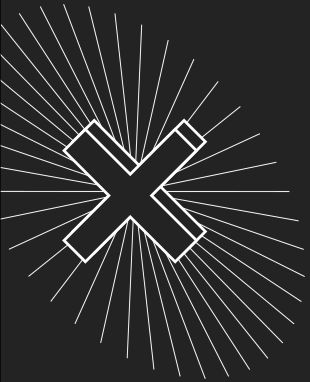




Bee Cycles Market: Customer Segmentation and Behavioral Insights Dashboard

by: Ferdiansyah Permana Putra





Content Discussed

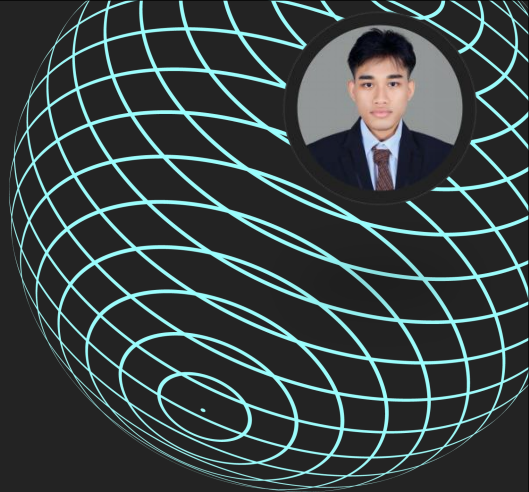
<u>Dashboard Design</u>	Business line problems and questions on the dataset
<u>Dashboard Development and Analytics</u>	Dashboard Analysis and Visualization
<u>Dashboard Documentation</u>	The Result of full dashboard





01

Dashboard Design





Business Problem (Objective Analysis)

To increase **revenue**, I aim to identify the most potential customers based on region, product category, and purchasing trends. Additionally, I will analyze the best-selling products in specific regions and identify customer segmentation for each product. Furthermore, I will optimize the total cost (unit price + shipping) to maximize profit margins per transaction.

Key Questions

Which products are the most popular based on the number of transactions in each region?

How is the distribution of cities that contribute the highest revenue?

What is the customer segmentation based on product category and demographics (gender and region)?

How does profit margin contribution vary per transaction over time, and what are the conditions for each product category?

What are the sales trends and patterns for each product category?

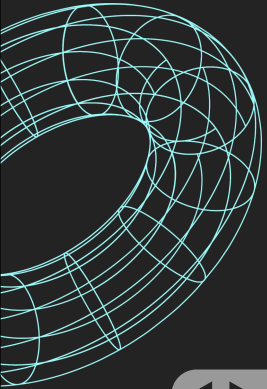
Which customers have the highest total spending, along with their detailed information?





For the key questions

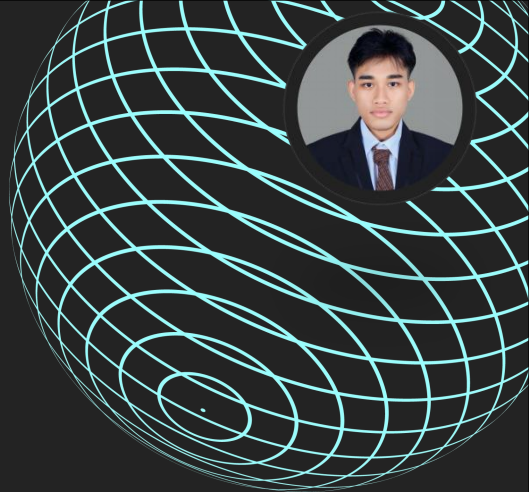
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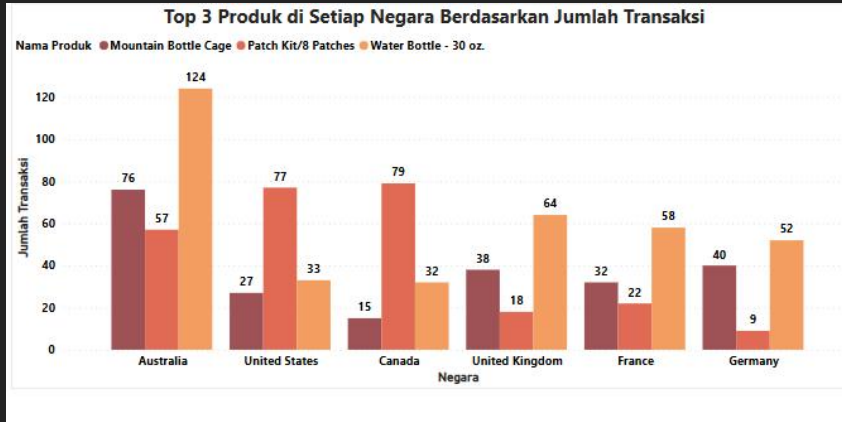


02

Dashboard Development and Analytics



Which products are the most popular based on the number of transactions in each region?



Top 3 Best-Selling Products by Transaction Volume

Mountain Bottle Cage, Patch Kit/8 Patches, and Water Bottle – 30 oz are the most frequently purchased products across different countries.



Key Insights of Country

Australia

- Water Bottle – 30 oz (124 transactions) and Mountain Bottle Cage (76 transactions) dominate sales.
- Strong market demand for these products.

Canada

- Patch Kit/8 Patches is the top product, with 79 transactions in Canada and 77 in the US.
- Indicates different preferences compared to Australia.



Market Potential by Country

- **Australia** has the highest transactions (257), indicating a strong market opportunity.
- **Germany** has the lowest transactions (101), suggesting a weaker demand in this region.

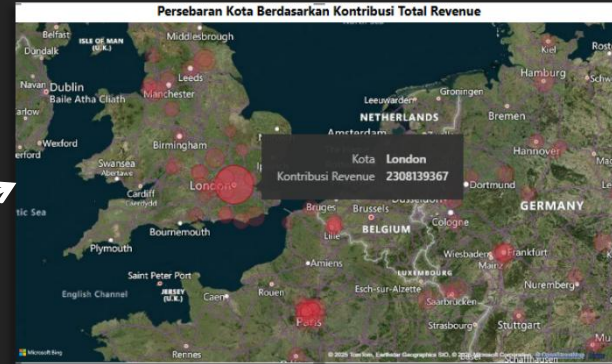


Recommendation

To maximize sales, **Water Bottle – 30 oz** should have increased stock, distribution, and promotional efforts due to its high demand. Other products need market evaluation and targeted strategies to boost interest across different countries. Given **Australia's** strong market potential, optimizing sales strategies there can further enhance profitability. Meanwhile, low-performing regions like **Germany** require improved marketing and promotions to increase brand awareness. For other regions, maintaining product quality, strategic marketing, and diverse product variations will help sustain and grow market demand.



How is the distribution of cities that contribute the highest revenue?





Insights

Based on the map bubble chart, Europe has the largest bubble size, indicating the highest total revenue contribution. The larger the revenue in a city, the bigger the bubble.



London stands out with the highest total revenue of **IDR 2.3 billion**, likely due to high-priced products and large purchase volumes.



In **Australia**, several cities have revenues around **IDR 1 billion** or close to it, with an estimated average of **IDR 800 million**.



Unlike **London**, where only one city dominates revenue, **Australia** shows a more evenly distributed revenue pattern due to higher transaction volumes across multiple cities.

This highlights the significant market potential in both London and Australia, but with different revenue distribution patterns.





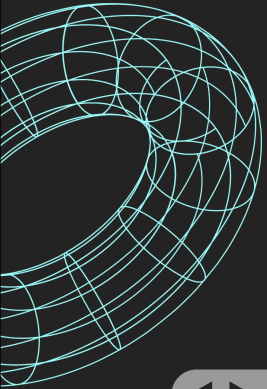
Recommendation

To maximize revenue, the UK market should expand beyond London by evaluating marketing and distribution strategies in other cities while implementing regional segmentation to match consumer preferences. In Australia, where revenue is more evenly distributed, strengthening marketing efforts, optimizing distribution, and analyzing purchasing power can further enhance sales. Similar strategies should be applied to other regions to drive growth. Overall, improving product distribution across all markets is essential to achieving a more balanced and maximized revenue potential.



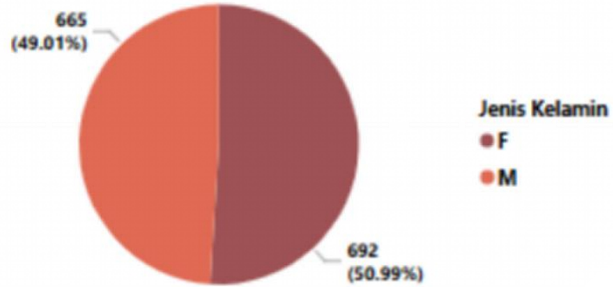


What is the customer segmentation based on product category and demographics (gender and region)?



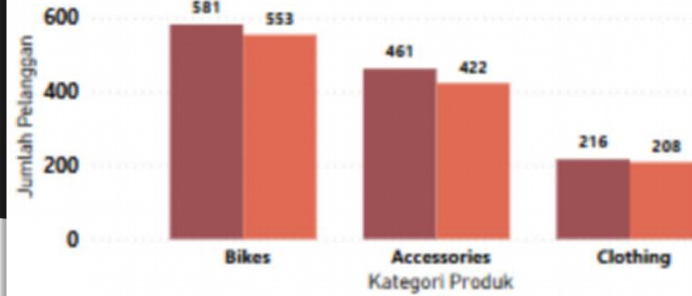


Jumlah Pelanggan Berdasarkan Jenis Kelamin



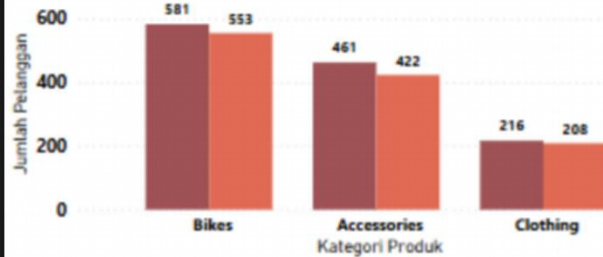
Jumlah Pelanggan Berdasarkan Kategori Produk dan Jenis Kelamin

Jenis Kelamin ● F ● M



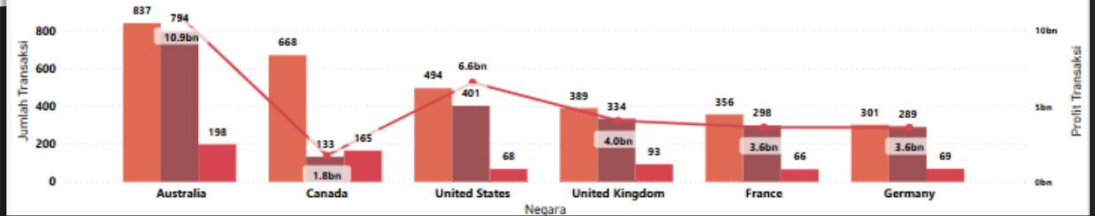
Jumlah Pelanggan Berdasarkan Kategori Produk dan Jenis Kelamin

Jenis Kelamin ● F ● M



Jumlah Transaksi dan Profit Transaksi Berdasarkan Negara dan Kategori Produk

Kategori Produk ● Accessories ● Bikes ● Clothing ● Profit Transaksi





Insights



Gender Distribution (Pie Chart): Female customers dominate transactions at **50.99%** (692 customers), slightly higher than male customers at **49.01%** (665 customers).



Product Category & Gender (Column Chart): The Accessories category is the most purchased, with **1,134 transactions**, indicating high customer demand. Meanwhile, Clothing is the least preferred, with only **424 transactions**. Across all product categories, female customers dominate in purchase volume.



Transactions & Profit by Country (Combo Chart): **Australia** leads in total transactions (**1,894 transactions**), particularly in **Accessories (837 transactions)**, Bikes, and Clothing. In terms of profit contribution, **Australia** ranks highest at **IDR 10.89 billion**, whereas **Canada** has the lowest at **IDR 1.8 billion**. This suggests that **Australia** has the strongest market demand and highest profit contribution, with a well-distributed customer base.



Recommendation

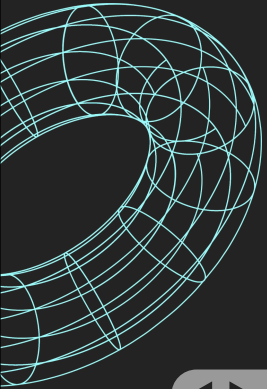


To maximize **revenue**, targeted marketing campaigns should focus on **female customers**, who dominate transactions, while also expanding strategies to attract more male buyers. **Accessories**, being the most popular category, should have increased distribution, stock, and product variations, along with **upselling** strategies like **bundling** with bikes or clothing. Meanwhile, **Clothing**, the **lowest-performing** category, requires market research, product innovation, and stronger promotions to boost demand. Given **Australia's strong** market potential, enhancing marketing efforts, optimizing stock availability, and expanding reach will further increase profitability. In contrast, **Canada** and **other lower-performing** regions need in-depth market research, localized campaigns, and improved distribution to enhance accessibility and demand. Lastly, **competitor analysis** is crucial for refining pricing, branding, and promotional strategies to strengthen market positioning and customer trust.



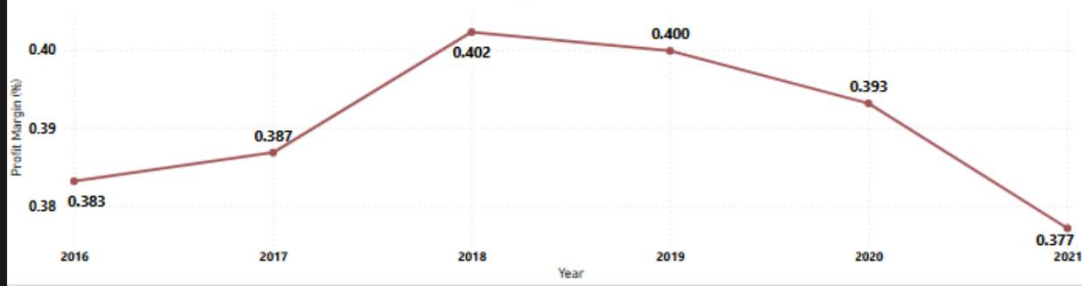


How does profit margin contribution vary per transaction over time, and what are the conditions for each product category?





Tren/Pola Profit Margin (%) Berdasarkan Tahun

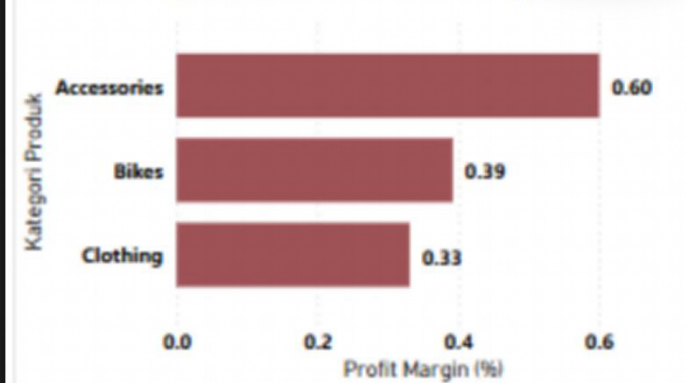


Annual Profit Margin Trend (Line Chart): From 2016 to 2018, profit margins **increased** significantly, reaching a peak of **0.402%** in 2018. However, from 2018 to 2021, margins **declined** sharply, with 2021 recording the lowest margin at **0.377%**. This decline could be due to reduced customer interest or market saturation over time, whereas the earlier rise may have been driven by product launches or special events that boosted initial demand.



Profit Margin by Product Category (Bar Chart): The **Accessories** category contributes the highest profit margin at **60%**, while **Clothing** has the lowest at **33%**. This highlights **Accessories** as the most **profitable** category, playing a significant role in overall business profitability.

Profit Margin (%) Berdasarkan Kategori Produk



Recommendation



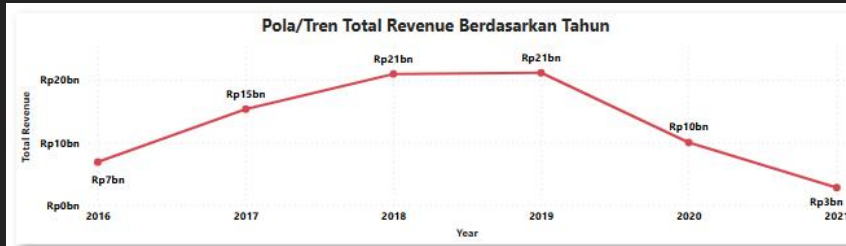
To address declining **profit margins** post-**2018**, a comprehensive evaluation is needed, focusing on product efficiency, quality, customer feedback, and long-term marketing strategies to minimize further declines. Given that **Accessories** contribute the highest profit margin (**60%**), the company should expand product variations, enhance quality, and refine marketing strategies while ensuring other product categories are optimized through market segmentation and targeted promotions. **Upselling and cross-selling strategies**, such as bundling Accessories with main products, can drive higher sales, while introducing premium product lines may increase margins. **Strengthening customer loyalty programs** (e.g., birthday discounts, exclusive offers) will enhance retention. Lastly, **competitor analysis and supply chain audits** are essential to optimizing production and maintaining competitive market positioning.



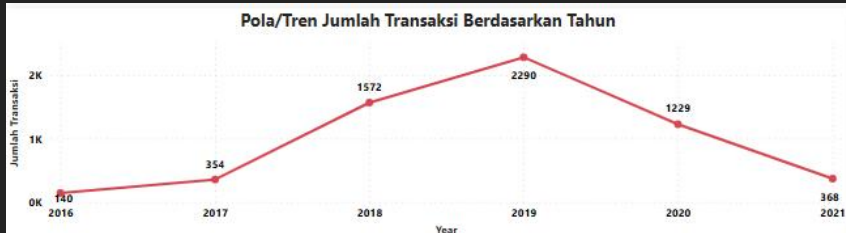
What are the sales trends and patterns for each product category?



Key Insights of Revenue Trends



Total Revenue Trend (Line Chart 1): Revenue increased from 2016 to 2019, peaking at 21M in 2019, but then declined significantly to 3M in 2021.



Transaction Volume Trend (Line Chart 2): Transactions followed a similar pattern, rising to 2,290 transactions in 2019 before dropping sharply to 368 transactions in 2021.

Key Insight: The strong correlation between transactions and revenue indicates that fewer transactions lead to lower revenue. The decline from 2019 to 2021 suggests potential issues in marketing strategies, customer segmentation, or product appeal, requiring further evaluation.



Recommendation



To address the significant decline in **revenue** and **transactions** from **2019 to 2021**, the company should identify key factors behind this drop through customer surveys and market analysis. **Implementing targeted promotional campaigns**—such as seasonal discounts, cashback offers, and loyalty programs—can help drive sales. **Customer segmentation** should be refined to target specific groups with new products, bundling options, or premium offerings, increasing both transaction volume and revenue. Additionally, **expanding market reach and continuously improving product quality** will enhance customer interest and sustain long-term profitability.



Which customers have the highest total spending, along with their detailed information?



Top Spender: Nicole Nara from France recorded the highest total spending of 112,629,431 (dollar)



Spending vs. Transactions Correlation: While higher transactions generally lead to higher spending, the relationship is not always linear—some high-spending customers made fewer transactions but purchased more expensive products.

Nama Pelanggan	Gender	Marital Status	Asal Negara	Total Pengeluaran	Jumlah Transaksi
Nichole Nara	F	S	France	Rp112,629,431	
Randall Dominguez	M	M	France	Rp112,475,544	
Kaitlyn Henderson	F	M	France	Rp112,286,440	
Margaret He	F	M	France	Rp112,205,380	
Adriana Gonzalez	F	S	France	Rp112,076,453	
Rosa Hu	F	M	France	Rp111,924,626	
Brandi Gill	F	S	France	Rp111,819,852	
Francisco Sara	M	M	France	Rp111,657,536	
Brad She	M	M	France	Rp111,652,464	
Total				Rp44,779,632,668	



France Dominance: Nearly all top 10 highest spenders are from France, suggesting a wealthier customer base that prefers higher-value purchases over frequent transactions.



Recommendation



To optimize customer engagement and revenue growth, segmenting customers based on gender, marital status, and transaction frequency is crucial, with a particular focus on single women as the dominant group. High-spending but low-transaction customers should be targeted with special promotions to encourage repeat purchases. Implementing incentive programs, such as discount offers, reward points for high spending, and exclusive deals, can drive transaction frequency, while VIP loyalty programs help retain high-value customers. Given the significant contribution of high-spending customers in France, strengthening engagement through up-selling premium products and cross-selling complementary items can further maximize revenue. Additionally, expanding into new geographic markets will help diversify revenue streams and broaden the customer base.





Thanks!

Do you have any questions?

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