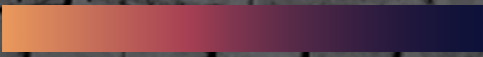


ANALYTICAL REVIEW

BEST BIKES EVER



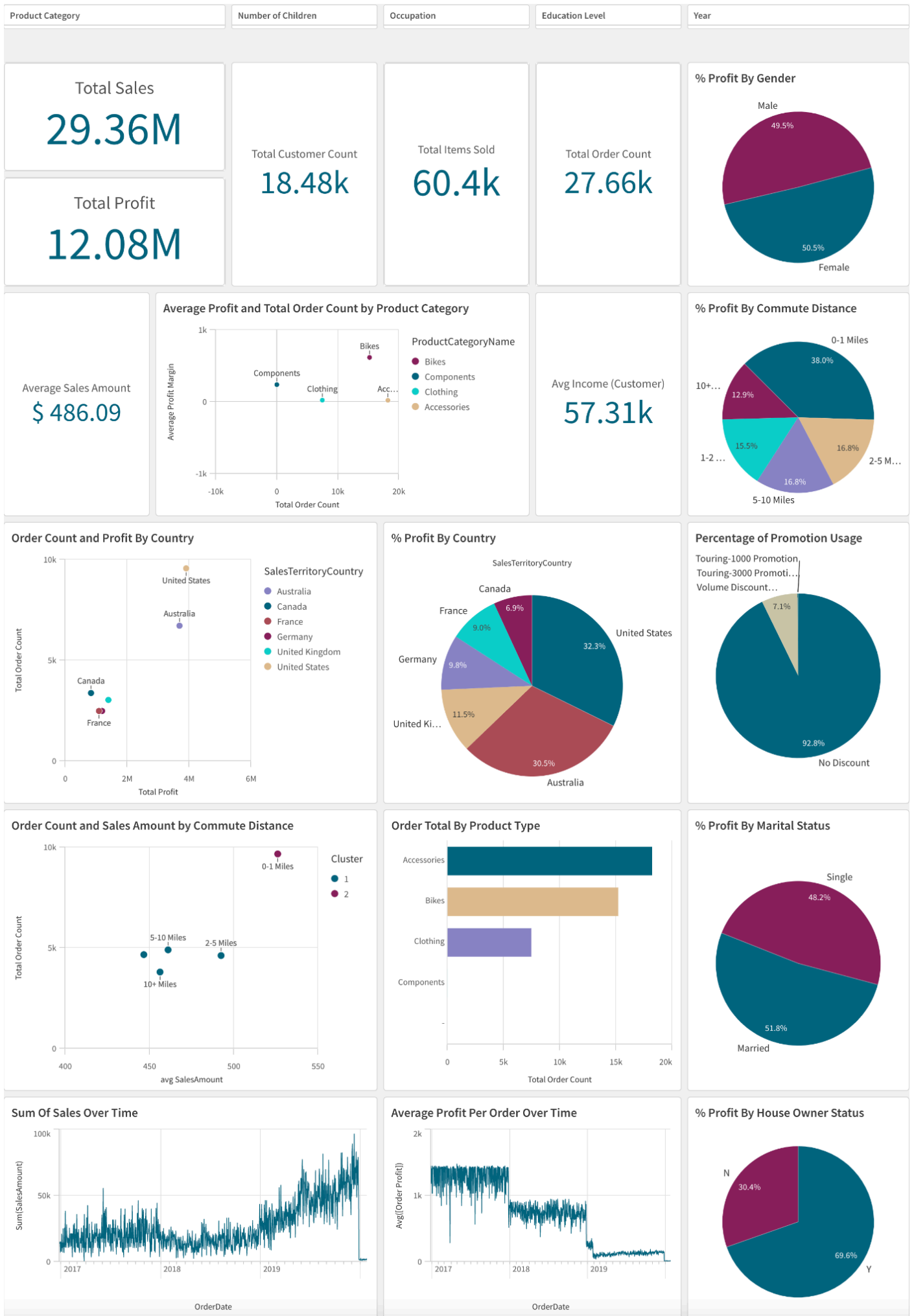
INTRODUCTION

This report is an exploration of the sales data for the organisation Best Bikes Ever (BBE). The report will analyse the overall sales for the recorded period and identify the most notable products as well as any key customer segments. The report will then provide a few small recommendations to potentially improve the organisation's efficiency and efficacy.

ASSUMPTIONS

Due to limitations of knowledge about the organisation and the dataset a few assumptions have been made which may influence any conclusions made, all assumptions are listed below.

- Components are utilised for repairs, warranty and spare parts for certain products (especially more expensive products) as such they have no sale volume.
- The falloff of sales in 2020 is partially attributed to the data not containing the whole month.
- The reduction in average profit per sale is attributed to the organisation expanding its product line offering more products of lower average values.





FINDINGS - SALES



\$29.3 Million Sales

OUTLINE OF SALES



\$12.08 Million Profit

BBE has recorded over \$29.36 million of sales throughout its operational history; these sales consisted of 60.4k items sold across 27.66k orders with an average sale value of \$486.10. These sales resulted in profits of \$12.08 million at a profit margin of 41.1%.



41.1% Profit Margin

Average Profit Per Order Over Time

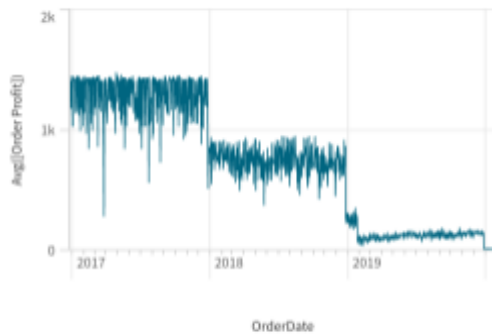


Figure 2: Average Profit Over Time Graph

Sum Of Sales Over Time

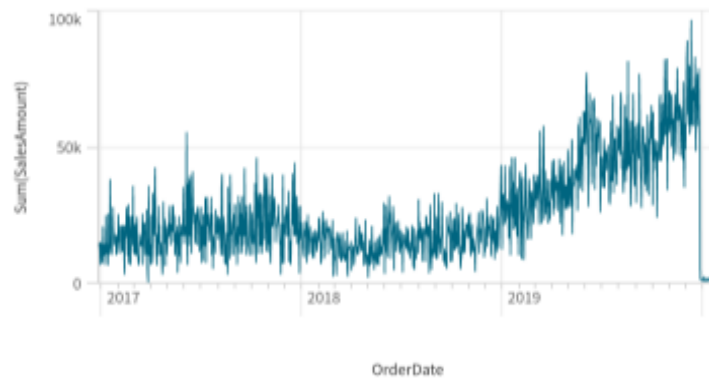


Figure 1: Sales Over Time Graph

Figure 1 above highlights that BBE has seen steady growth in sales since 2017. This steady growth in sales is contrasted by a clear decline in the average profit per order as can be seen in Figure 2 to the left, whilst initially this seems concerning, this staggered decline in average profits per order can be attributed to improved product offerings each year across various categories resulting in reduced average product costs, this improvement in product lines can clearly be seen as a positive for the organisation.

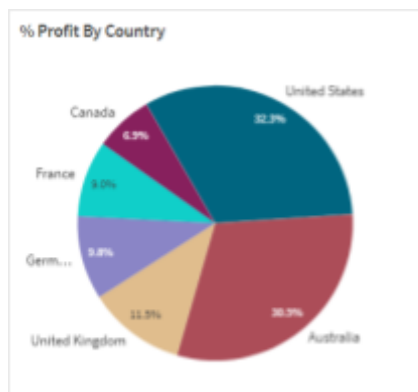


Figure 3: Percentage Profit By Country

Figure 3 to the left explores the sales regions BBE operates within, it is most notable that the Australian and United States markets account for over 60% of total profits, the final ~40% is distributed between locations in Europe and Canada. This not only highlights the importance of the Australian and US markets it also highlights the need for organisational growth in the European markets.



FINDINGS - CUSTOMERS



18.48k Customers



57.31K Avg Income



54.16% Married



67.64% Homeowners



49.4% Female

CUSTOMER DEMOGRAPHICS

BBE has a large customer base serving 18.48k customers across various demographics. BBE's customers have an average income of 57.31k, with the majority of customers working in skilled manual or professional occupations. Most customers had a strong level of education, with 56.39% having a Bachelor's or Partial College education. Gender and Marital Status was relatively even with 49.4% being female and 54.16% being married. Moreover, 67.64% of customers were homeowners, with most customers having at least 1 child at home.

Figure 4 on the left displays the percentage of profit by gender. Similar to the percentage of customers by gender, the profit levels between male and female are highly proportional. This indicates that gender has limited influences on customer spending habits with BBE.

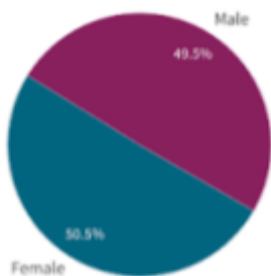


Figure 4: % Profit by Gender

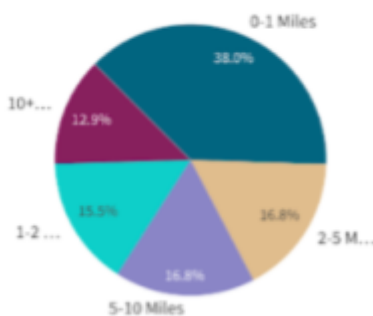


Figure 5: % Profit by Commute Distance

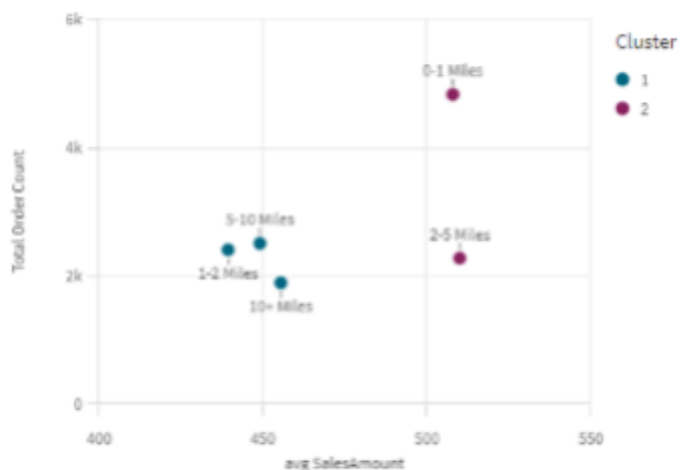


Figure 6: Order Count and Sales Amount by Commute Distance

Figure 6 above highlights the strong relationships between a shorter commute distance and the desire to commute via bike to work. Customers with a 0-1 mile commute distance made up 34.14% of BBE's customer base, accounting for 34.9% of total orders and 38% of total profit; as seen left in Figure 5. This indicates that BBE should mainly focus on targeting customers with shorter commute distances, however there is also opportunity for growth with customers with longer commutes, especially those with a commute distance of 1-2 miles.

BBE sells products in six countries, with the majority of customers being located in the United States and Australia. *Figure 7* shows the disparity between total order count and profit when grouping by country. Similarly, *Figure 3* shows that despite the larger amount of orders in the US, Australia is almost as profitable with both countries sharing almost a third of BBE's total profit. The average sale is also significantly higher in Australia (\$678.98) compared to the US (\$439.93).



**\$678.98 Average
Australian Sale**



**\$439.93 Average US
Sale**



**\$522.44 Average Single
Customer Sale**

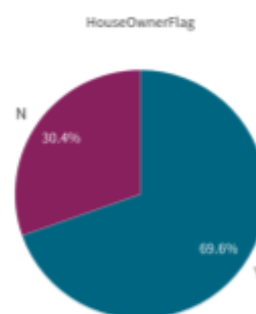
Order Count and Profit By Country



Figure 7: Total Profit by Country

Customers who have indicated that they are single have a higher average sale (\$522.44) compared to those that are married (\$456.45). Married customers also purchase more clothing and accessories compared to single customers, with bike sales having fairly even order counts despite married customers having placed approximately 3,000 more orders over BBE's data.

% Profit By House Owner Status



**Figure 8: Profit By House
Ownership status**

Owning a house appears to have a high significance when looking at BBE's customers. House owners make up almost 70% of the company's profit (*Figure 8*), with customers more likely to place multiple orders than those that do not own a house.

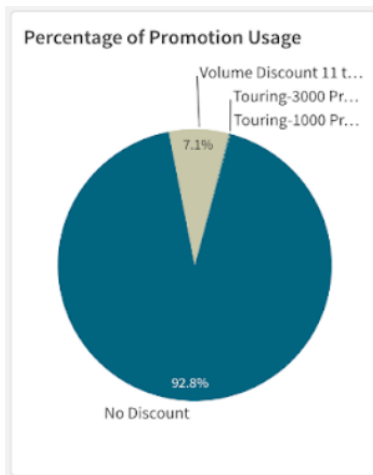


Figure 10: Percentage of Promotion Usage

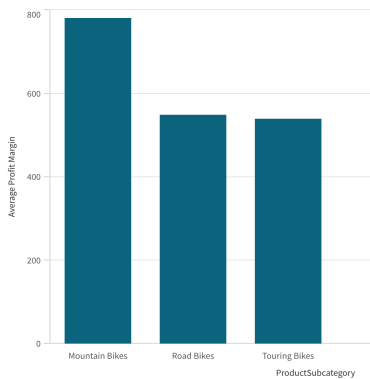


Figure 11: Average Profit Margin by Bike Type

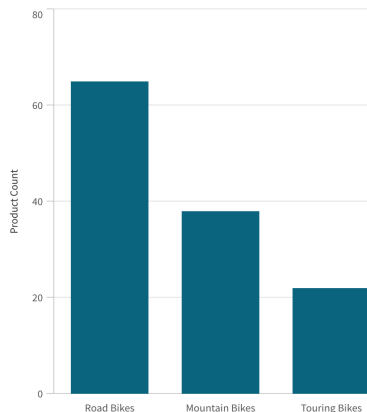


Figure 12: Product Count by Bike Type



FINDINGS - PRODUCTS

Average Profit and Total Order Count by Product Category

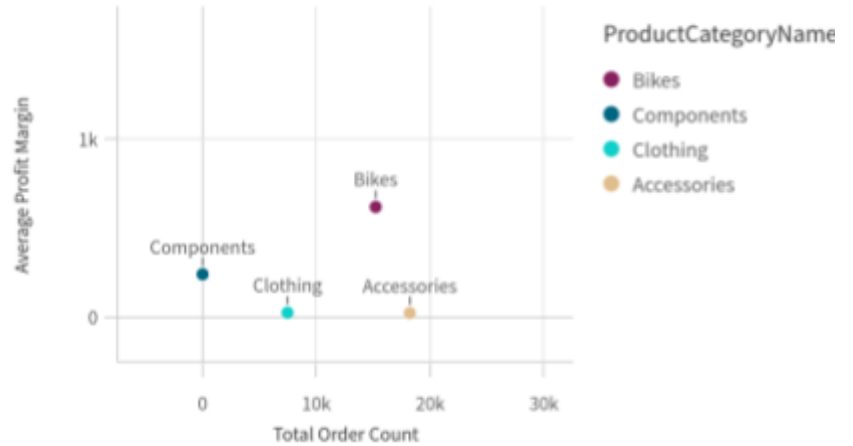


Figure 9: Average Profit and Order Count by Product Type

ORDERS BY PRODUCT CATEGORY

BBE's best selling product category is accessories with bikes second and clothing third. Referring to Figure 9, Bikes generate the most profit per sale, whilst accessories generate the least of all categories. The highest sales specifically in accessories comes from water bottles, which given its versatility is most likely due to it attracting a wide variety of peoples. It is important to note the profit margins as previously mentioned as there should be a greater focus on the bikes category.

PROMOTIONS

There are a number of promotions currently offered by BBE. However as seen in Figure 10, 92.8% of sales orders did not utilise a discount. The most commonly used discount, at 7.1% of all sales orders, falls under 'Volume Discount 11 to 14', a 2% volume discount. This discount is for resellers, meaning that customers have no knowledge of the discounts available to them, which could limit their desire to purchase. Furthermore, despite having more than 16 discounts offered, these discounts are rarely used by resellers and customers.

SALES BY BIKE TYPE

As shown in Figure 11, mountain bikes are the most profitable bikes sold by BBE, followed by road and touring bikes. However, as seen in Figure 12, Road Bikes are the items held in highest stock, indicating a high demand for this product. This is most likely related to the customer segment living close to the stores, who probably are using road bikes for day-to-day travel as everything is within a biking distance for them and road bikes are the most appropriate of the bikes.



RECOMMENDATIONS

Through a culmination of the analysis within each of the sections of this report it is recommended that BBE could improve the efficiency and efficacy of their sales and operations by implementing some of the following actions.

- Utilise promotions more often and across more product ranges to entice customers to return or include additional items within purchases, e.g. *Buy 2 Bikes get the cheapest one 50% off*, promotions such as this are viable due to high profit margins across product categories such as bikes.
- Across Germany, France and the United Kingdom there is a total population of over 200 million people who only account for ~30% of sales, this is contrasted by the sales in Australia which similarly account for ~30% of sales whilst having one tenth of the population. BBE should consider improving current operations in these locations.
- Expand into nations with high bike ownership such as the Netherlands or Portugal. BBE could experience significant growth by expanding their sales into these high volume markets .
- Expand product ranges to target wider consumer segments e.g. introduce lower price entry level bikes for children and amateur consumers and/or premium priced bikes for professionals



Utilise More Promotions



Expand operations in Europe



Target growth Markets



Expand product ranges



CONCLUSION

Across the data collection period BBE has seen significant growth in sales and profits, in conjunction with this growth they have significantly expanded their product range over the previous 4 years. Most notably accessories have been their most frequently sold product category and bikes have been their most profitable.

This report has identified customers with a commute of 1-2 miles as a unique customer segment which BBE could target more specifically with advertising and product offerings. Customers from the USA and Australia account for a significant portion of sales profit across each sales region, accounting for 32.3% and 30.5%, respectively. Similarly home-owners and customers with a commute of 0-1 miles each represent customer segments which could be further targeted to improve organisational efficiency and efficacy.

Organisational efficiency and efficacy could also be improved by implementing some growth strategies such as improved utilisation of sales and promotions, expansion and growth in current and new regional markets and improved product range offerings.