

Superstore Analysis - Australia

Name – Khalid Mohamed Awad

Student Number – 200630425

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Executive Summary

The analysis is based on Superstore Data in the period December 2016 to December 2020. The analysis will focus on data based in Australia across all states. The report focuses on looking for ways to optimize profitability, shipping issues and market trends. The data is clean and includes no duplicates.

Key Findings include:

The most profitable state was New South Wales and the least profitable state was the Australian Capital Territory.

The Northern Territory has a high profit per order and has the least unique orders for a state, advertising efforts must focus on this region to widen the customer base.

Tables are loss-making per order and are the only sub-category to have made a loss in total. Tables also have the highest average discount, selling them without discount will help make them more profitable.

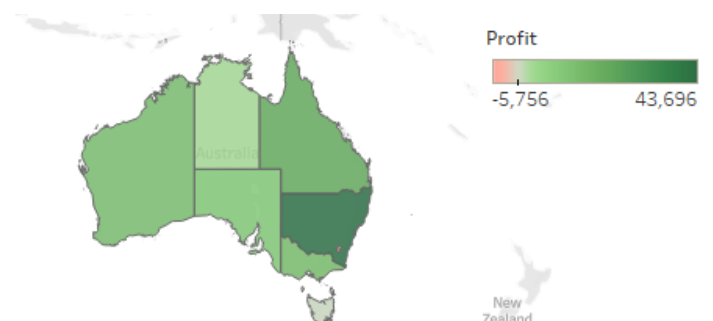
Overall, we note that shipping times are not ideal, with nearly 30% of critical orders being late and 73% of First-Class orders being late.

The Home Office segment is less profitable in most states.

Discounting products has been profitable overall for most sub categories.

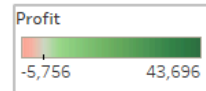
Overview

The map overview of Australia depicts the states with increasing colour intensity based on profits.



Total profit in New South Wales (\$43,696) is the highest.

	State									Overall
	New South Wales	Queensland	Victoria	Western Australia	South Australia	Northern Territory	Tasmania	Australian Capital Ter..		
Sales	\$270,487.10	\$238,312.73	\$151,785.03	\$111,090.23	\$75,552.73	\$14,463.48	\$30,381.74	\$33,162.81	\$925,235.85	
Shipping Cost	\$28,127.14	\$27,990.10	\$15,150.56	\$10,661.21	\$9,820.89	\$1,751.88	\$3,233.94	\$3,623.30	\$100,359.02	
Profit	\$43,695.98	\$21,608.75	\$14,929.08	\$14,249.78	\$11,351.80	\$3,375.57	\$452.41	-\$5,755.95	\$103,907.43	
Profit Ratio	16%	9%	10%	13%	15%	23%	1%	-17%	11%	
Profit Per Order	\$112.62	\$57.78	\$59.24	\$95.64	\$115.83	\$168.78	\$7.67	-\$71.95	\$73.17	
Distinct count of Order ID	388	374	252	149	98	20	59	80	1,420	
Discount Per Order	8.78%	16.86%	14.30%	12.12%	9.77%	8.06%	24.49%	34.81%	14.35%	
% of Positive Orders	77.46%	59.78%	66.24%	66.49%	71.65%	82.61%	56.16%	37.76%	66.11%	



The average profit per order is highest in the Northern Territory (\$169 per order). The profit ratio in the Northern Territory is also the highest with 23%, and 82.6% of all orders in the region were profitable.

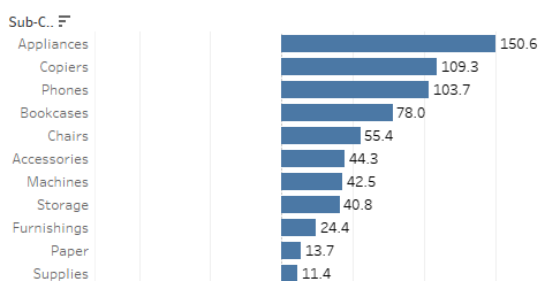
The Australian Capital Territory performed the worst with a total profit of \$-5,756, an average profit per order of \$-72 and only 37.8% of orders were profitable. The Australian Capital Territory also has the highest average discount per order at 34.8%, and Tasmania has the second highest discount per order (24.5%).

Recommendations: Advertisement efforts should focus on the Northern Territory as it has the fewest orders and the highest profit per order. Cost of Sales in the Australian Capital Territory must be optimized so orders at-least break even. Discounts in less profitable states like A.C.T and Tasmania should be reduced.

Overall Breakdown

The overall breakdown looks at the profitability of the sub-categories, profit by state, profit by segment and a breakdown of the demand for different ship modes.

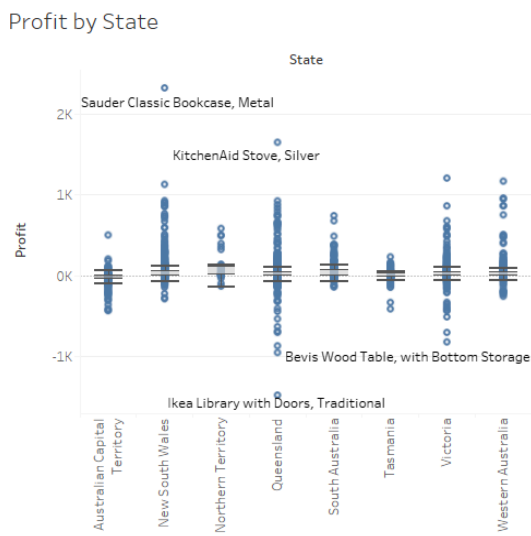
Sub-Category Profit Per Order



In Australia, the most profitable sub-category per order, is appliances with an average profit per order

of \$150.6. Tables are the only sub-category that has a negative average profit per order (\$-86.2).

Recommendations: The high profit per order should be utilized and marketing efforts should focus on driving appliance sales. If the sale of tables cannot be optimized to make it profitable, listing tables must be discontinued.

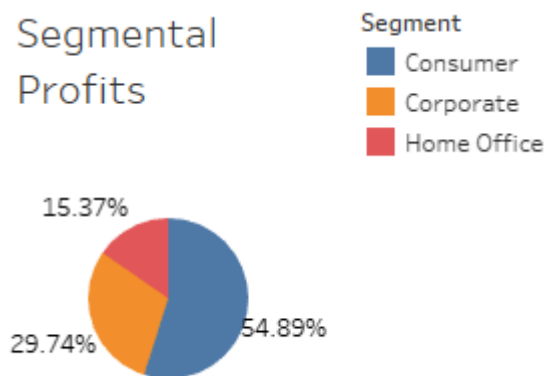


This chart depicts all the individual transactions in each state. We note the positive skew in New South Wales with a few outliers. New South Wales has an order for a Sauder Class Bookcase by Maria Bertelston with a transaction profit of \$2317, this was the most profitable transaction. The biggest loss in a single transaction was an order from Queensland for an Ikea Library with Doors by Raymond Buch (\$-1479).

Recommendations: Queensland transactions appear to have a large spread in terms of profits, management

needs to understand why and mitigate these issues to make transactions more profitable (for e.g.: reducing cost of sales at physical outlets, avoiding loss-making products such as Bevis Wood Tables and Ikea Libraries).

Segmental Profits

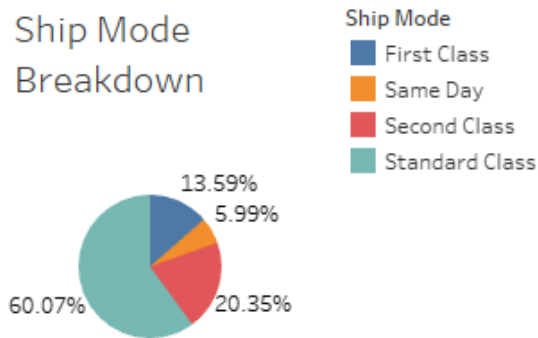


The consumer segment accounts for 55% of the total profit with \$57,037. We observe that the average profit per order for each segment follows the same order as the total profit per segment, with the consumer segment in the lead (\$76.8) and the home office segment in 3rd place (\$65.7). While home office orders only account for 15% of the total profit, it has the highest percentage of profitable

orders with 70% of orders at-least breaking even.

Recommendations: Focus marketing efforts on the Home Office Segment as orders in this segment are more likely to be profitable.

Ship Mode Breakdown

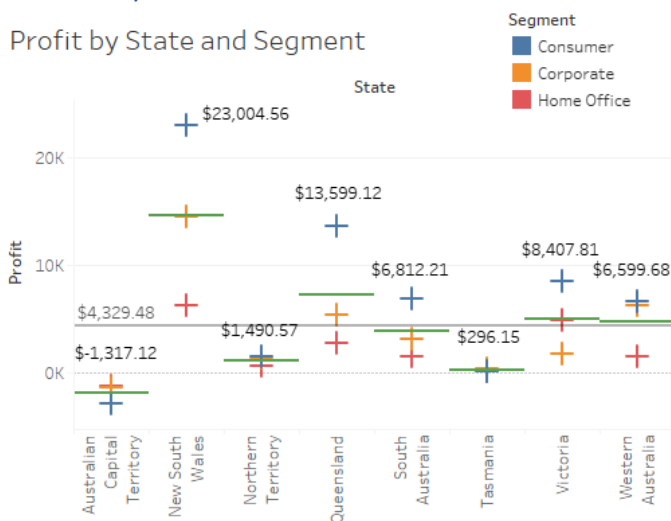


Standard class is the most used ship mode with 60% of all unique orders using standard class and has the cheapest average shipping cost per order at \$53.84.

Same day is the least popular ship with 6% of all orders, it also has the second highest shipping cost per order at \$103.97. Shipping cost per order is highest for first-class orders at \$105.69 and it accounts for 14% of all orders.

Profit Analysis

Profit by State and Segment



This chart looks at the total profitability of each segment for each individual state.

The green lines represent the average profit of all 3 segments for a particular state. The gray line represents the average total profit for all segments across all 8 states.

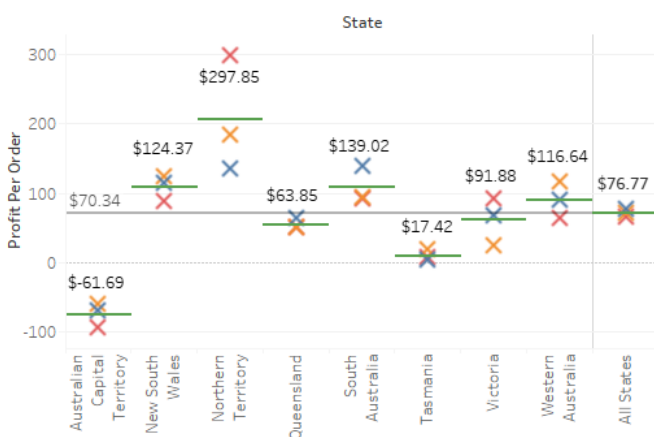
We observe that the consumer segment is the most profitable segment in 7 out of 8 states, except in the A.C.T in which Home Office is the most profitable segment although it is loss-making. Home Office profits are below the average profit across segments for all states except in the A.C.T. In the A.C.T, Tasmania and Northern

Office is the most profitable segment although it is loss-making. Home Office profits are below the average profit across segments for all states except in the A.C.T. In the A.C.T, Tasmania and Northern

Territory, all 3 segments are less profitable than the average segmental profit (across all states) represented by the gray line.

Recommendations: The Home Office segment is less profitable than other segments in most states, potential causes of this need to be addressed. The performance of the consumer segment in the A.C.T is unusually low and this needs to be looked into. All 3 segments in the A.C.T and Tasmania are loss-making and efforts need to be made to move towards more profitable products in these states.

Profit per Order by State and Segment

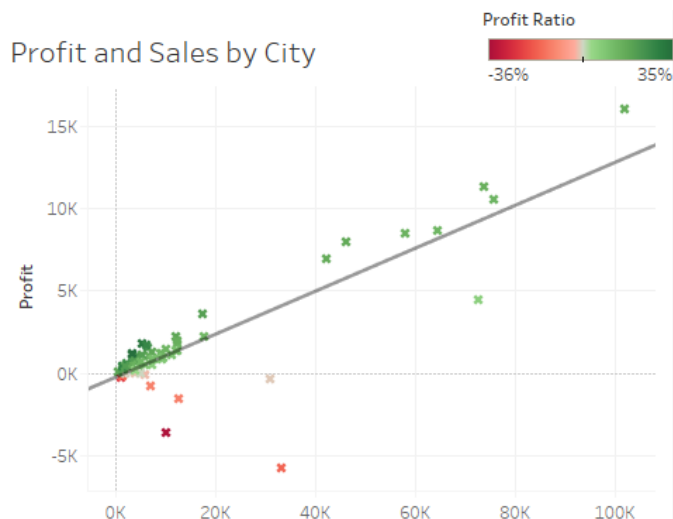


This chart looks at the profit per order of each segment for each individual state.

When looking at the profits per order, the Northern Territory is the best performing state. This suggests that the Northern Territory's subpar performance in terms of total profits is due to a lack of sales overall. The A.C.T however is loss making when looking at profit per order as well, which means that it's subpar performance could be related to bad product

selections and/or unusually high cost of sales. The segment with the highest profit per order is the Home Office segment in the Northern Territory, however the lowest profit per order for a segment is also the home office segment in the A.C.T.

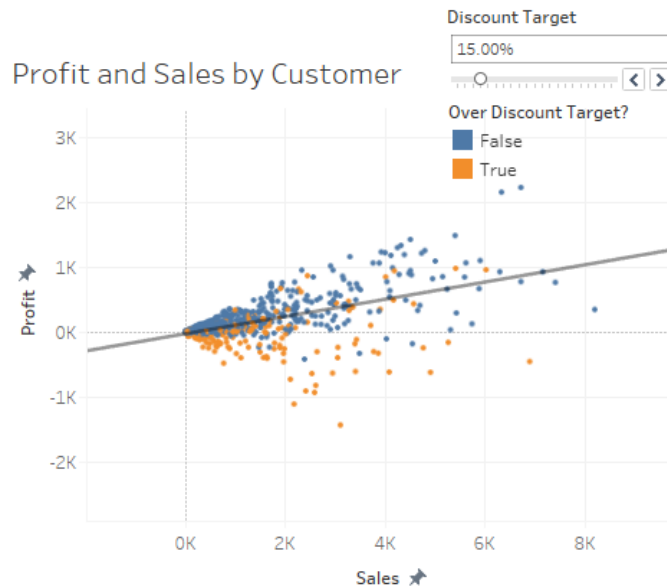
Recommendations: Focus marketing efforts on customer acquisition in the Northern Territory as profits per order are higher on average. Identify loss making products in the A.C.T: We note that all products are loss making in the A.C.T except tables and envelopes, these products need to be pushed more. We also note that profit per order for Tables in Queensland is \$-289.1 which affects the states performance as a whole. Home Office Orders in the Northern Territory need to be pushed while Home Office Orders in the A.C.T need to be avoided.



We note that the cities show mostly a positive linear relationship between sales and profits apart from roughly 6 significant outliers. Sydney has the highest profits and sales. Goulburn, has the highest profit

ratio of 35% and Cairns has the lowest profit ratio of -36%.

Recommendations: Cities below the trend line need to be analysed and product placement and cost of sales must be optimized to make them more profitable.



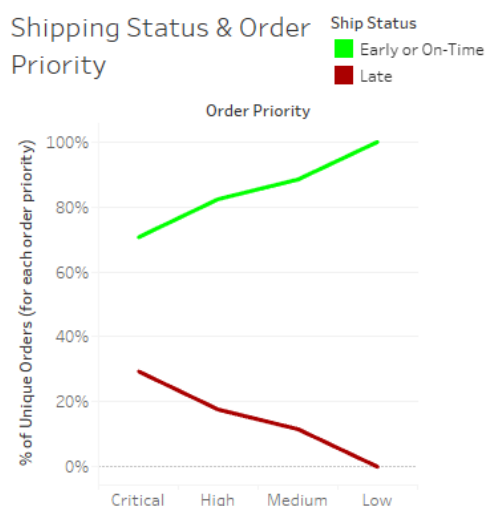
The most profitable customer was Mario Bertelson and the least profitable was Raymond Buch.

Adjusting the Discount Target parameter allows us to see the customers that received an average discount more than the target, in orange. For example, at the 15% discount target, we note that most customers that had over an average discount of 15% lied below the regression line.

Recommendations: Discounts of over 15% appear to not be profitable as many customers having this discount were loss making. Sales teams can also take note to prioritise highly profitable customers.

Shipping Analysis

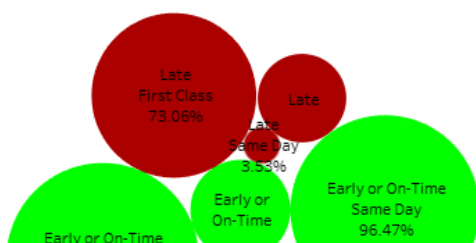
The shipping analysis sheets focus on the % of late and early or on-time orders across different order priorities, ship modes and states.



The % of late orders for a particular order priority is highest for critical orders and reduces as order priority reduces. The % of early or on-time orders for a particular order priority is highest for low priority and reduces as order priority increases.

Recommendations: Customer satisfaction in terms of delivery time is likely highest for low priority orders and lowest for critical orders, this could lead to important customers leaving. Shipping issues must be addressed to solve this problem.

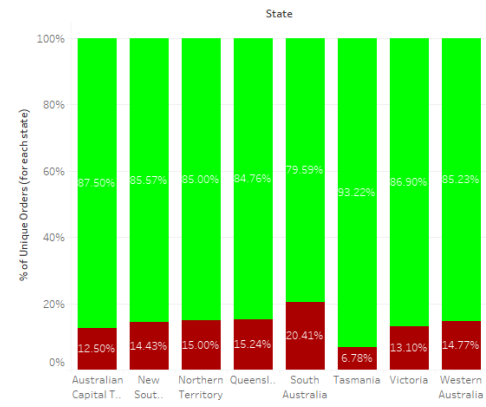
Shipping Status & Ship Mode



The % of late orders for a particular ship mode is highest for first class orders. Standard class orders have never been late by far.

Recommendations: First class orders have been late for the majority of orders (73.06%), however same day orders have only been late for 3.53% of orders. Shipping issues must be addressed to solve this problem.

Shipping Status & State

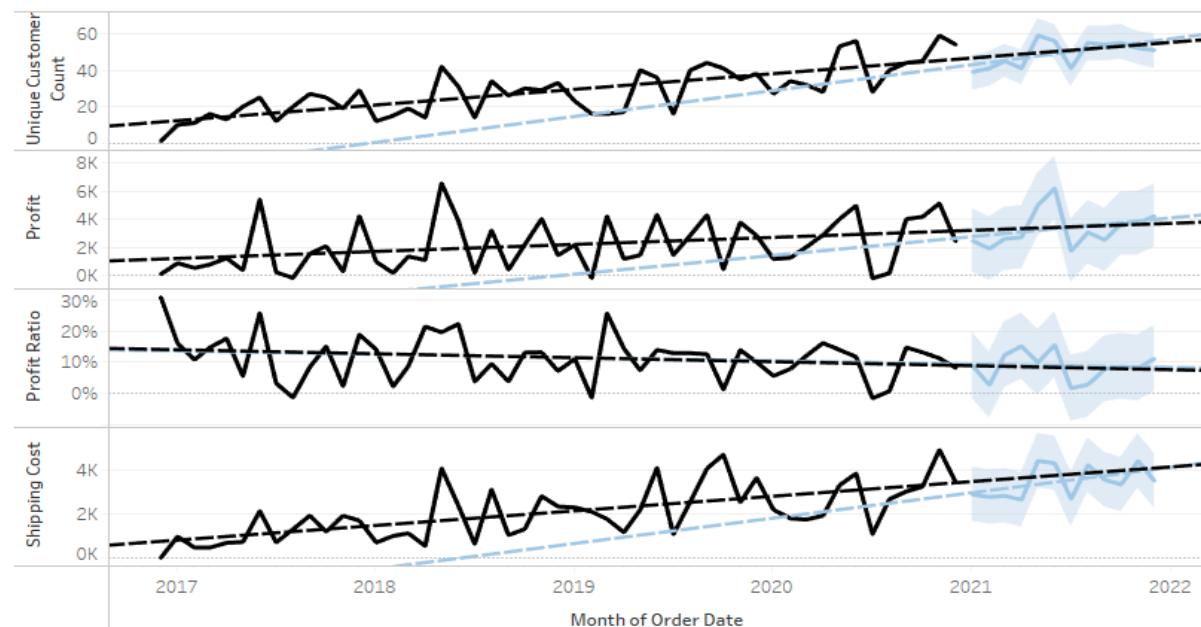


The % of late orders for a particular state is highest for South Australia and lowest in Tasmania.

Recommendations: Potential shipping issues to customers in South Australia need to be addressed to make sure they receive their orders on-time at least.

Market Trends

Trends with Time



The number of unique customers per month has increased over time. There are no significant seasonal peaks.

Profits have increased over time but the increase isn't significant. In 2018, 2019 and 2020 profits peaked in November. In 2017, 2019 and 2020 profits peaked in June. The forecast estimates a peak in June 2021 as well.

Profit ratio has steadily decreased over time.

Shipping costs have increased significantly with time.

Recommendations: Seasonal offers during celebratory seasons such as December might help engage more customers. Alternative shipping methods need to be explored to reduce shipping costs.



The above chart illustrates the profit/profit per order for discounted/non-discounted transactions across sub-categories.

Discounts increase profit for all sub categories except tables.

In all sub-categories except copiers, non-discounted transactions are more profitable per order.

Recommendations: Tables should only be sold without discount. Copiers perform better discounted per order as well as in total, hence, advertising copiers with discounts would increase profits.

Sub-categories circled in green should be discounted as this significantly increases total profit.

Appendix

Optimal Shipping Times:

Ship Mode	Planned Days to Ship
Same Day	0
First Class	1
Second Class	4
Standard Class	7

Late orders in “Shipping Analysis” are based on these delivery times.

Calculated Fields Used:

Profit Per Order	SUM (Profit) / No. of Unique Orders
Shipping Cost Per Order	SUM (Shipping Costs) / No. of Unique Orders
Discount Per Order	AVG(Discount)
Profit Ratio	SUM(Profit) / SUM(Sales)
% of Late Orders	Count of Unique Late Orders / Count of Unique Orders

