**Reports from Analyzing Customers Address, Customers Demographics, and Transactions Datasets**

**Transaction by State**

**New South Wales (NSW)**:

* New South Wales leads in terms of the number of transactions, with a total of 29,757.
* This state exhibits the highest level of consumer engagement, suggesting a robust market presence and commercial activity.

**Queensland**:

* Queensland records 11,877 transactions, representing a substantial consumer base within the dataset.
* While it falls behind NSW in transaction count, it still demonstrates a noteworthy level of consumer participation.

**Victoria**:

* Victoria reports the lowest number of transactions among the three states, with 1,415 transactions.
* Despite its lower transaction count, Victoria still contributes to the overall dataset, showcasing regional consumer activity.

These transaction figures provide a valuable overview of consumer engagement and market presence in each state, helping to identify areas of focus and potential growth opportunities.

**Transaction Analysis by Gender**

There's no significant difference in transactions between male and female customers. Unspecified gender customers have notably lower transaction counts across all age groups.

**Transaction Analysis by Wealth Segment**

In all three states, the Mass Customer group consistently exhibits the highest transaction count. Affluent Customers and High Net Worth Customers tend to have lower transaction counts in comparison. There are no significant differences in transactions between genders within wealth segments.

**Transaction Analysis by Age Group**

In all three states, the middle-aged group consistently records the highest transaction count. The under-30 group follows with a moderate transaction count. Senior citizens have the lowest transaction count.

**Property Valuation Analysis**

* In New South Wales, Customers with property valuations of 9, 10, 8, 11, 7, and 12 respectively exhibit higher transaction percentages.
* In Queensland, Customers with a property valuation of 7 have a transaction percentage of 3.6%, while those with other property valuations have lower transaction percentages.
* In Victoria, Customers with property valuations of 8, 9, 7, and 10 respectively show higher transaction percentages, while the transaction percentages for others are lower.

**Past 3 Years Bike-Related Purchases Analysis**

* Over the past three years, customers in New South Wales have the highest rate of bike-related purchases, followed by Victoria and then Queensland. There isn't a significant difference between male and female customers in terms of bike-related purchases.
* Customers with unspecified gender exhibit very low purchase activity in this category.
* In terms of age groups, the middle-aged segment leads in bike-related purchases, followed by the under-30 group and then senior citizens.

**Transaction Analysis by Tenure**

Transaction counts by tenure vary across states. In New South Wales, the top 5 tenures for transactions are 7, 13, 11, 12, and 16, while in Victoria, they are 5, 8, 9, 15, and 19. Queensland's top 5 tenures for transactions are 7, 16, 14, 11, and 9.

**Transaction Analysis by Month**

Transaction counts by month differ among the states. In New South Wales, October, August, January, and November show slightly higher transaction numbers. In Queensland, the highest transaction months are October, April, August, May, and November. Victoria sees its peak transactions in July, May, August, October, and January.

**Brand Analysis**

**New South Wales**: The top brands by the number of transactions, from highest to lowest, are Solex, WeareA2B, Giant Bicycles, OHM Cycles, Trek Bicycles, and Norco Bicycles.

**Victoria**: The ranking of brands is consistent with New South Wales, with Solex leading in transaction count, followed by Giant Bicycles, WeareA2B, Trek Bicycles, OHM Cycles, and Norco Bicycles.

**Queensland**: In Queensland, the top brands by transaction count mirror the patterns seen in New South Wales and Victoria, with Solex, Giant Bicycles, WeareA2B, OHM Cycles, Trek Bicycles, and Norco Bicycles taking the lead.

**Analysis by Product Line**

Across all three states, the Standard Bike product line demonstrates the highest transaction count. Road Bikes, Touring Bikes, and Mountain Bikes follow in descending order of transaction counts.

**Analysis by Product Class**

The Medium bike class consistently records the highest transaction count in all three states. High and Low bike classes exhibit lower transaction counts, with minimal variation between them.

**Analysis by Product Size**

In all three states, Medium-sized bikes have the highest transaction count. Large and Small-sized bikes have lower transaction counts, with Large bikes ranging from approximately 20-21% and Small bikes from 14-15% of the total transactions.

**Analysis by Job Title**

Customers with job titles related to Manufacturing, Financial Services, Retail, Health, and Unknown job titles consistently have the highest transaction counts across all three states.

**Analysis by Job Industry Category**

The top job industry categories associated with the highest transaction counts in all three states include Manufacturing, Financial Services, Retail, Health, and Unknown job titles.

These individual reports summarize key findings for each of the specified categories based on transaction data in the three states.

**Revenue Analysis by States**

The analysis of revenue by state reveals the following key insights:

**New South Wales (NSW)**:

* NSW stands out with the highest revenue among the three states, totaling $17,201,669.
* This state demonstrates a strong economic contribution to the dataset, indicating significant consumer activity and purchasing power.

**Victoria**:

* Victoria ranks second in revenue with a total of $6,954,716.
* While its revenue is considerably lower than that of NSW, it still represents a substantial portion of the dataset.

**Queensland**:

* Queensland follows with a revenue of $9,268,274.
* Although it falls behind NSW in revenue, it surpasses Victoria, highlighting its economic significance within the dataset.

These revenue figures provide valuable insights into the economic dynamics of each state, helping to identify where substantial business activities and opportunities lie within the dataset.

**Revenue Analysis by Month**

Revenue patterns by month vary among the states. In each state, specific months (e.g., October, August, January, and November) tend to have slightly higher revenue than others.