



## **AC2105 Accounting For Decision Making And Control**

**Academic Year 2021-2022**

### **Business Analytics Project Case: Merlion Cafe**

**Prepared for: Dr Yin Huaxiang**

**Prepared By:**

**Seminar 5 Team 5**

**Chua Ming Kwan, Anthony (U1910631A)**

**Lim Jun Rong (U1810398E)**

**Ng Ching Jie (U1910649D)**

**Pua Tian Yu (U1910659B)**

## **Executive Summary**

Merlion Cafe has been hit hard with the recent and ongoing Covid-19 pandemic. All 3 outlets have shown unsatisfactory operating results in 2020. This report aims to identify the issues that the company is facing by analysing its financials and to give appropriate recommendations for these issues. The dashboard in Figure III summarizes the company's key performance statistics. Some of the key issues identified include high fixed labour costs, the inability to generate enough revenue to cover expenses, and orders clustering during peak hours causing long waiting times. These issues will be addressed with the following recommendations: remodelling the current pay structure to a performance-based model, removing some of the current full-timers and hiring new part-timers, allocating part-timers to peak periods to reduce order clustering and long waiting times, closing down the CBD outlet, and lastly, to increase revenue generation by recommending bundles of items that have high unit contribution margin with relatively high correlation with each other.

## **Assumptions**

For this report, when calculating profits and contribution margin, costs of consumables distinct between each outlet are taken into consideration as variable costs. We have derived the cost of consumables by deducting direct costs from the cost of sales provided and dividing the difference by the total quantities sold for each specific outlet (Figure 4).

For recommendations, although our team has recommended the closure of the CBD outlet, we assume that it is up to upper management of Merlion Cafe to implement these recommendations and thus, for the subsequent recommendations, we have still included the CBD outlet in the case that they decide not to close it down.

## **Performance Analysis of Products**

With reference to Figure 1, Non-cream cakes generated the highest revenue at \$348,607. Following closely behind was Caramel Hot Chocolate at \$323,071. As seen in Figure 2, both products also had the highest sales volume at 59,086 and 40,895 units respectively. It is evident that these are the 2 most popular products. However, Figure 3 shows Caramel Hot Chocolates are generating the highest contribution margin for the company at a total of \$232,757. On the other hand, Non-cream cakes are only third place in generating gross profit with a Contribution Margin of \$150,965. Therefore, despite Non-cream cakes being the most popular product, Caramel Hot Chocolates generated the most profits for the year.

According to Figure 1, the poorest performer in terms of sales was Espresso, making up only 1.76% of total sales followed by Black Tea and Hot Brew at 2.57% and 2.65% respectively. In terms of contribution margins, Figure 3 shows that these 3 products were also bottom performers along with Brownies. Despite having an average sales volume of 28,081 units, Brownies have generated the second-lowest contribution margin of \$25,941 and only 4.43% of total sales revenue. Referring to Figure 4, this is due to Brownies having a low contribution margin per unit.

Overall, out of all the product categories, referring to Figure 5, Coffee generated the highest contribution margin at \$397,813 followed by Dessert, at \$298,373. However, Dessert has a higher sales volume at 122,361 units as compared to Coffee at 95,045 units. This was likely due to customers purchasing Desserts as complements to go with any type of Beverages. Tea was the poorest performer in revenue generated and profitability. It had a contribution margin of just \$206,774, revenue generated of \$320,240, and a sales volume of 50,286 units. Although Tea had a higher sales volume, it generated less profit than Caramel Hot Chocolate.

### **Performance Analysis of Outlets**

Figure 6 depicts the total profit generated from each outlet for the year which shows that only Toa Payoh is making a profit of up to \$41,703. The other two outlets in Orchard and CBD made a loss of -\$72,728 and -\$112,619 respectively. Overall, the company as a whole made a loss of -\$143,644. With reference to Figure 7, sales revenue started to decline in the first quarter of the year relative to Figure 8, all profits saw a sharp decline from February to April, with both profits and revenue slowly recovering over time. This can be attributed to the effects of the Covid-19 Pandemic and the impact of the “Circuit Breaker” in Singapore and its effects on sales in the F&B Industry where year-on-year sales for the F&B sector dropped by -26% for the year and -51% during the Circuit breaker period (Qua K., 2021).

Profits started rising in the second half of the year. For the Orchard outlet, net profits recovered from -\$35,404 in April to \$20,017 in December. Similarly for the Toa Payoh outlet, net profits recovered from -\$20,765 to \$18,720. However, for the CBD outlet, total net profits remained negative as the outlet struggled to recover from the fall. From November to December, Net profit even decreased further from -\$7,060 to -\$11,143. Thus, it is evident that the CBD outlet was the poorest performing outlet, and had failed to recover.

In terms of sales, referring to Figure 9, CBD was again the poorest performer as it only made up 19.52% of total sales at \$371,446. On the other hand, Orchard and Toa Payoh made up

37.20% and 43.27% of total sales respectively. From this, we can conclude that the impact of COVID-19 had affected the CBD outlet significantly due to the new work from home measures taken by many companies located in the CBD area (Goh, 2021). Whereas for Orchard and Toa Payoh, customers have started coming back after the Circuit Breaker period.

In terms of hourly revenue earned by each outlet, referring to Figure 10, Orchard and Toa Payoh both peaked at 1 pm. However, they have a different distribution as Orchard performs exceptionally well during the afternoon from 12 noon to 4 pm whereas Toa Payoh performed well throughout the day from 7 am to 4 pm. Earnings per hour for Toa Payoh were less skewed and more smooth throughout the day. In contrast, CBD did not appear to have a consistent distribution of hourly earnings throughout the day as their revenue distribution was largely concentrated for 2 hours each in the morning, noon and the evening during mealtimes.

### **Performance Analysis by Modes of Consumption**

Looking at the difference in revenue per the mode of consumption as shown in Figure 11, we can see that overall, dining-in is the most popular choice. Referring to Figure 7, the drop in sales revenue from Feb onwards was due to the Covid-19 pandemic where consumers were either restricted from dining in by the regulations or for fear of mingling in public places.

During the month of May, there were 0 dine-in customers for all 3 outlets primarily due to Covid-19 regulations. As a result, there was a surge in Deliveries for the month of May in both Orchard and Toa Payoh outlets, peaking at 1,268 and 1,286 deliveries respectively. This seems to suggest that these 2 outlets are well-received by the customers because they enjoy the food and drinks as they continue to support the stores through other means (delivery). For the case of CBD, there was no inverse correlation with the dine-in and takeaway or delivery experience. Even though the dine-in decreased drastically, the frequency for takeaway and delivery at CBD did not increase. Thus, this seems to suggest that customers frequent the café because they enjoy the ambience and environment instead of its food and beverages. Another reason could be that customers in CBD are primarily working from home, so they would not have gone to such a large extent to purchase drinks from the café through takeaway or delivery as there are few residential buildings in the CBD.

The least popular mode of consumption is delivery which only generated \$130,666 in gross profits for the year. This was likely due to customer complaints about long waiting times resulting in fewer repeat orders from dissatisfied customers. Overall, the high popularity for dining in suggests that many customers enjoy the ambience of the cafe and customer services.

### **Cost Analysis per Outlet**

Figure 12 shows that the fixed costs of the Orchard outlet were significantly higher than the other two outlets. This was mainly due to its high amount of staff salary amounting to \$168,000 and marketing expenses of \$70,776. Rental expenses in Orchard were also significantly higher than other outlets amounting to \$144,000 accompanied by high utility expenses of \$39,600. The outlet paid significantly more to market their products and paid a higher salary to their staff despite having the same number of staff as the Toa Payoh outlet. This caused the outlet to record a loss for the year despite its relatively high sales.

As for the CBD outlet, despite having the lowest operating expenses of \$335,484, the outlet had insufficient sales to generate a net profit. Referring to Figure 13, CBD had a contribution margin of \$222,868 which is up to \$112,616 lower than its operating expenses. We can infer that CBD's fall in revenue was enough to result in a net loss despite low expenses.

Lastly, for the Toa Payoh outlet, its rent expenses were the lowest, amounting to only \$84,000 and staff salary was lower than the equally staffed Orchard outlet at \$156,000. Figure 14 also shows that the outlet has relatively low marketing costs at only \$24,696 but despite this, Toa Payoh generates the highest sales out of all 3 outlets. Therefore, Toa Payoh is the best performing outlet as it has sufficient revenue to support its operating expenses and is the only outlet generating a profit of up to \$41,703.

### **Issues & Recommendations**

#### **Issue 1: High labour costs and non-performance based salaries**

As seen in Figure 15, Merlion Cafe currently incurs \$405,000 in staff salaries and \$144,000 in manager salaries yearly. Comparing this with their total revenue of \$1,902,488, total labour costs add up to 28.86% of revenue. Therefore, we can infer that labour costs are extremely high and are a big portion of their expenses that caused losses for the year.

Furthermore, the company hires the same number of staff regardless of hourly demand, which inflates the costs for each outlet as some staff would be idle during non-peak hours. For the Orchard outlet, there are 5 staff hired, but during the morning and night, revenue generation is extremely low (Figure 10). Also, the staff and the store manager are given a fixed monthly salary which fails to incentivise them to perform well in their duties or for the manager to take responsibility for driving up profit for the company.

#### **Recommendation 1.1: Performance-evaluation system and rewards**

Currently, Merlion cafe's critical success factors include service quality due to the high number of customers that prefer dining in and increased customer satisfaction to maintain customer retention especially during the pandemic where foot traffic has decreased. For store managers, a performance-based bonus based on their corresponding store's profits motivates them to think of creative means to drive up sales while reducing costs and the risk of agency problems. Since store managers are in control of daily operations, they have the ability to control the profits of each outlet, based on the revenue generation and making costing decisions such as the scheduling of part-time and full-time staff. As for regular staff, a review-based bonus measured by customer feedback surveys can be implemented.

Due to the company making losses, it will be beneficial to make a portion of salaries performance-based by reducing the fixed portion and having a variable portion of their salaries based on the net profit margin for store managers, and customer satisfaction surveys for staff. This will reduce the operating expenses as the company only pays higher labour costs when the outlet is performing well, reducing the probability of a net loss. Customer surveys for staff members will include short questions on the quality of food, service and drinks such that waiters, chefs and baristas' performance can all be evaluated.

### **Recommendation 1.2: Hire part-time waiters and let go of existing service staff**

Merlion cafe can drop some existing service staff and hire part-time waiters as it would be cheaper. With hourly wages, their working times can be scheduled based on having more waiters during peak hours and having fewer waiters during non-peak hours (Figure 10).

Merlion Cafe should remove 2 full time employees from the Orchard and Toa Payoh outlet and remove 1 full time employee from the CBD outlet. They will be replaced with part-time employees that cost \$9 per hour. In Figure 16, we have computed how Merlion should re-allocate its staff in order to fully optimize the hourly rate of these part-time employees. For instance, during peak periods for Orchard from 11am to 7pm, we would assign up to 2 part-timers to help out. This ensures that we optimize the hourly rate of part-timers and reduce the idle cost incurred by the company. Beyond 7pm, we would not allocate any part-time workers as Orchard would have relatively low sales volume for its existing full-timers to handle. With this re-modelling, part-timers would only cost Merlion Cafe \$105,120 a year. Total labour costs would be at \$299,520 a year, instead of \$324,000 previously. Overall, Merlion Cafe would have saved \$24,480 in labour costs. However, this is not without risk as it may have a negative impact on the morale of existing full time staff.

## **Issue 2: Loss-making CBD outlet**

Based on our analysis, the CBD outlet lacks sufficient sales to cover its fixed expenses and does not seem to be recovering from the impacts of the Circuit Breaker. As a result, the company has incurred a total loss of \$112,619 for the year. Going forward, working from home has become the norm in many companies operating in the CBD. This will affect the outlet's sales as human traffic in the area has significantly decreased (Phua, 2020).

### **Recommendation 2.1: Close down the CBD outlet**

Referring to Figure 17, the CBD outlet should close down if a revenue of \$599,145 cannot be achieved. For the CBD outlet to break even, its revenue has to increase by 50.53% in 2021. In order to forecast next year's sales, on the assumption that CBD has a constant growth rate, it would need to achieve 7.66% monthly constant growth in sales. However, the likelihood of this is low as the adverse impacts of COVID-19 on F&B businesses as of 2020 year-end are still prominent (Singstat, 2021). Furthermore, as workers continue working from home, since CBD has few residential buildings in the area, the volume of takeaways and deliveries are unlikely to grow. Assuming that this pessimistic assumption holds true, we assume that CBD has a constant growth rate of 4% in 2021, and based on this, closing the outlet down would generate a net benefit of \$73,630.74 (Figure 17). Hence, it is beneficial to close down CBD as the avoidable costs are higher than the opportunity costs of closing the outlet.

However, some qualitative factors that may impact Merlion Cafe is the fact that closing down its CBD outlet may impact company reputation, as customers may perceive the closure to be due to lousy quality and investors may perceive it to be due to poor performance. To mitigate the negative effects, the company should communicate its reasons clearly as the closure is mainly due to external factors caused by the pandemic and not poor performance.

## **Issue 3: Increasing pressure to generate cash**

There is an outstanding loan for its Orchard outlet payable in one year's time and Merlion Cafe is facing cash flow problems. Hence, the company needs to generate more revenue or reduce costs to be able to pay off its debts and expenses. Some notable expenses that can be reduced are the Orchard outlet's marketing expenses as it is substantially higher at \$70,776.

### **Recommendation 3.1: Upsell high contribution margin products using bundling**

Products chosen for bundling should have a high contribution margin such as Caramel Hot Chocolate, Caffè Latte/Cappuccino, Non-Cream Cakes and Mocha/Macchiato. Merlion Cafe

should upsell these products to generate higher profits. For instance, combo meals could be offered where these drinks are sold together with a dessert at a slightly discounted price.

Referring to Figures 2 and 4, Since Green Tea and Mocha/Macchiato have the highest contribution margin of \$5.33 and \$5.84 respectively out of all Tea and Coffee products and a relatively low sales volume of just 22,342 units and 26,466 units respectively, they can be paired as a bundle with Non-cream cakes which has the highest sales volume of 59,086 units and customers can be given a choice to choose between the 2 types of beverages.

If a discount of \$1 is offered for purchasing the bundle, the total combined contribution margin earned from these two products being sold would be \$7.57 if the customer chooses Green Tea and \$8.085 if the customer chooses Mocha. Overall, this promotion is likely to boost revenue generation especially since Merlion Cafe offers a large variety of products (Chiambaretto & Dumez, 2012). Referring to Figure 18, Green Tea and Non-cream cakes have a correlation of 0.103 whilst Mocha and Non-cream cakes have a correlation of 0.124. This implies that customers purchase these two combinations relatively often. Hence, we can infer that introducing this bundle would have a generally positive response as some existing customers are already purchasing these 2 products together.

### **Recommendation 3.2: Improve marketing efforts through the usage of social media and customer loyalty programmes**

Instead of relying on the ads provided on platforms where advertising fees have to be incurred, Merlion Cafe could offer free brownies to customers for posting pictures of the cafe's products and tagging their social media page. Giving away free brownies will not be costly to the company as its variable direct cost is only \$1.35 each. With the shared posts from the consumers, there would be an increase in awareness of Merlion Cafe and an increase in sales. Ultimately, the benefits of increased sales and cost savings would outweigh the costs incurred from giving away free brownies. By implementing this strategy, Merlion Cafe can opt out of placing ads on social media, saving marketing expenses in the process.

The presence of customer loyalty programs will increase customer retention rates and sales. According to a study, customers spend 67% more when they are part of a customer loyalty program. Also, increasing customer retention rates by 5% can increase profits by 25% to 95%. (Miller, n.d) To acquire new customers, referral programs could be implemented. It was stated that 77% of customers are more likely to purchase a product when learning about it from friends or family. (Miller, n.d). Thus, these initiatives would boost Merlion Cafe's sales.



### **Recommendation 3.3: Sending Chefs and Baristas to training workshops**

One of the main drivers of a successful cafe business is the quality of their food and drinks. Hence, it is important for the Chefs and Baristas to constantly upgrade their cooking and brewing skills so as to remain competitive. With higher quality products, customer satisfaction will be improved and therefore, it would boost the revenue of Merlion Cafe.

Merlion Cafe can send its Chefs and Baristas to workshops monthly to expand their skillset and ability to create new product offerings in the future. With financial resources being put towards product innovations and quality, Merlion Cafe will be able to remain competitive as companies require constant innovation for customer loyalty and differentiation (Reguia, 2014).

### **Issue 4: Orders cluster at peak hours and long waiting time**

Orders tend to cluster together at peak hours, affecting the online customer experience. If not addressed, customer retention would be negatively affected due to unsatisfied customers, resulting in lower revenue growth in the future.

### **Recommendation 4.1: Offer discounts at non-peak hours**

As observed in Figure 10, outlets differ slightly in their non-peak hours. For the Orchard outlet, the non-peak periods include 9am to 11am and 5pm to 9pm. As for the Toa Payoh outlet, the non-peak period is from 5pm to 8pm. Hence, Merlion Cafe should offer discounts at these timings to entice customers to make their purchases during non-peak periods. This will make the revenue distribution more consistent throughout the opening hours and peak period crowds could be reduced and better managed, improving customer satisfaction.

For the CBD outlet, since a large percentage of customers prefer delivery over takeaway and in light of low revenue generated, Merlion Cafe could participate in Grab and FoodPanda promotion activities to increase orders. Although giving a discount means lower contribution margins, it will still benefit from higher sales as it is not selling products at full capacity.

### **Evaluating performance after implementation**

After Merlion Cafe has implemented our recommendations, the Strategy Map (Figure I) and Balanced Scorecard (BSC) (Figure II) will be used to evaluate their performance. The strategy map shows the cause-and-effect of the relationships among critical success factors and the BSC uses performance measures based on recommendations to set targets for achieving the intended outcomes.

## Appendix

### Strategy Map

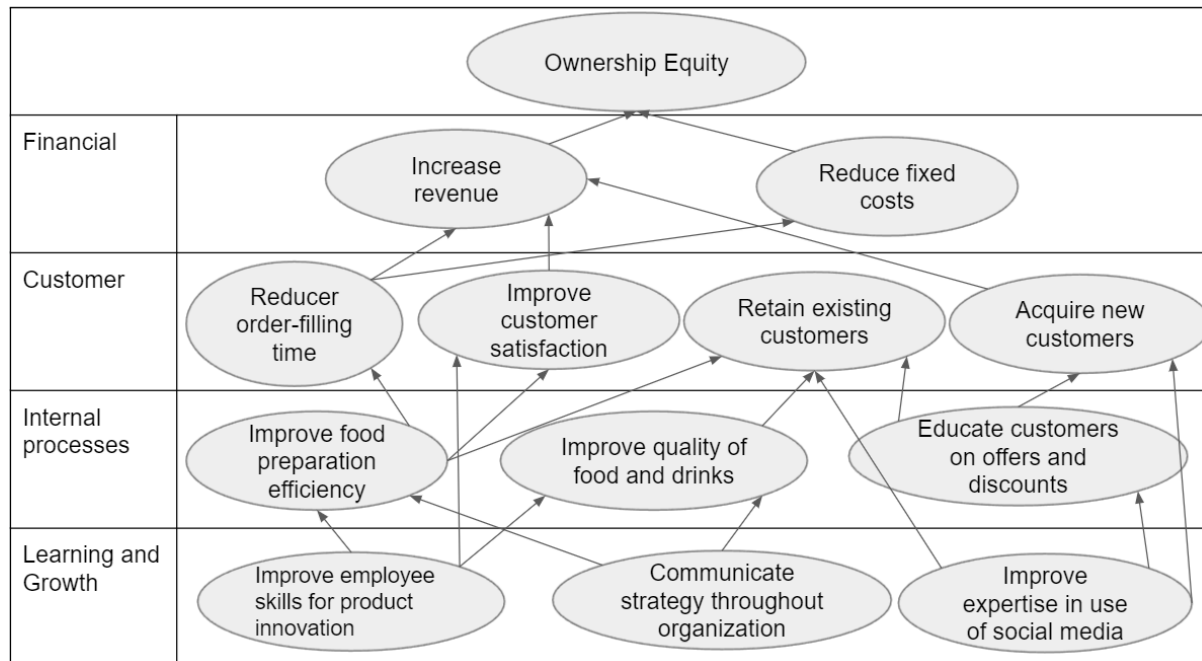


Figure I

### Balanced Scorecard

	Strategic Objectives	Measures	Targets	Initiatives
Financial	Increase Revenue	Revenue Growth per outlet	↑15%	Increase sales volume by introducing combo meals
				Increase marketing efforts on high contribution margin products
				Offer discounts at non-peak hours to increase sales volume
	Reduce Fixed Costs	Fixed cost per outlet	↓18%	Reduce labour cost by revising full-time employees' remuneration package to be performance-based Discontinue

				loss-making outlet
<b>Customer</b>	Reduce order-filling time	Service Time	Average of 1.5 minutes to take orders for each customer	Provide training for staff to be more efficient
	Improve customer satisfaction	Survey customer satisfaction	85% good or better	Provide performance-based remuneration package for service staff
	Retain existing customers	Customer Retention Rate	25% Increase number of repeat customer	Schedule more part-timers during peak period
	Acquire new customers	Customer Acquisition Rate	25% Increase number of new customer	Customer loyalty program
<b>Internal Processes</b>	Improve food preparation efficiency	Cooking/ Brewing time	Maximum 6 pending orders at one point in time	Marketing initiatives such as referral program
	Improve quality of food and drinks	Customer surveys on food quality	80% good or better	Provide performance-based remuneration package for chef/barista
	Educate customers on offers and discounts	No. of customers that utilize discounts and offers	50% of total customers	Offer to send chefs and baristas to workshops
<b>Learning and growth</b>	Improve employee skills for product innovation	Training hours	3 hours a month	Promote discounts on social media and storefront
	Communicate strategy throughout organization	% of employees trained on the firm's strategy map	100%	Offer to send chefs and baristas to workshops
				Show video on firm's mission and strategy

	Improve expertise in use of social media	Follower growth	↑15%	Reward customers for posting company's products on social media
--	--	-----------------	------	---

Figure II

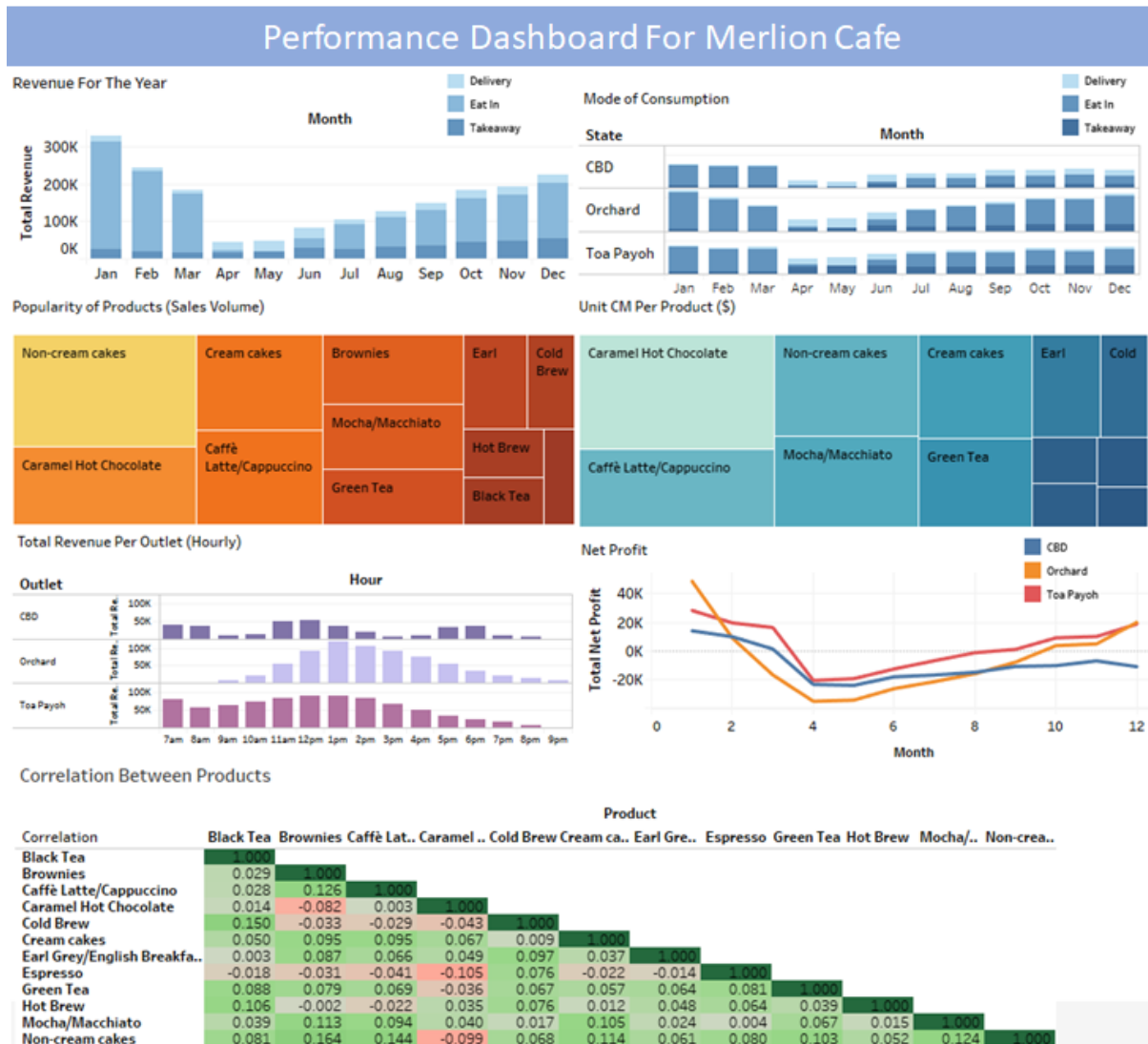


Figure III

## Sales revenue by product

Sales by product

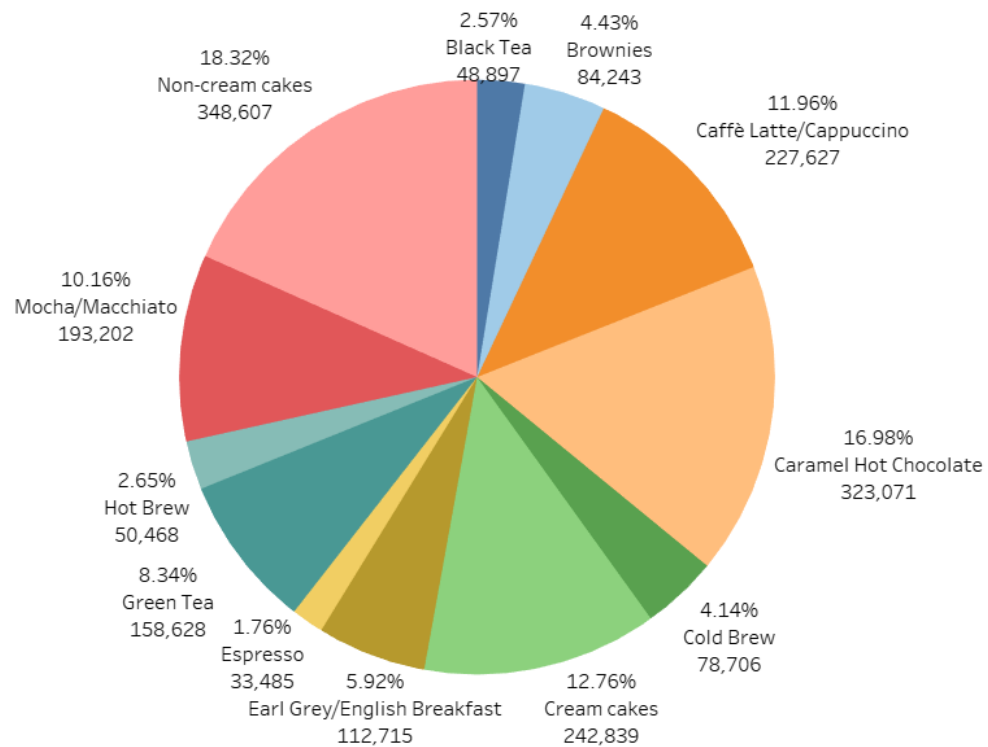


Figure 1

## Sales Volume (By Product)

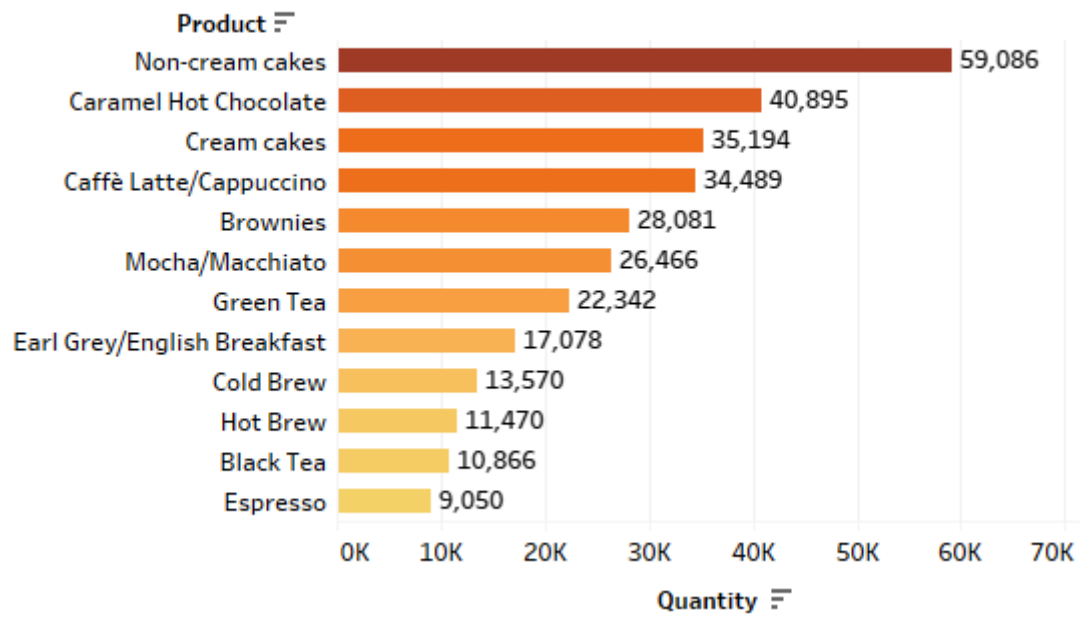


Figure 2

CM earned per product

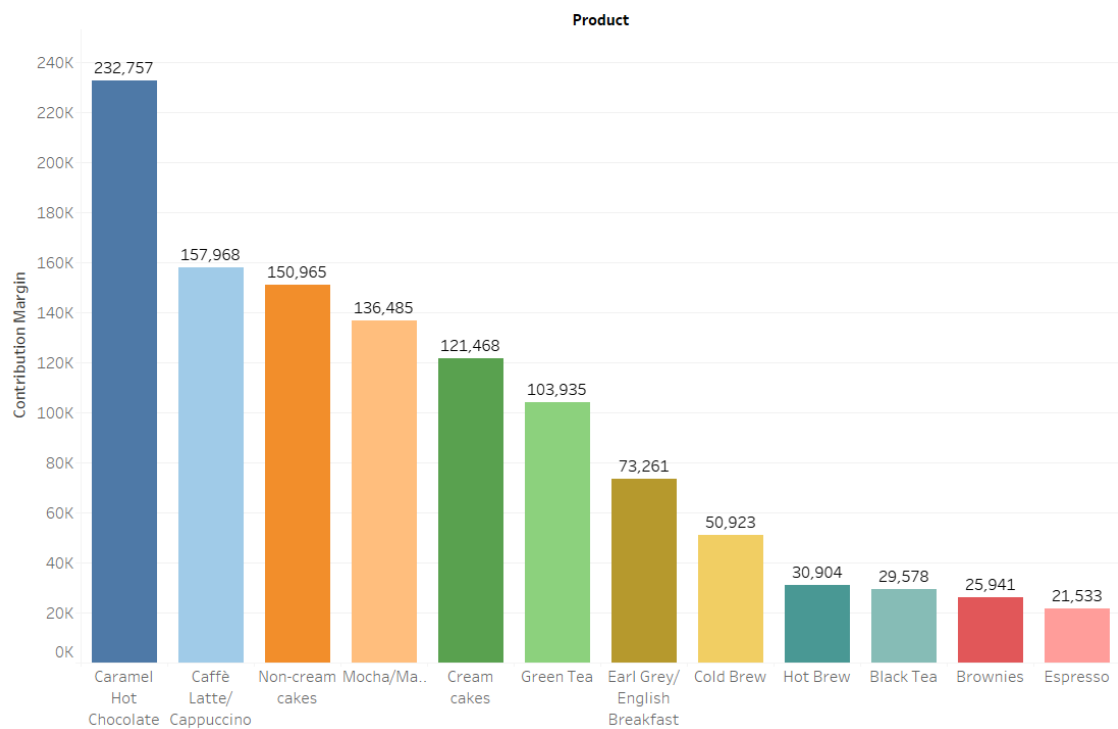


Figure 3

Menu Item	Sales Price	Variable direct costs	Contribution margin (Excluding consumable costs)
<b>Coffee</b>			
Cold Brew	5.8	1.45	4.35
Hot Brew	4.4	1.1	3.3
Espresso	3.7	0.74	2.96
Caffè Latte/Cappuccino	6.6	1.32	5.28
Mocha/Macchiato	7.3	1.46	5.84
<b>Tea</b>			
Earl Grey/English Breakfast	6.6	1.65	4.95
Green Tea	7.1	1.775	5.325
Black Tea	4.5	1.125	3.375
<b>Caramel Hot Chocolate</b>			
Caramel Hot Chocolate	7.9	1.58	6.32
<b>Dessert</b>			
Brownies	3	1.35	1.65
Non-Cream Cakes	5.9	2.655	3.245
Cream Cakes	6.9	2.76	4.14

Outlet	Consumeable Cost per unit
<b>Formula: (COGS - Total Direct variable costs) / Units sold</b>	
CBD	0.53
Orchard	0.60
Toa Payoh	0.79

Figure 4

CM/Sales/Volume by product type



Figure 5

Total profit by outlet

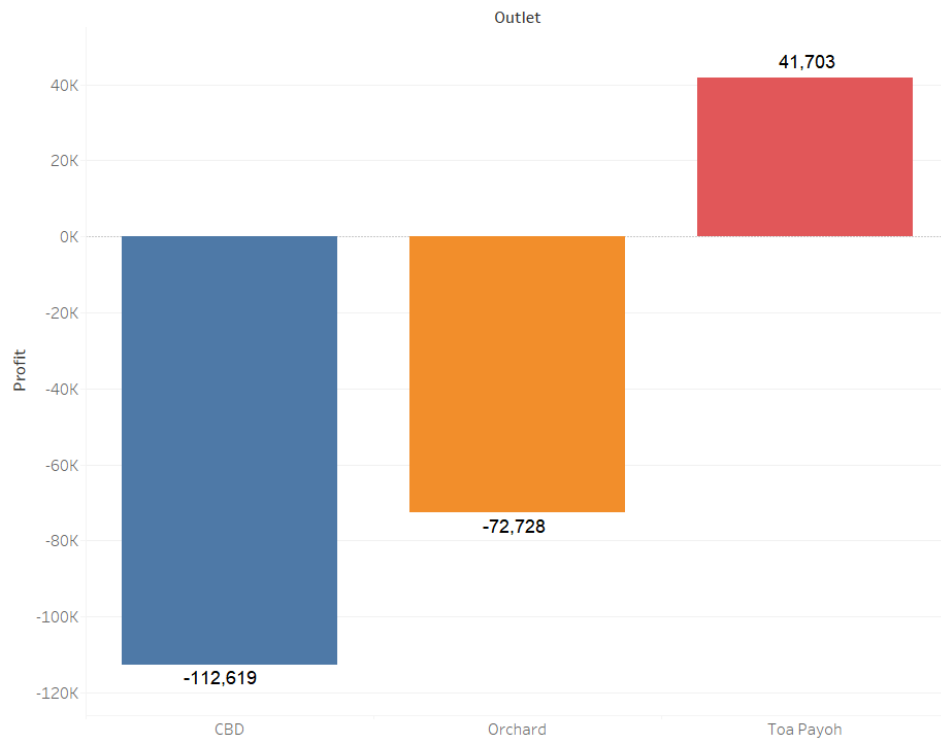


Figure 6

Revenue (Monthly Per Outlet)

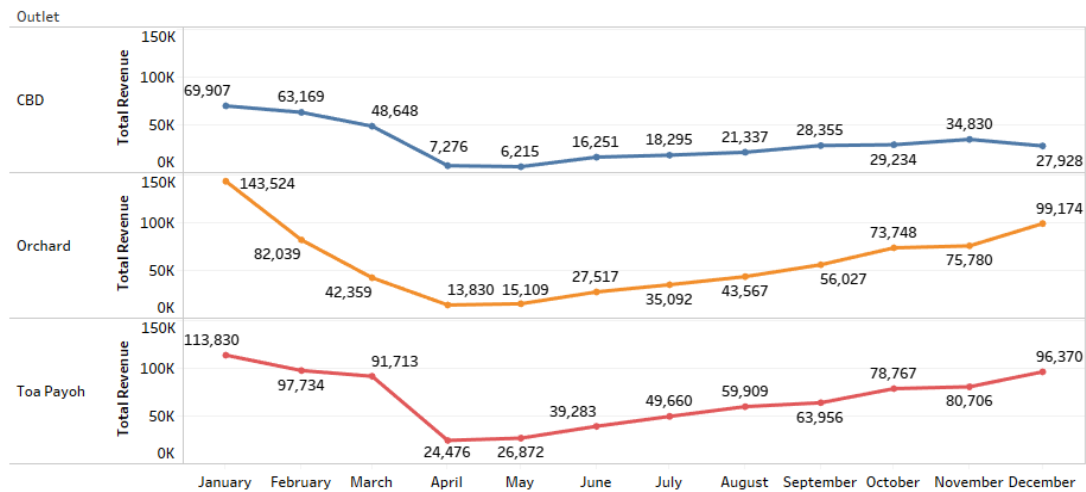


Figure 7



### Net Profit Per Mth By Outlet

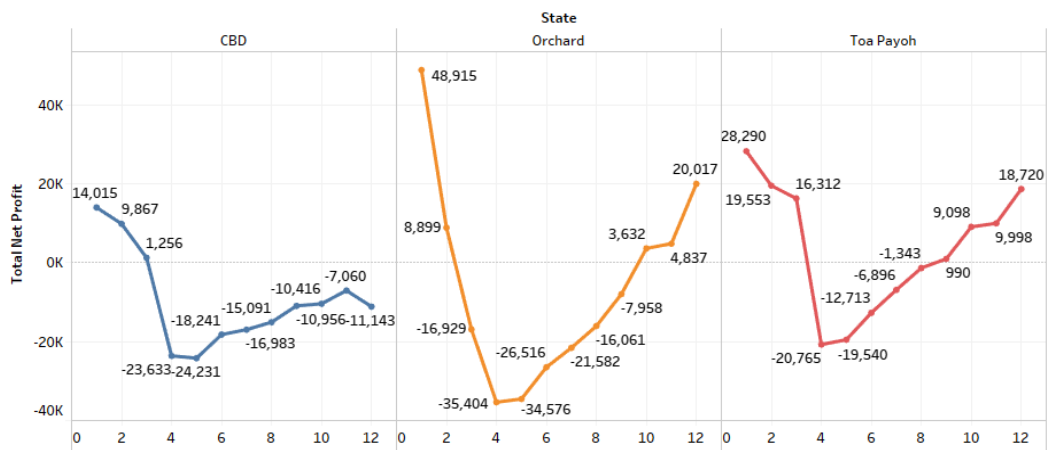


Figure 8

### Sales revenue of each outlet

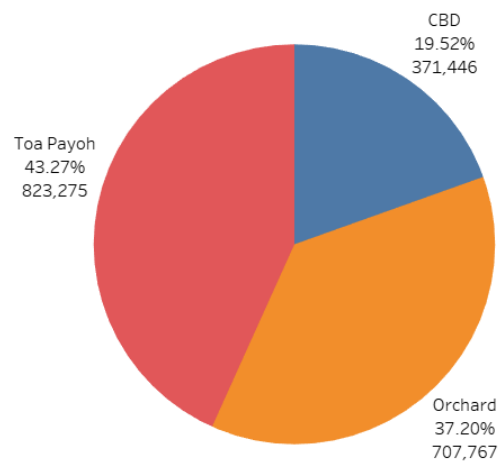


Figure 9

### Total Revenue / Hour Per Day

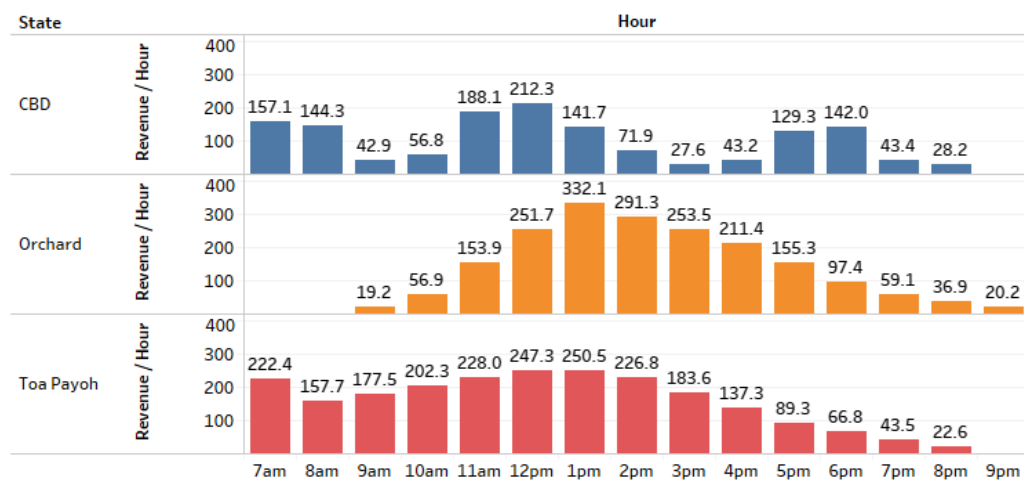
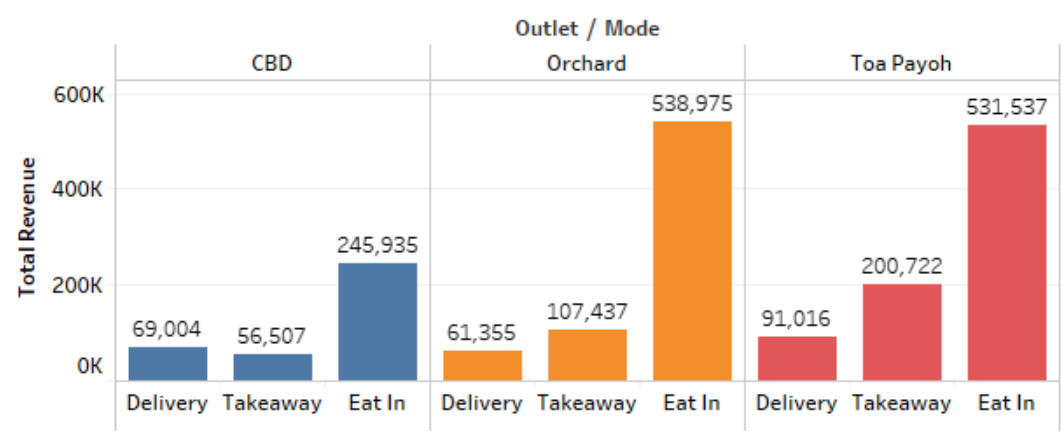


Figure 10

# Revenue (Mode Per Outlet)



## Mode of Consumption

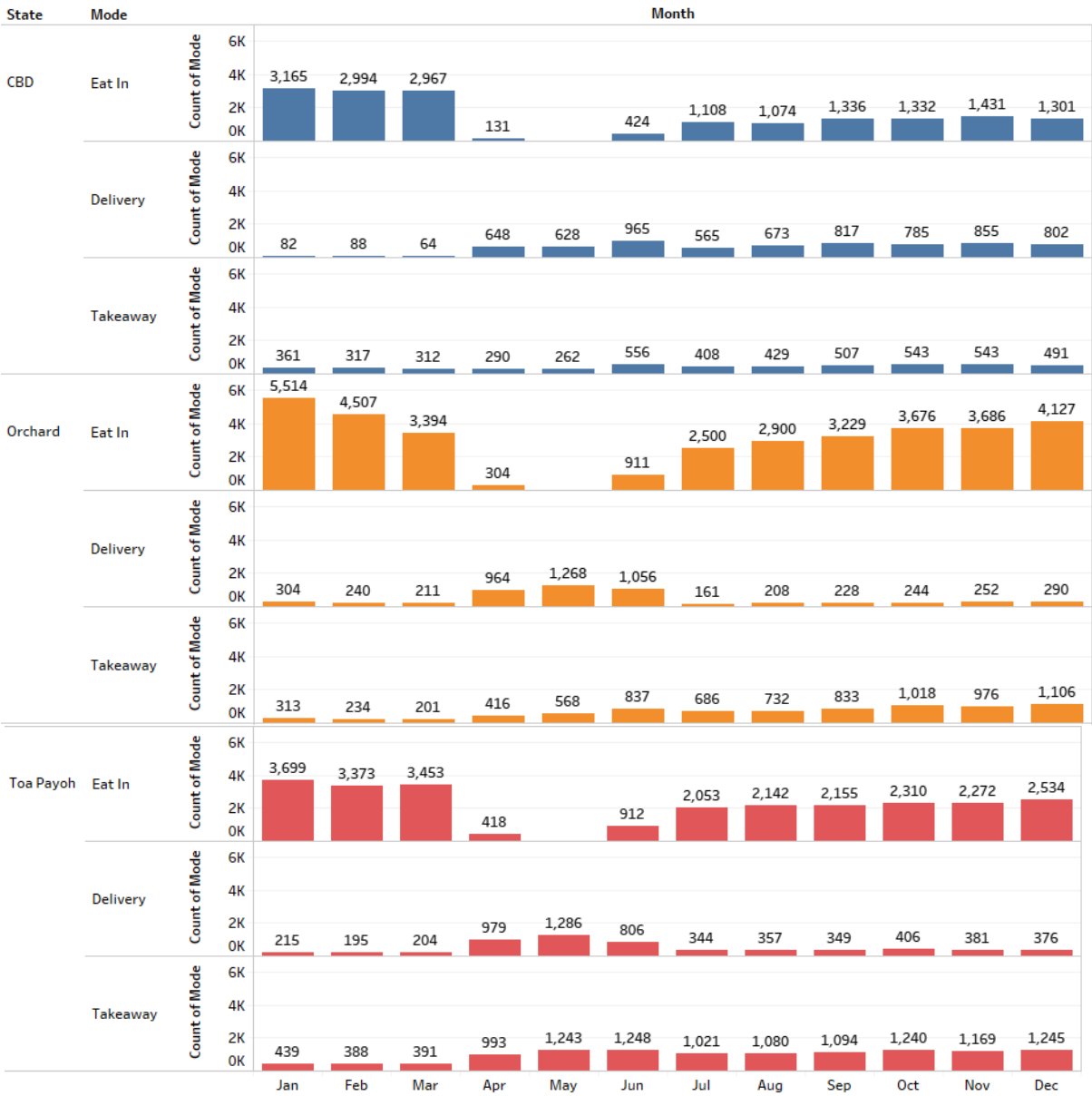


Figure 11

### Yearly fixed cost across outlets

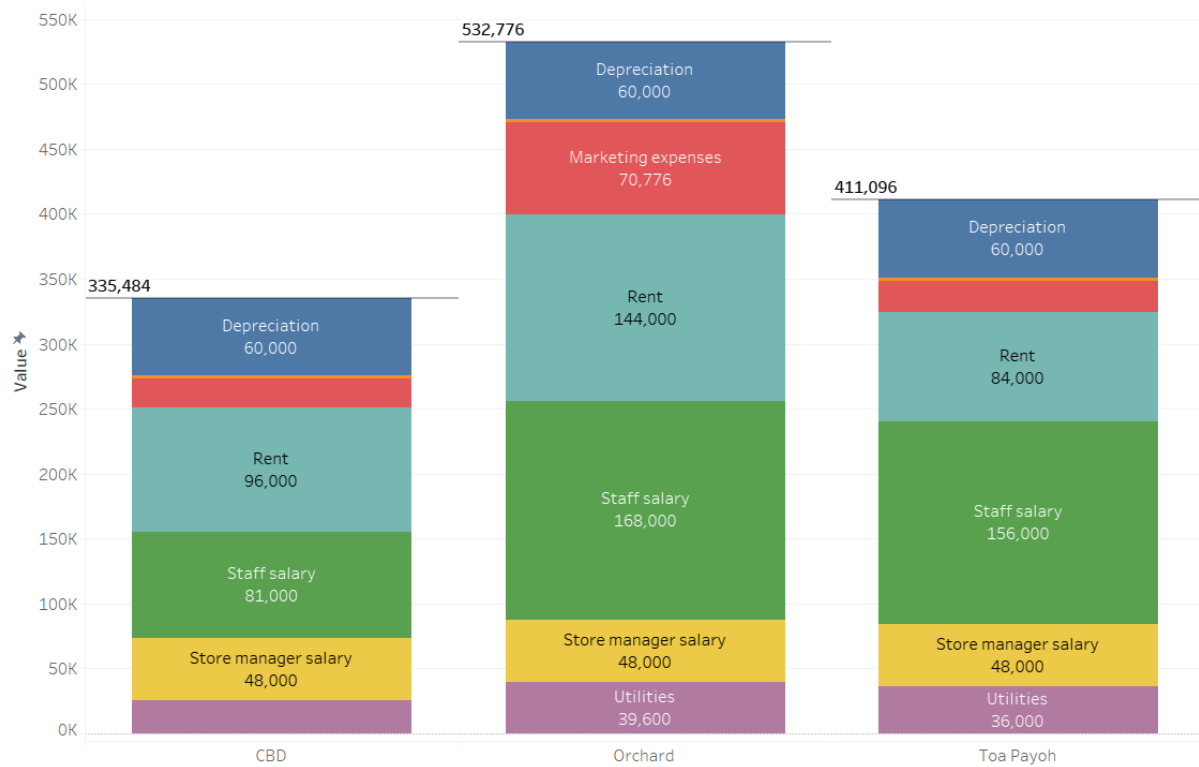


Figure 12

### Total Contribution Margin Per Outlet

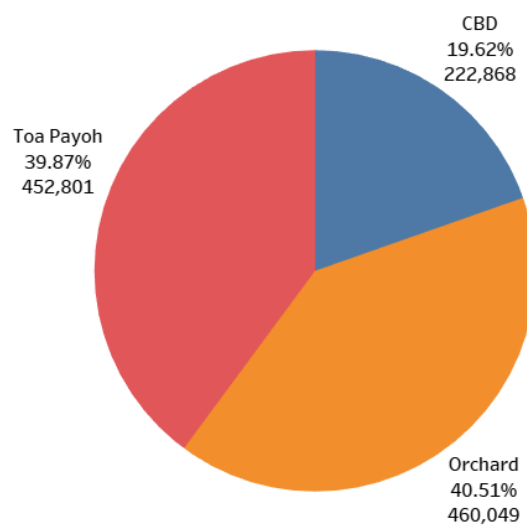


Figure 13

Operating Expenses	CBD	Orchard	Toa Payoh
Store manager salary	\$ 48,000.00	\$ 48,000.00	\$ 48,000.00
Staff salary	\$ 81,000.00	\$ 168,000.00	\$ 156,000.00
Marketing expenses	\$ 22,284.00	\$ 70,776.00	\$ 24,696.00
Rent	\$ 96,000.00	\$ 144,000.00	\$ 84,000.00
Utilities	\$ 25,800.00	\$ 39,600.00	\$ 36,000.00
General expenses	\$ 2,400.00	\$ 2,400.00	\$ 2,400.00
Depreciation	\$ 60,000.00	\$ 60,000.00	\$ 60,000.00
<b>Total Operating Expenses</b>	<b>\$335,484.00</b>	<b>\$532,776.00</b>	<b>\$411,096.00</b>

Figure 14

	CBD	Orchard	Toa Payoh	Total
Annual staff salaries	\$ 81,000.00	\$ 168,000.00	\$ 156,000.00	\$ 405,000.00
Annual Manager salaries	\$ 48,000.00	\$ 48,000.00	\$ 48,000.00	\$ 144,000.00
<b>Total labour costs</b>	<b>\$ 129,000.00</b>	<b>\$ 216,000.00</b>	<b>\$ 204,000.00</b>	<b>\$ 549,000.00</b>
Revenue for the year	\$ 371,446.00	\$ 707,767.00	\$ 823,275.00	\$ 1,902,488.00
<b>Labour costs % of revenue</b>	<b>34.73%</b>	<b>30.52%</b>	<b>24.78%</b>	<b>28.86%</b>

Figure 15

Part-time Staff Allocation	Orchard	Toa Payoh
7:00 AM	0	2
8:00 AM	0	2
9:00 AM	0	2
10:00 AM	0	2
11:00 AM	2	2
12:00 PM	2	2
1:00 PM	2	2
2:00 PM	2	2
3:00 PM	2	2
4:00 PM	2	0
5:00 PM	1	0
6:00 PM	1	0
7:00 PM	0	0
8:00 PM	0	0
9:00 PM	0	0

Per Year	Orchard	Toa Payoh	Total
Part-Time Labour Cost (\$9/h)	\$45,990	\$59,130	\$105,120
Full-Time Labour Cost	\$100,800	\$93,600	\$194,400
Labour Cost (New)	\$146,790	\$152,730	\$299,520
Labour Cost (Old)	\$168,000	\$156,000	\$324,000
Net Gains / (Loss)	\$21,210	\$3,270	\$24,480

Figure 16

<b>Constant Monthly Growth</b>	<b>4.00%</b>
Total Revenue	\$ 436,426.32
Cost of sales (Actual COGS/Actual Sales x Forecasted revenue)	\$ (174,570.06)
Contribution Margin	\$ 261,856.26
Fixed Expenses	\$ (335,487.00)
<b>Net Profit / (Loss)</b>	<b>\$ (73,630.74)</b>

**If outlet were to close down:**

Opportunity cost (Contribution Margin given up)	\$ (261,856.26)
Avoidable fixed cost (Assuming all depreciated equipment are disposed and manager fired)	\$ 335,487.00
<b>Net benefit / (disadvantage) of closing down the outlet</b>	<b>\$ 73,630.74</b>

Constant monthly sales growth required to breakeven:	7.6581215%
COGS as % of rev	40.00%
Let X be revenue	
Avoidable Fixed Cost must be equal to: $X - 0.4X = 0.6X$	
<b>Revenue required (Fixed cost / 0.6)</b>	<b>\$ 559,145.00</b>
<b>Revenue growth required from current year <math>(559,145 - 371,446) / 371,446</math></b>	<b>50.53%</b>

2021	Revenue
Jan	\$ 29,045.12
Feb	\$ 30,206.92
Mar	\$ 31,415.20
Apr	\$ 32,671.81
May	\$ 33,978.68
Jun	\$ 35,337.83
Jul	\$ 36,751.34
Aug	\$ 38,221.40
Sep	\$ 39,750.25
Oct	\$ 41,340.26
Nov	\$ 42,993.87
Dec	\$ 44,713.63

**2021 CBD Growth Chart (Optimistic vs Realistic)**

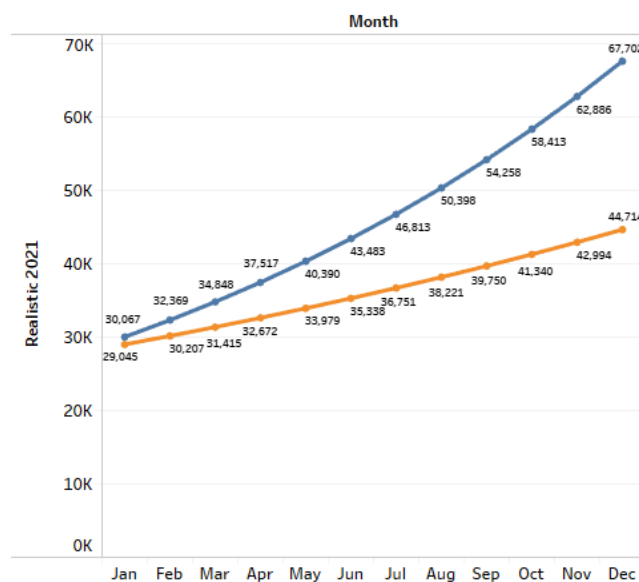


Figure 17

**Correlation Between Products**

	Product											
Correlation	Black Tea	Brownies	Caffè Latte/ Cappuccino	Caramel Hot Chocolate	Cold Brew	Cream cakes	Earl Grey/ English..	Espresso	Green Tea	Hot Brew	Mocha/Mac.. Non-cream cakes	
Black Tea	1.000											
Brownies	0.029	1.000										
Caffè Latte/Cappuccino	0.028	0.126	1.000									
Caramel Hot Chocolate	0.014	-0.082	0.003	1.000								
Cold Brew	0.150	-0.033	-0.029	-0.043	1.000							
Cream cakes	0.050	0.095	0.095	0.067	0.009	1.000						
Earl Grey/English Breakfa..	0.003	0.087	0.066	0.049	0.097	0.037	1.000					
Espresso	-0.018	-0.031	-0.041	-0.105	0.076	-0.022	-0.014	1.000				
Green Tea	0.088	0.079	0.069	-0.036	0.067	0.057	0.064	0.081	1.000			
Hot Brew	0.106	-0.002	-0.022	0.035	0.076	0.012	0.048	0.064	0.039	1.000		
Mocha/Macchiato	0.039	0.113	0.094	0.040	0.017	0.105	0.024	0.004	0.067	0.015	1.000	
Non-cream cakes	0.081	0.164	0.144	-0.099	0.068	0.114	0.061	0.080	0.103	0.052	0.124	1.000

Figure 18

## **References**

- Chiambaretto, P., & Dumez, H. (2012). The role of bundling in firms' marketing strategies: a synthesis. *Recherche et Applications en Marketing (English Edition)*, 27(2), 91-105.  
[https://www.researchgate.net/profile/Paul-Chiambaretto-2/publication/312474223\\_The\\_Role\\_of\\_Bundling\\_in\\_Firms%27\\_Marketing\\_Strategies\\_A\\_Synthesis/links/591ff9320f7e9b99793c79da/The-Role-of-Bundling-in-Firms-Marketing-Strategies-A-Synthesis.pdf](https://www.researchgate.net/profile/Paul-Chiambaretto-2/publication/312474223_The_Role_of_Bundling_in_Firms%27_Marketing_Strategies_A_Synthesis/links/591ff9320f7e9b99793c79da/The-Role-of-Bundling-in-Firms-Marketing-Strategies-A-Synthesis.pdf)
- Department of Statistics Singapore. (2021). Retail Sales Index and Food & Beverage Services Index. Singapore: Department of Statistics Singapore. Retrieved from  
<https://www.singstat.gov.sg/-/media/files/news/mrsaug2021.pdf>
- Goh, C. (2021). 'Sales are dismal': Businesses in CBD see slow recovery as most offices continue work-from-home arrangements. CNA. Retrieved 18 October 2021, from  
<https://www.channelnewsasia.com/business/singapore-cbd-retail-food-office-crowd-phase-2-covid-19-642531>
- Miller, G. (n.d.). 10 benefits of implementing a Customer Loyalty Programs: Annex Cloud. Annex Cloud Blog. Retrieved from  
<https://www.annexcloud.com/blog/10-benefits-of-implementing-customer-loyalty-program/>.
- Miller, G. (n.d.). 42 referral marketing statistics to convince you to start a RAF program. Annex Cloud Blog. Retrieved from  
<https://www.annexcloud.com/blog/42-referral-marketing-statistics-that-will-make-you-want-to-start-a-raf-program-tomorrow/>
- Phua, R. (n.d.). F&B, retail businesses in CBD feel pinch as people work from home amid coronavirus concerns. CNA. Retrieved from  
<https://www.channelnewsasia.com/singapore/coronavirus-work-from-home-blow-to-business-es-cbd-singapore-776706>.
- Qua, K., Yeo, M., Lee, J., & Chua, K. (2021). Impact of COVID-19 on the Retail and Food & Beverage Services Sectors. Singapore Department of Statistics.
- Reguia, C. (2014). Product innovation and the competitive advantage. *European Scientific Journal*, 1(1), 140-157.  
[https://www.researchgate.net/profile/Kujtim-Bytyqi/publication/263661555\\_Principles\\_of\\_State-Building\\_The\\_case\\_of\\_Kosovo/links/0f31753b9889103c56000000/Principles-of-State-Building-The-case-of-Kosovo.pdf#page=151](https://www.researchgate.net/profile/Kujtim-Bytyqi/publication/263661555_Principles_of_State-Building_The_case_of_Kosovo/links/0f31753b9889103c56000000/Principles-of-State-Building-The-case-of-Kosovo.pdf#page=151)