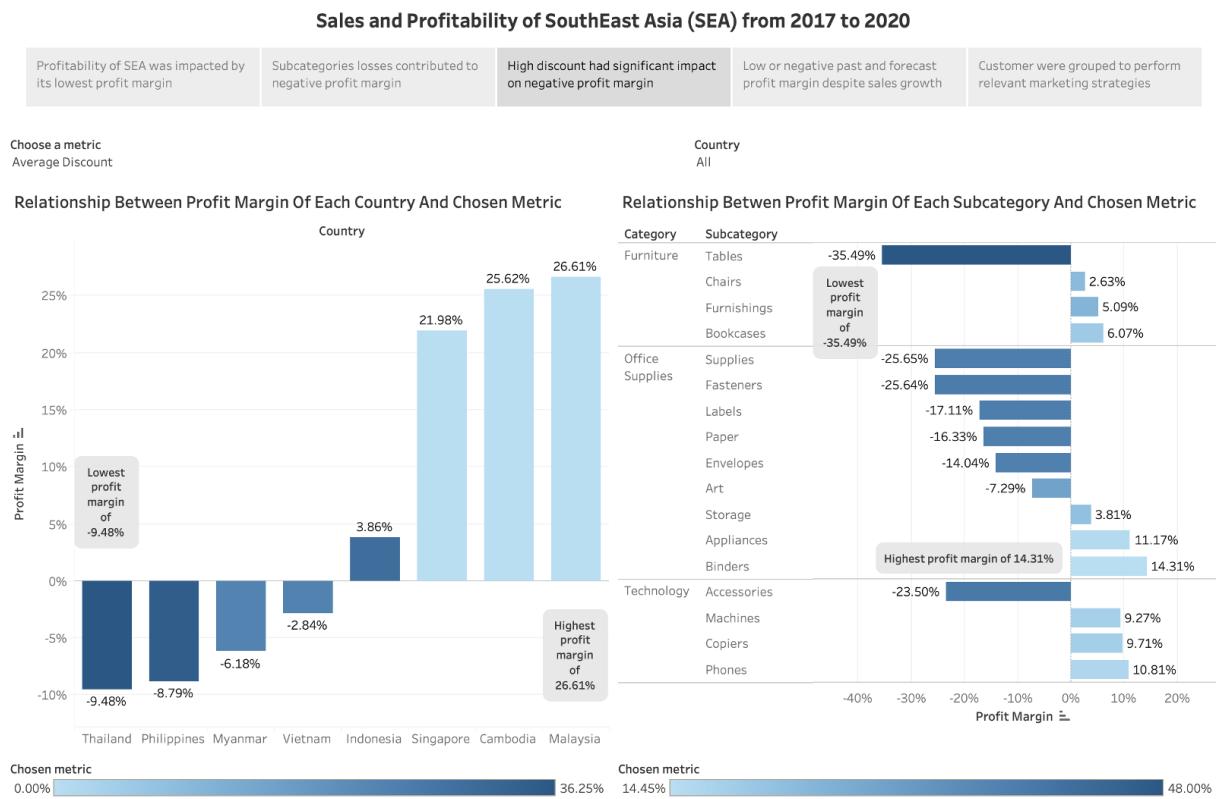
[Dashboard 2]

3.3. Investigating impact of discount and shipping cost on profit margin

Average discount and shipping cost over sales of each subcategory were computed to discover their impact on profit margin with generalization of all products in each subcategory were the same.

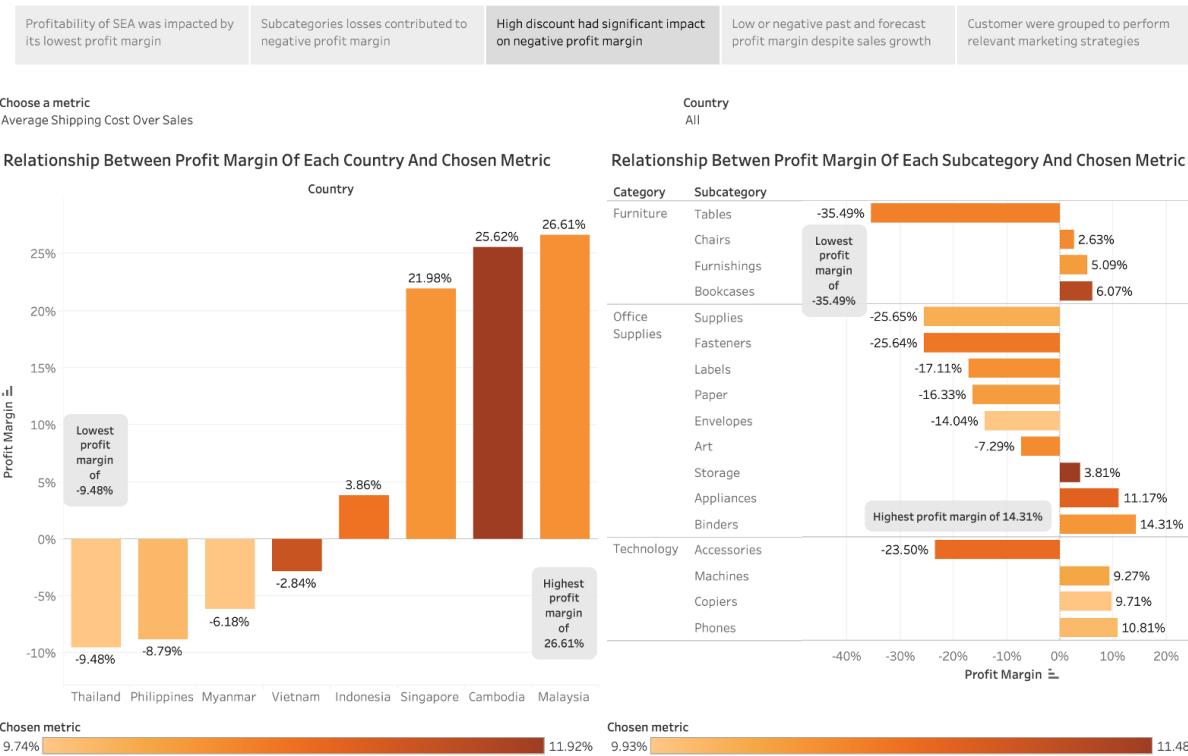
3.3.2 High discount had more significant impact on profit margin compared to high shipping cost

High discounts of tables, supplies, fasteners, labels, paper, envelopes, art and accessories resulted in negative profit margin [Dashboard 3a]. High shipping costs did not seem to cause negative profit margins as overall shipping cost was a lower percentage of the sales compared to discount. The average shipping cost over sales ranged from 9.93% to 11.48% [Dashboard 3b] whereas average discount ranged from 14.45% to 48.00% for all subcategories [Dashboard 3a].



[Dashboard 3a]

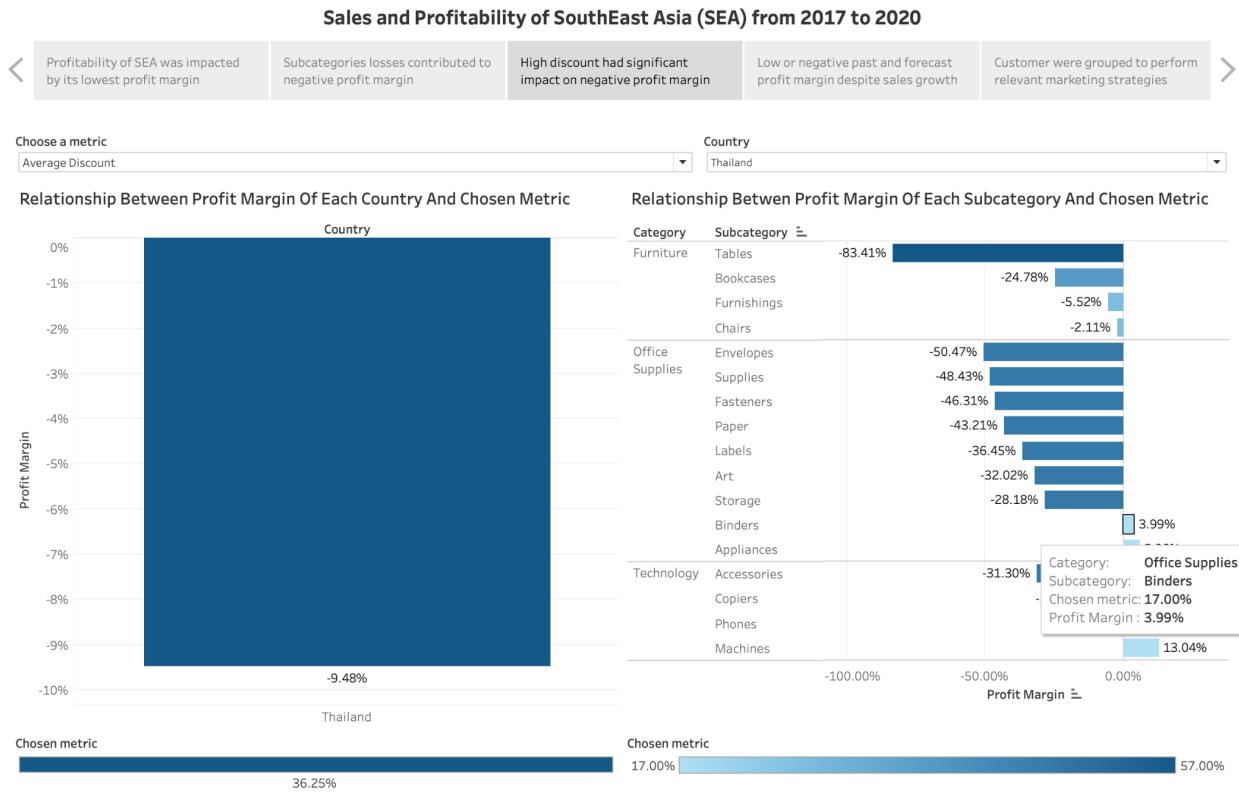
Sales and Profitability of SouthEast Asia (SEA) from 2017 to 2020



[Dashboard 3b]

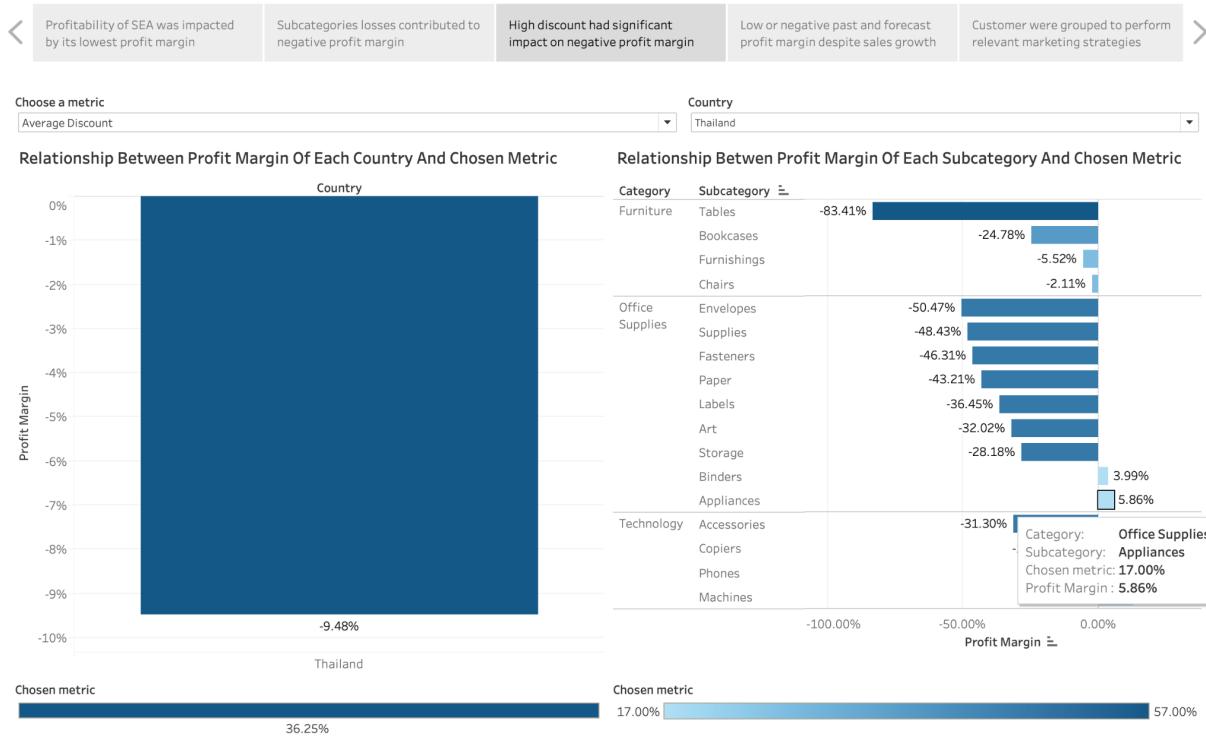
3.3.3 Discounts had different impacts on different countries and different subcategories

Malaysia, Cambodia, Singapore had the same discounts of 0% with different profit margins of 26.61%, 25.62% and 21.98% respectively [Dashboard 3a]. In Thailand, with an average discount of 17%, binders, appliances, phones and machines generated a profit margin of 3.99%, 5.86%, 10.47% and 13.04% respectively [Dashboard 3ai - 3aiv].



[Dashboard 3ai]

Sales and Profitability of SouthEast Asia (SEA) from 2017 to 2020



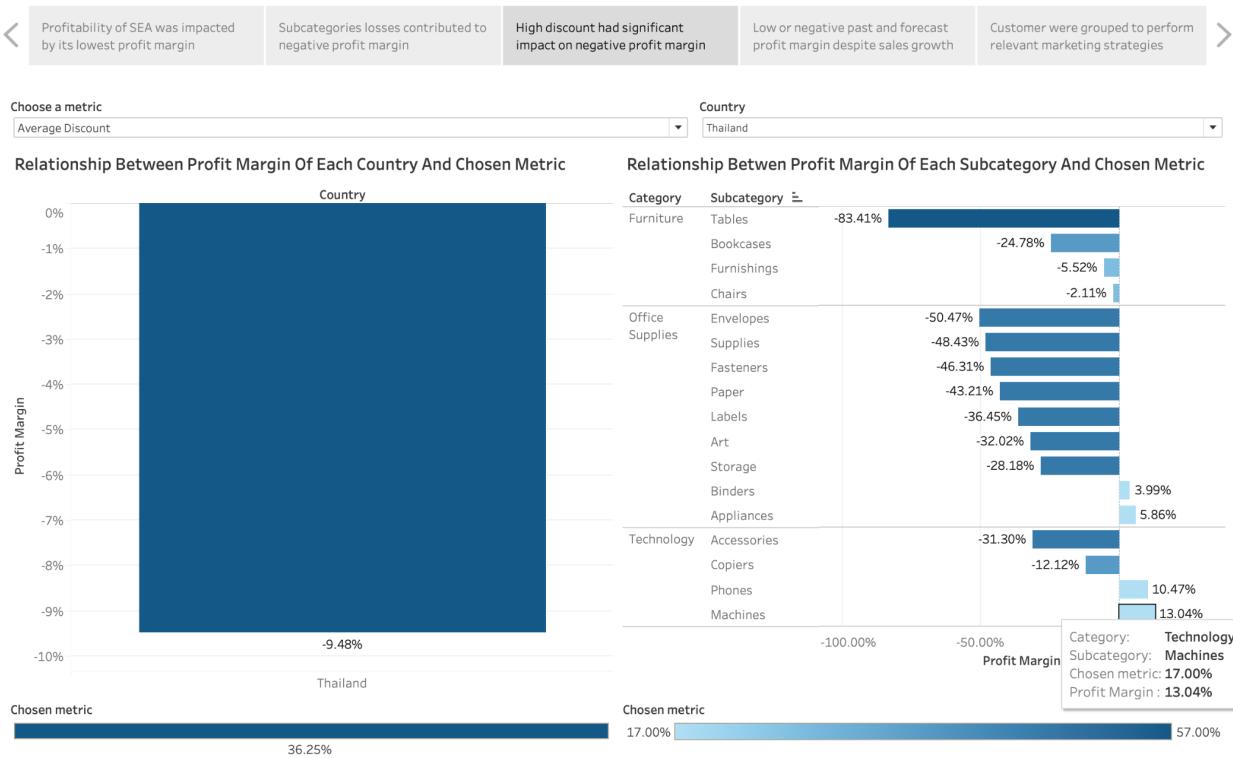
[Dashboard 3aii]

Sales and Profitability of SouthEast Asia (SEA) from 2017 to 2020



[Dashboard 3aiii]

Sales and Profitability of SouthEast Asia (SEA) from 2017 to 2020



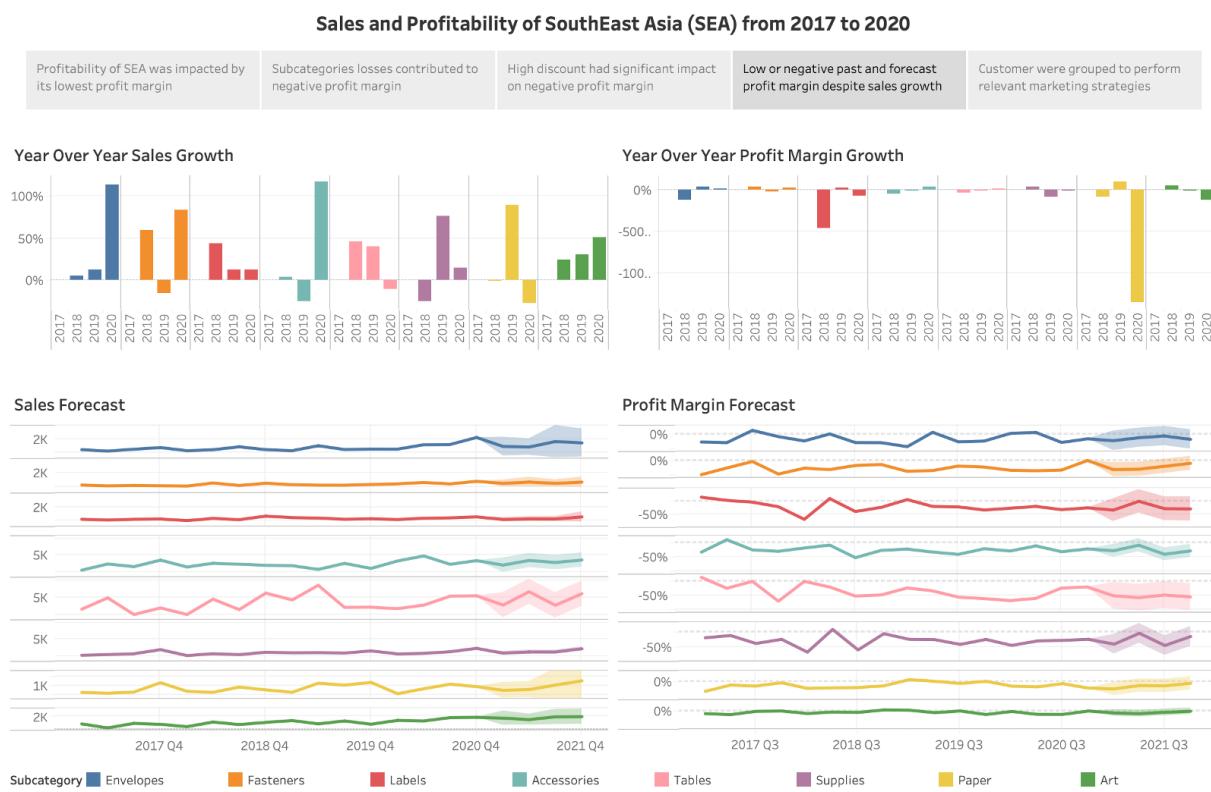
[Dashboard 3aiV]

3.4 Forecasting models for sales and profit margins of each subcategory that incurred loss

The forecasting models for sales and profit margin of subcategories that incurred losses were optimized by minimizing mean absolute scaled error (MASE) and mean absolute percentage error (MAPE). MASE and MAPE were chosen to optimize models as they were standardized statistics. The forecasts were for 4 quarters in 2021.

3.4.2 Low or negative past and forecast profit margin despite sales and profit margin growth

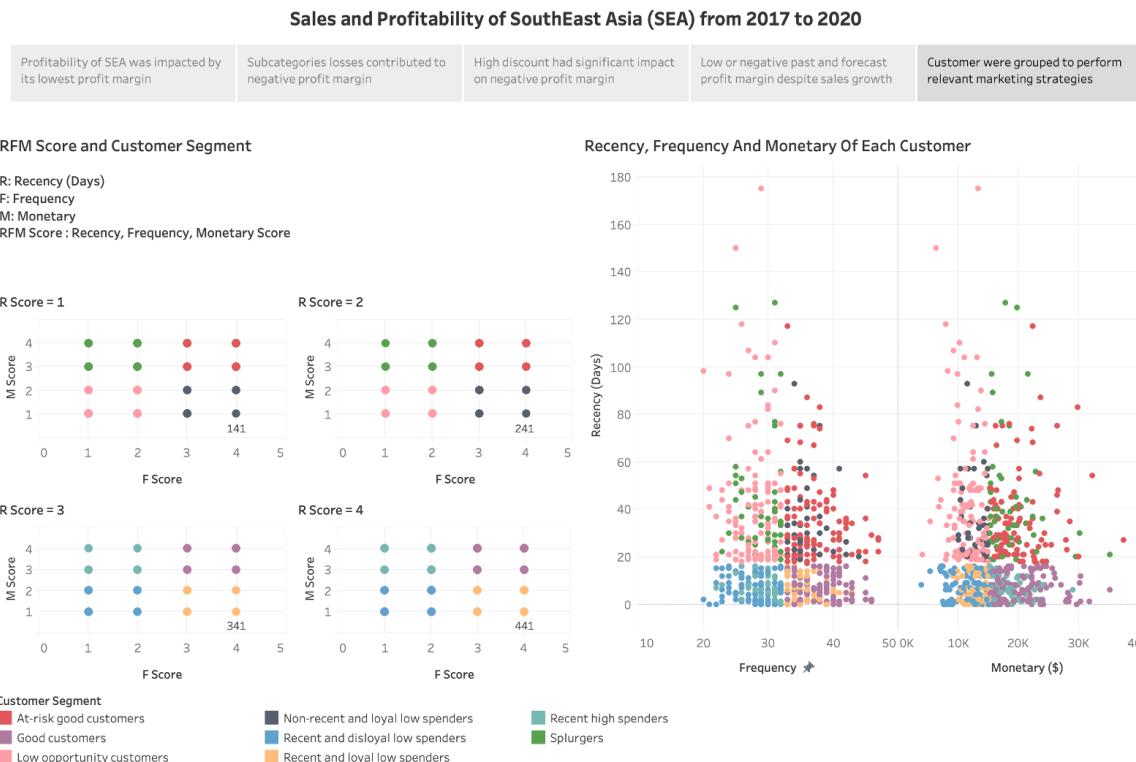
Profit margin from 2017 to 2020 was either low or negative despite sales and profit margin growth of some subcategories. Within the 95% confidence interval, tables were predicted to incur negative profit margin within the 95% confidence interval. The forecast profit margins of other subcategories were predicted to either have negative or low positive profit margins. The sales forecasts did not indicate a clear upward or downward trend except supplies subcategory with downward trend from 2020 Quarter 4 to 2021 Quarter 1 and an increasing trend from 2021 Quarter 1 to 2021 Quarter 4 [Dashboard 4].



[Dashboard 4]

3.5. Grouping customers in 8 customer segments

Customers with different behaviors were grouped based on recency, frequency and monetary (RFM) with global data into 8 customer segments. Recency is the difference between the latest order date in the dataset, which was 30/12/2020 and the latest purchase date of each distinct customer. Frequency is the number of times a distinct order was placed. Monetary is the sum of sales. A best score of 4 was given to the most favorable behavior to the profitability of the company. For value of recency less than or equal to 1st quartile, highest score of 4 is given, followed by 3,2,1. For values of frequency and monetary more than 3rd quartile, the highest score of 4 is assigned, followed by scores of 3,2,1. The recency score (R score), frequency score (F score) and monetary score (M score) were then concatenated to become Recency, Frequency, Monetary Score (RFM Score) (Windsor Circle, n.d.). For instance, Chirstophere Schild with RFM Score of 412 had a score of 4 for recency, 1 for frequency and 2 for monetary. He was grouped as recent and disloyal low spenders. After segmenting the customers with global data, non-SEA customers were filtered out for SEA analysis. The visualization for dashboard 5 excluded outliers, Nicole Brennan with a recency of 428 days to visualize the data better [Dashboard 5].

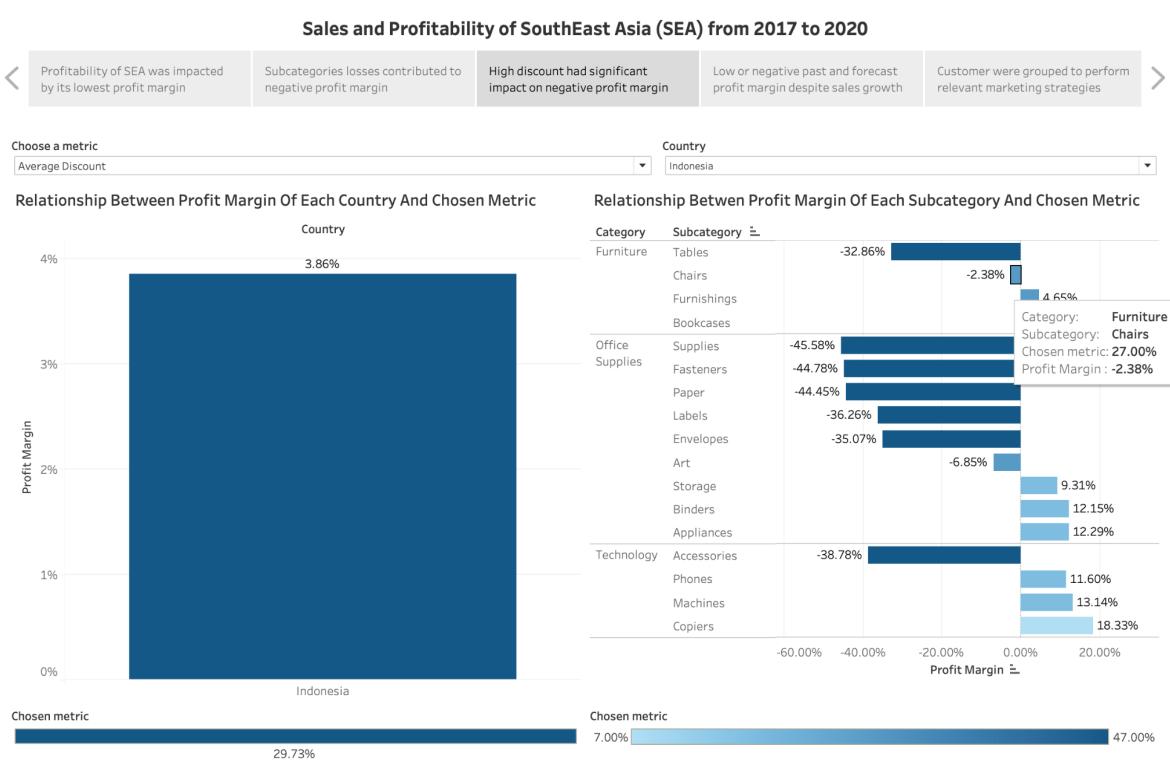


[Dashboard 5]

RECOMMENDATIONS

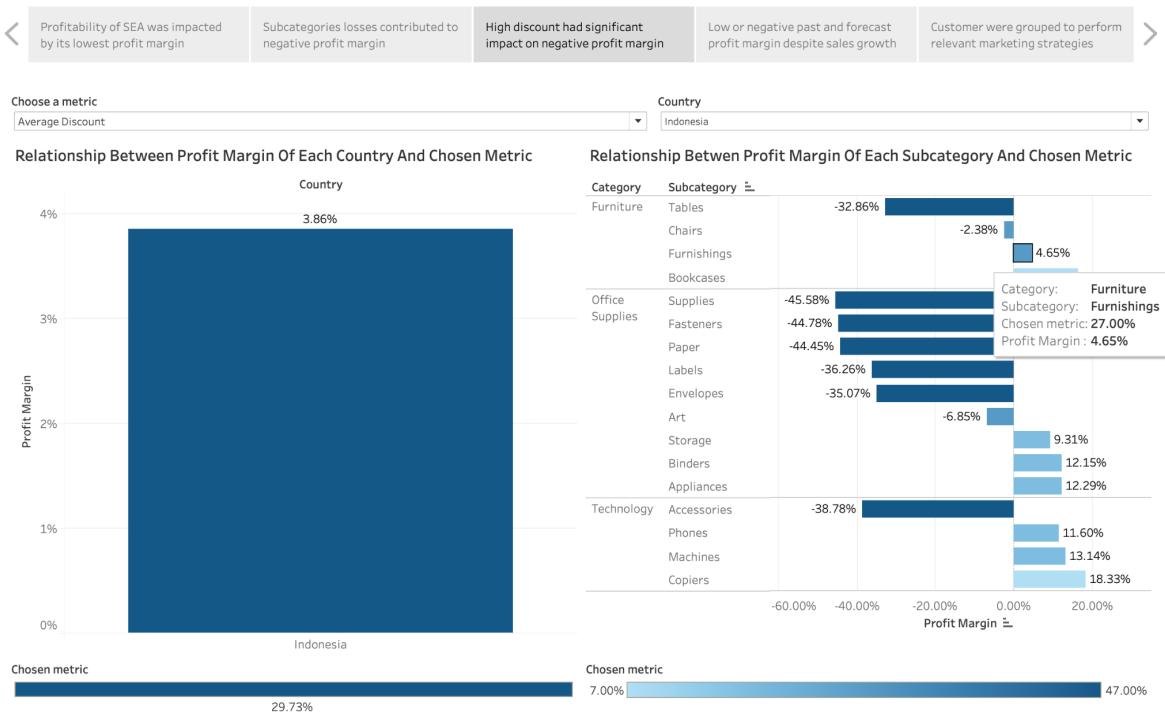
4.1 Increase profit margin by lowering discount

Discount should be decreased and varied across countries and subcategories due to difference in price elasticity of demand (PED). For Indonesia , lower discount to less than 27% except furnishings as subcategories started making loss at 27% discount or more except furnishings [Dashboard 3av-vi]. For Myanmar and Thailand , offer discounts less than 27% [Dashboard 3avii -3axi]. For Vietnam, give discounts less than 37% [Dashboard 3ax]. For the Philippines, provide discounts less than 25% except chairs, furnishings and phones [Dashboard 3axi-3axii].



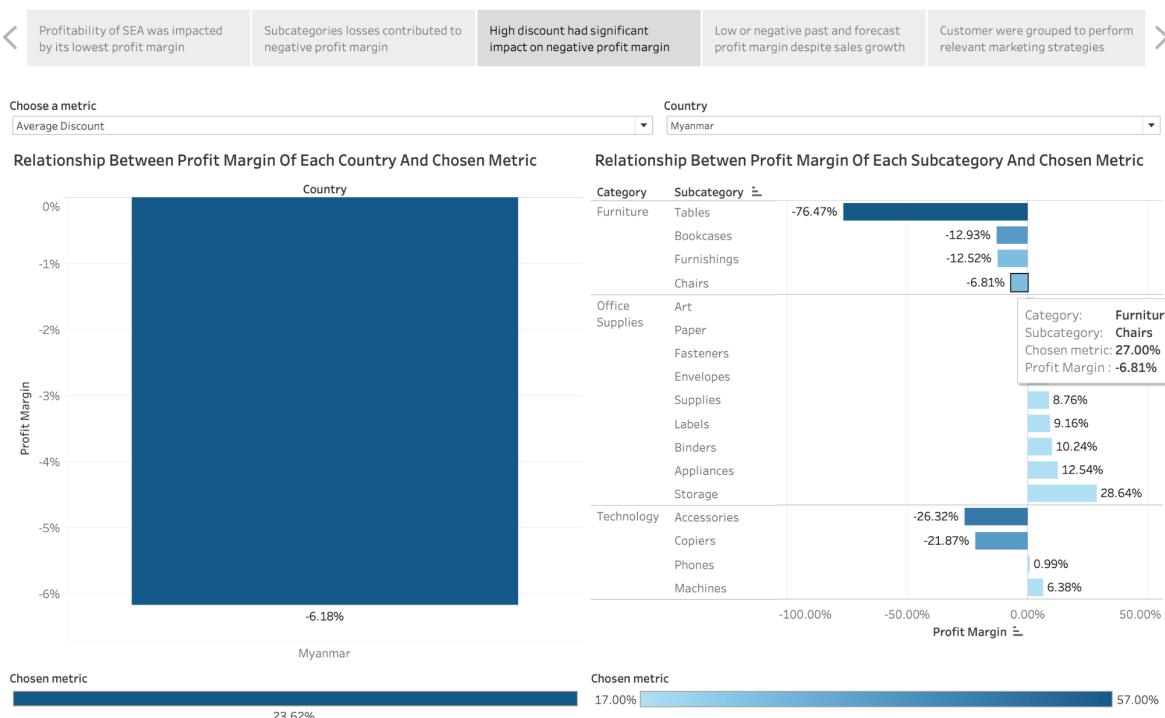
[Dashboard 3av]

Sales and Profitability of SouthEast Asia (SEA) from 2017 to 2020

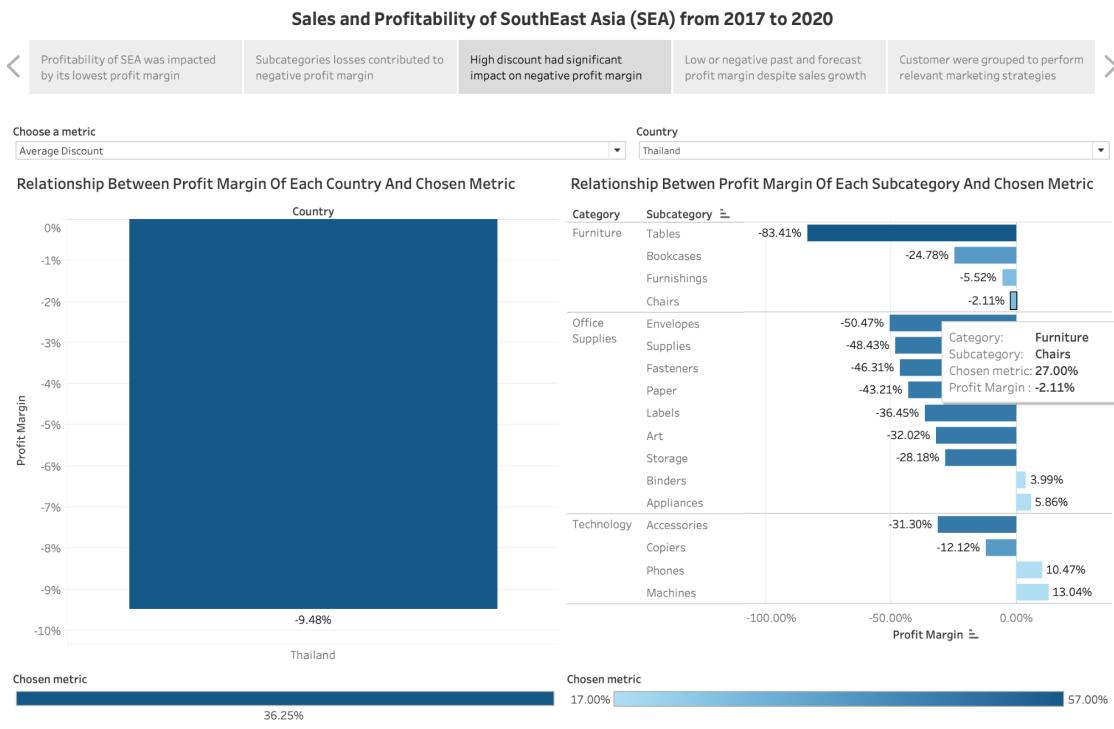


[Dashboard 3avi]

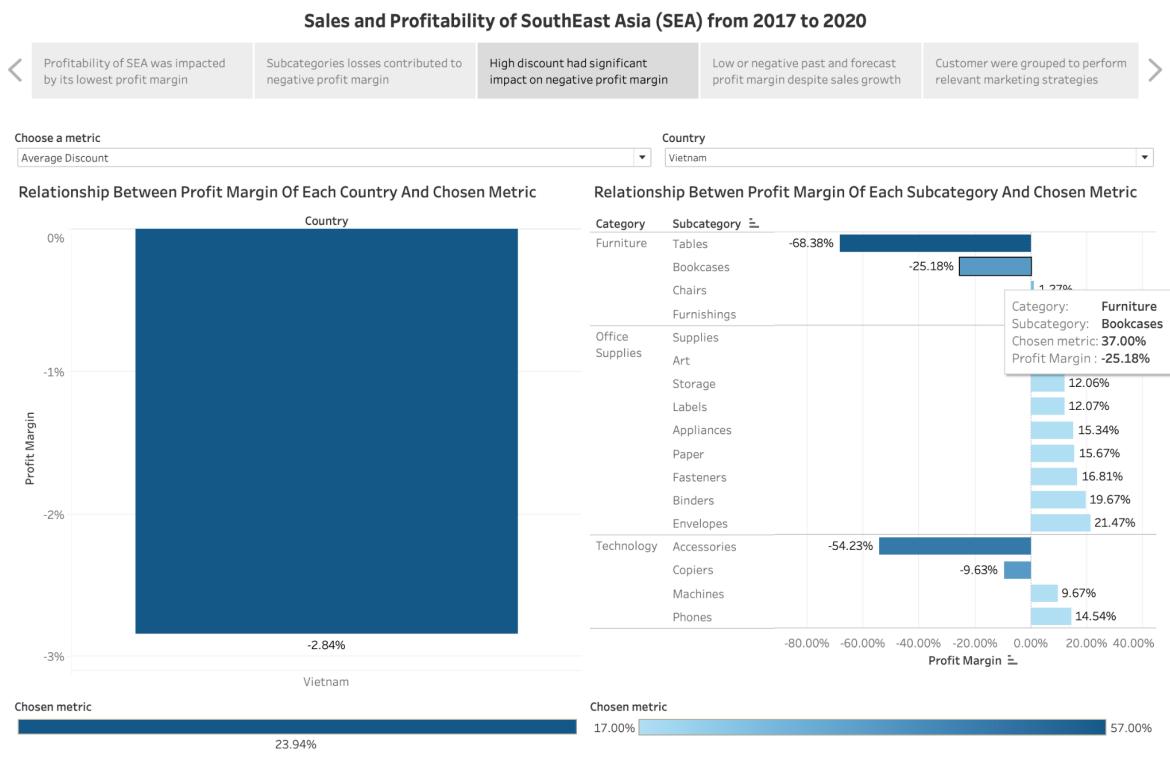
Sales and Profitability of SouthEast Asia (SEA) from 2017 to 2020



[Dashboard 3avii]

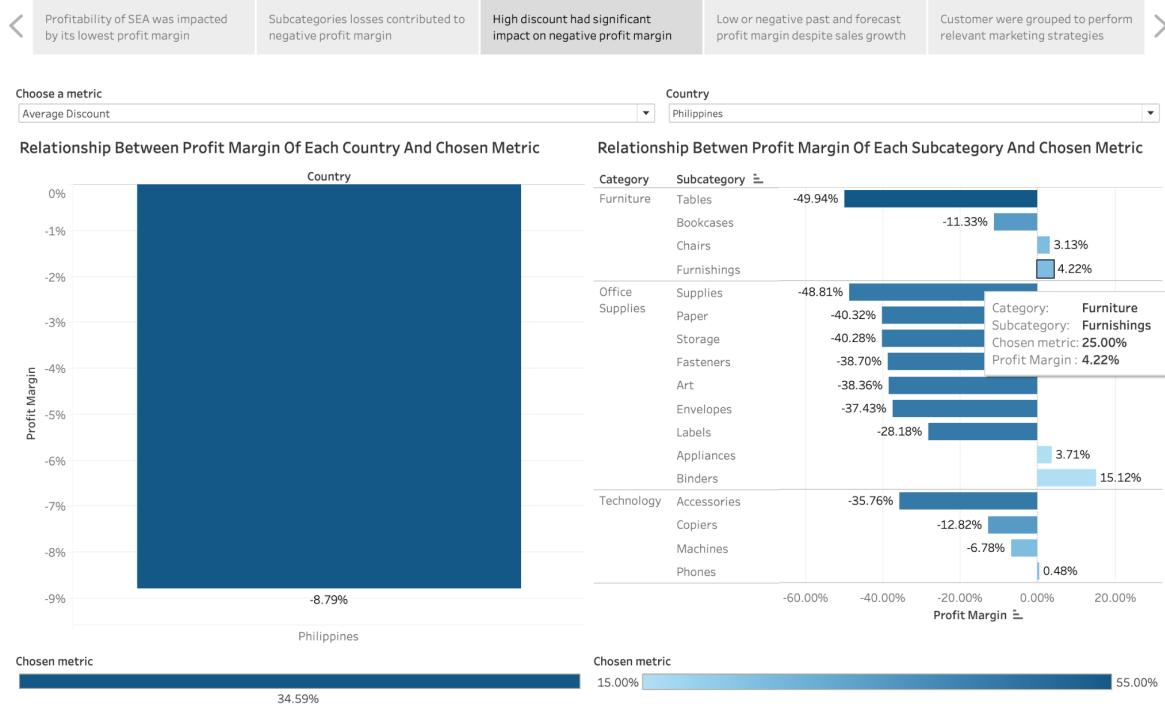


[Dashboard 3aix]



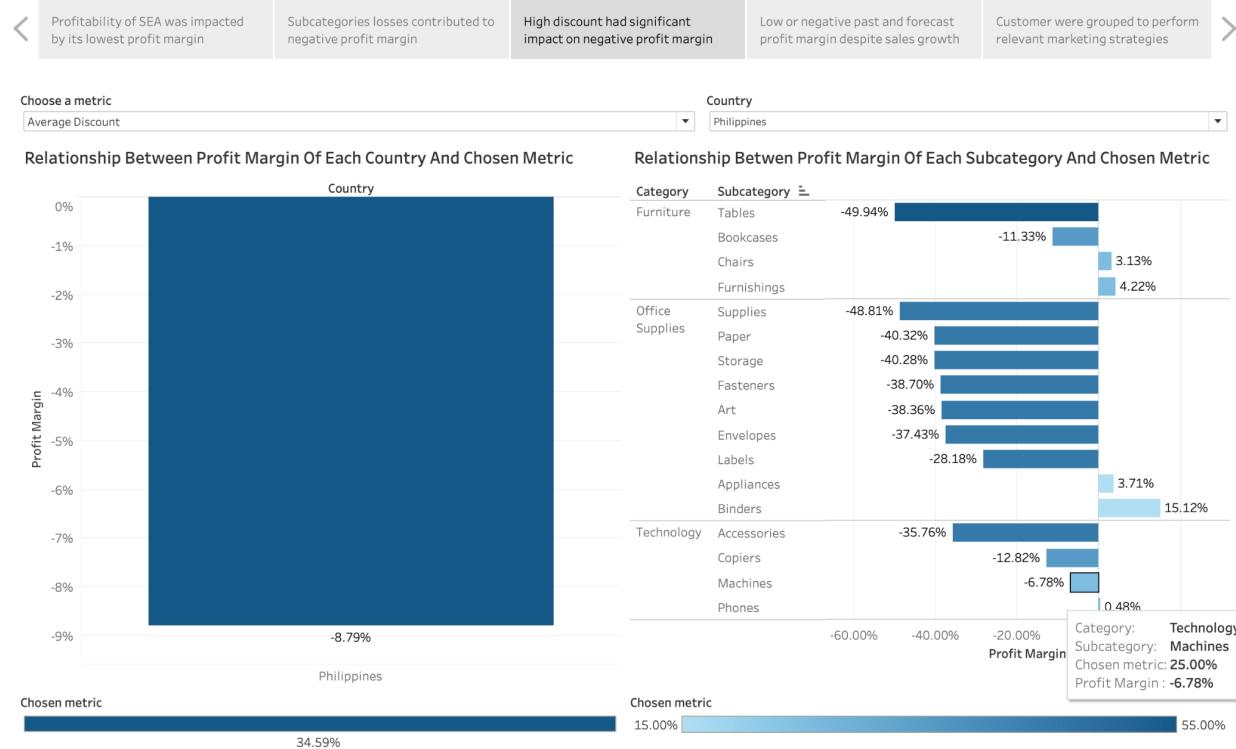
[Dashboard 3ax]

Sales and Profitability of SouthEast Asia (SEA) from 2017 to 2020



[Dashboard 3axi]

Sales and Profitability of SouthEast Asia (SEA) from 2017 to 2020



[Dashboard 3axii]

4.2 Increase sales by cross-selling and bundling sales

Despite sales growth of some subcategories from 2017 to 2020, losses were incurred. Supplies sales were predicted to increase in 2021 but predicted profit margin was low positive or negative [Dashboard 4]. Sales growth might not be enough to cover production cost. Increase sales such that sales growth could cover production costs that might increase over years due to inflation. Increased sales also increase economies of sales, further improving the profit margin of subcategories. Implement cross-selling and bundling sales to increase sales. For instance, cross-selling accessories which had low sales with phones that had high sales. Bundling sales for storage which generated high sales with fasteners, envelopes and labels which generated low sales [Dashboard 2].

4.3 Revise production cost and selling price for subcategories

Profit margin remained low or negative despite sales growth. Production cost might be too high or selling price might be too low. Revise production cost and selling price such that selling price could cover production costs for a higher profit margin.

4.4 Marketing strategies for each of the 8 customer segments

Recency, frequency, monetary (RFM) segmentation

- a. Good customers : Customers who bought recently, frequently and spent a lot
Prevent using price incentives for these customers to maximize profit margin. Offer exclusive loyalty programmes incentive like VIP access to new product launch events and allow them to provide feedback after testing the product.

- b. Recent high spenders: Customers who had not frequent the store but already spent a lot
Retain them by offering similar recommendations as good customers as they could be potentially converted into good customers.

- c. At-risks good customers: Customers who used to buy frequently and spend a lot
They might possibly churn due to more enticing product, price and customer services offered by competitors. Continue improvement of product, price and customer services. Send short surveys to them to understand why they stop ordering. Offer discounts on popular and improved products if they complete the survey which helps to promote good products that the customers might not know to win them back.

- d. Splurgers: Customers who spent a lot in few orders some time ago
- e. Low opportunity customers: Infrequent customers who spent less and did not order for some time

Offer these 2 kinds of customers with similar recommendations as at-risk good customers because they stopped buying for some time. Upsell luxury products for splurgers as they might be wealthy to spend a lot in a few orders. Recommend affordable products based on past transactions for low opportunity customers as they are likely to be influenced by the price of the product as low spenders.

- f. Recent and loyal low spenders: Recent customers who spent less but frequent the store
Offer incentives such as giving discounts if more items are bought to increase their spendings.
Ensure that the discount given was to increase sales for a higher positive profit margin.
- g. Recent and disloyal low spenders : Recent customers who spent less and did not frequent the store
- h. Non-recent and loyal low spenders: Customers who spent less and used to frequent the store
Offer these 2 kinds of customers with similar recommendations as recent and loyal low spenders. Increase loyalty of recent and disloyal low spenders with loyalty programmes which award them incentives by ordering more. Send short surveys to non-recent and loyal low spenders to understand why they stop ordering and update them about new product launches and incentives.

[1495 words]

References

1. Windsor Circle (n.d.). *RFM Analysis: The Key to Understanding Customer Buying Behavior* [online]. Available at:
https://nmcdn.io/e186d21f8c7946a19faed23c3da2f0da/712f15a792524df4bfe0912e6bf5bb2a/files/RFM-Analysis/Windsor_Circle_Whitepaper_-_RFM_Analysis_pdf.pdf (Accessed: 12 February 2022)