

2Market Report

Business Context

2Market is a global supermarket who's objectives are to gain a solid understanding of who their customers are, what their preferred products from 2Market are, and how they are most effectively advertised towards.

Analysis of 2Market's data will uncover and present findings using the basis of a 6-Step Framework with which the Product Manager can leverage to inform decision-making and implement effective marketing strategies.

Questions for 2Market

- Would it be possible to access population demographics data to compare with 2Market's customer demographic data?
- When will the marketing strategies be launched?

Further Questions of the Data

- Could a potential business objective be to achieve growth in a particular demographic or in a particular product's sales?

Analytical Approach

Excel

- I used 'Find and Replace' to:
 - replace '**YOLO**' and '**Absurd**' fields in the marital status column with **#N/A**. As there weren't many entries of this nature (n=4), it would not hamper analysis;
 - replace '**Alone**' with '**Single**' as this created a more succinct dataset and would not interfere with analysis;
 - I also replaced '**Together**' with '**Married**' under the assumption that many who wrote '**Together**' would be sharing a household and/or income with their partner. This created a more succinct dataset.
 - This decision later proved to be limiting in terms of achieving a more in-depth analysis of the data as those in the '**Married**' category showed to be a dominant demographic for high spending at 2Market.
- I searched for duplicate values and found none. Each observation had a unique customer ID, so I thought it safe to assume there were none.
- I created an 'Age_in_2022' column where I misused customers' D.O.B. from 2022.
- I created scatter plot pitching age against income, then identified and replaced outliers in both fields with **#N/A**.
- Advanced aggregation in a Pivot Table showed a more detailed view of age demographics alongside marital status.
- Using the Pivot Table Grouping Function for placing income into brackets allowed for further insight into how age, marital status and spending habits are distributed.

SQL

- While placing each product together in a **UNION** table provides results of the total spend per product per country, a more efficient syntax provides more insight into which products are the most popular in each country and is more easily readable.

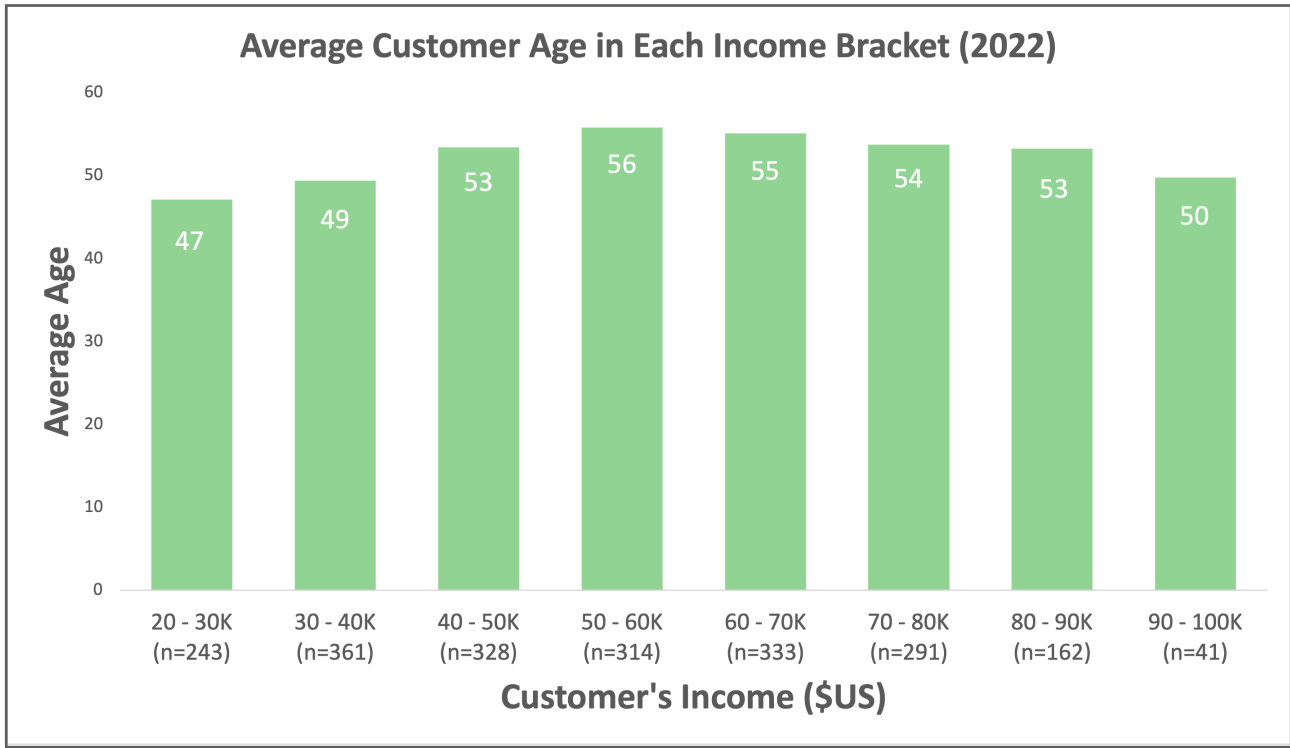
```
CREATE TABLE spend_per_country AS
SELECT
    country,
    SUM(amt_liq) AS total_amount_alcohol,
    SUM(amt_veg) AS total_amount_vegetables,
    SUM(amt_non_veg) AS total_amount_meat,
    SUM(amt_pes) AS total_amount_fish,
    SUM(amt_chocolates) AS total_amount_chocolate,
    SUM(amt_comm) AS total_amount_commodities,
    SUM(amt_liq) + SUM(amt_veg) + SUM(amt_non_veg) + SUM(amt_pes) +
    SUM(amt_chocolates) + SUM(amt_comm) AS total_spend_per_country
FROM public.marketing_data
GROUP BY country
ORDER BY total_spend_per_country DESC;
```

- I could replace 'country' with other dimensions eg. 'marital_status', 'age_bin', 'kid_home', etc. for quick, insightful queries.
- I **SUM**med each successful social media channel advertisement and placed them alongside the total number of successful lead conversions, grouping by country.
 - I also created a **UNION** table showing these results alongside each country's total spend per product. I visualised these results in the Tableau dashboard as they provided key insights.
 - I then replaced country with marital status. I also visualised these results in the dashboard.

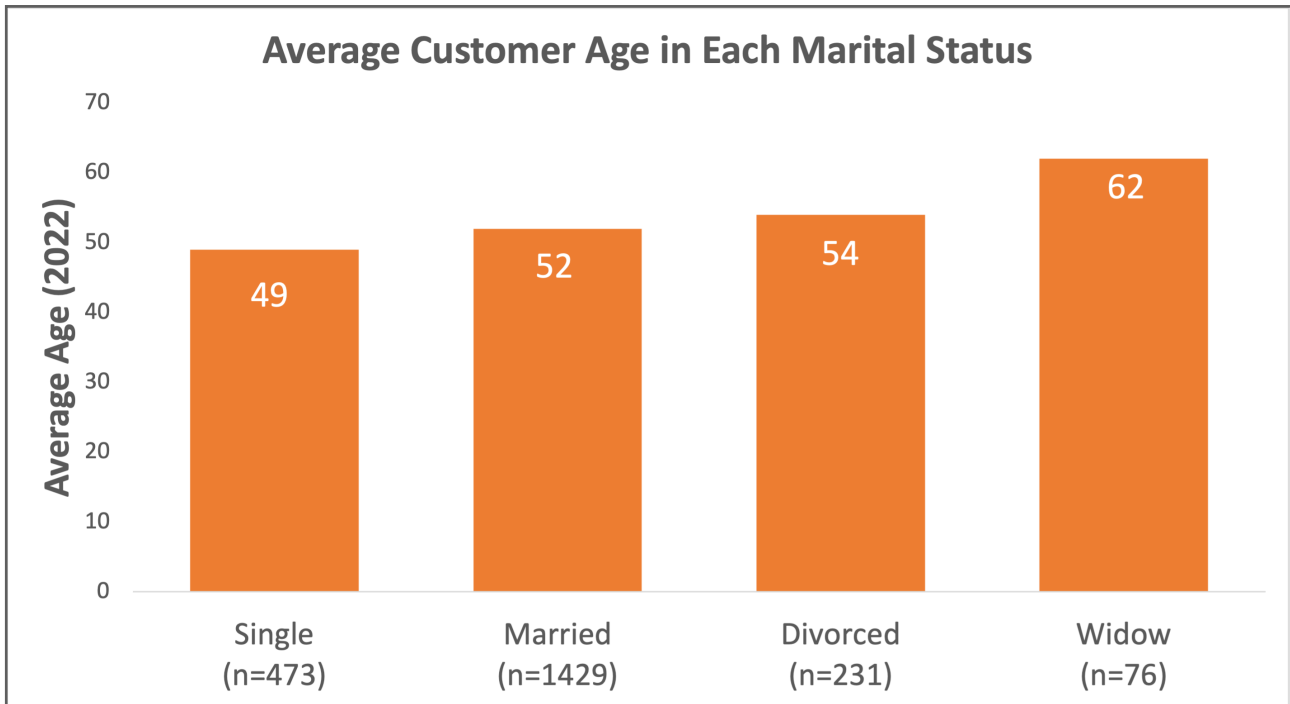
```
SELECT
    md.marital_status,
    SUM(twitter_ad) AS twitter_ad,
    SUM(instagram_ad) AS instagram_ad,
    SUM(facebook_ad) AS facebook_ad,
    SUM(twitter_ad) + SUM(instagram_ad) + SUM(facebook_ad) AS total_successful_ads,
    COUNT(marital_status) AS number_in_each_category
    --SUM(bulkmail_ad) AS bulkmail_ad,
    --SUM(brochure_ad) AS brochure_ad
FROM marketing_data md
JOIN ad_data ad USING (id)
WHERE (marital_status IS NOT NULL)
GROUP BY md.marital_status
ORDER BY twitter_ad DESC;
```

Patterns, Trends & Insights

- The average age of 2Market's 2,209 customers is **52**.

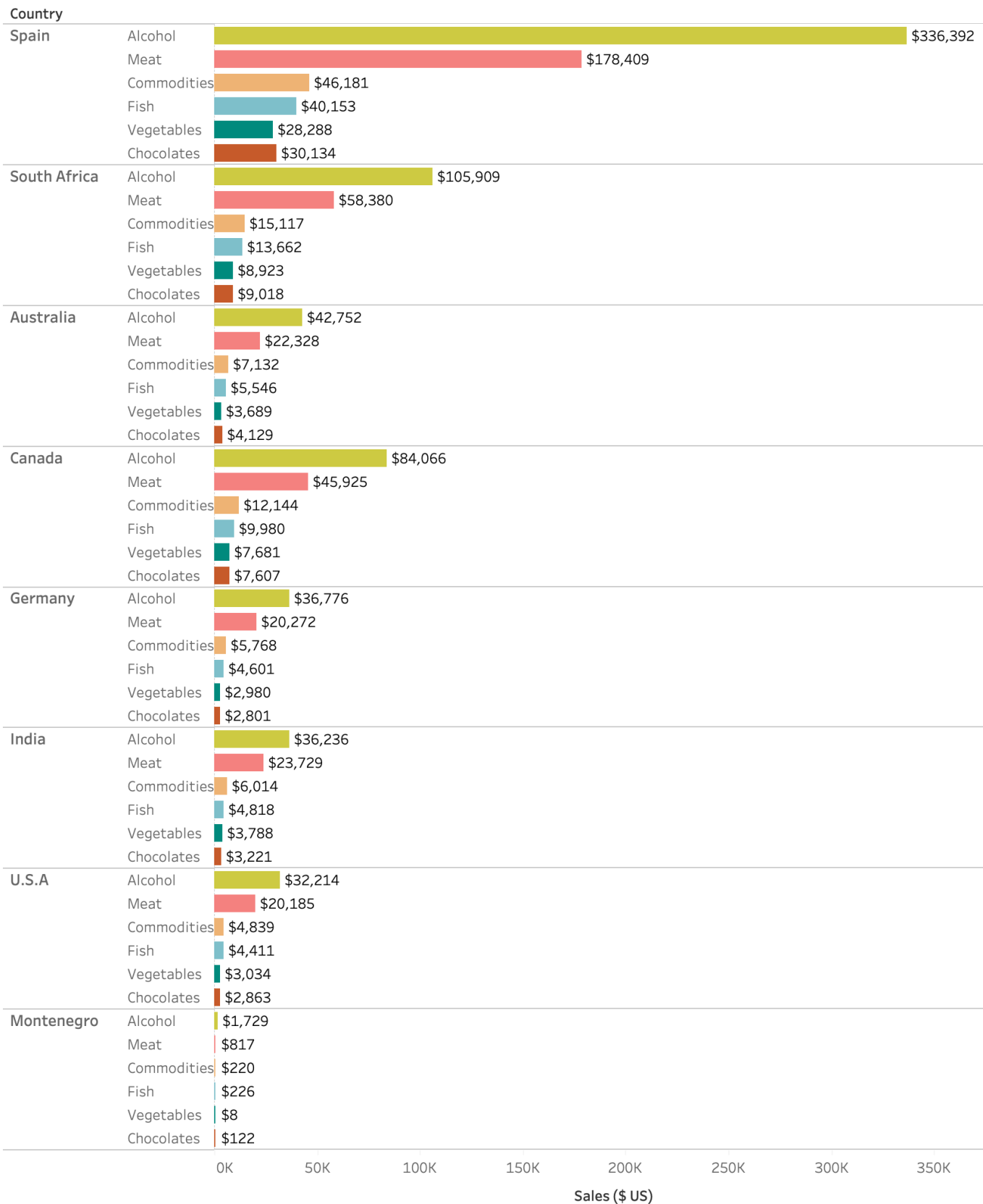


- Customers' average age varies only slightly as income increases.

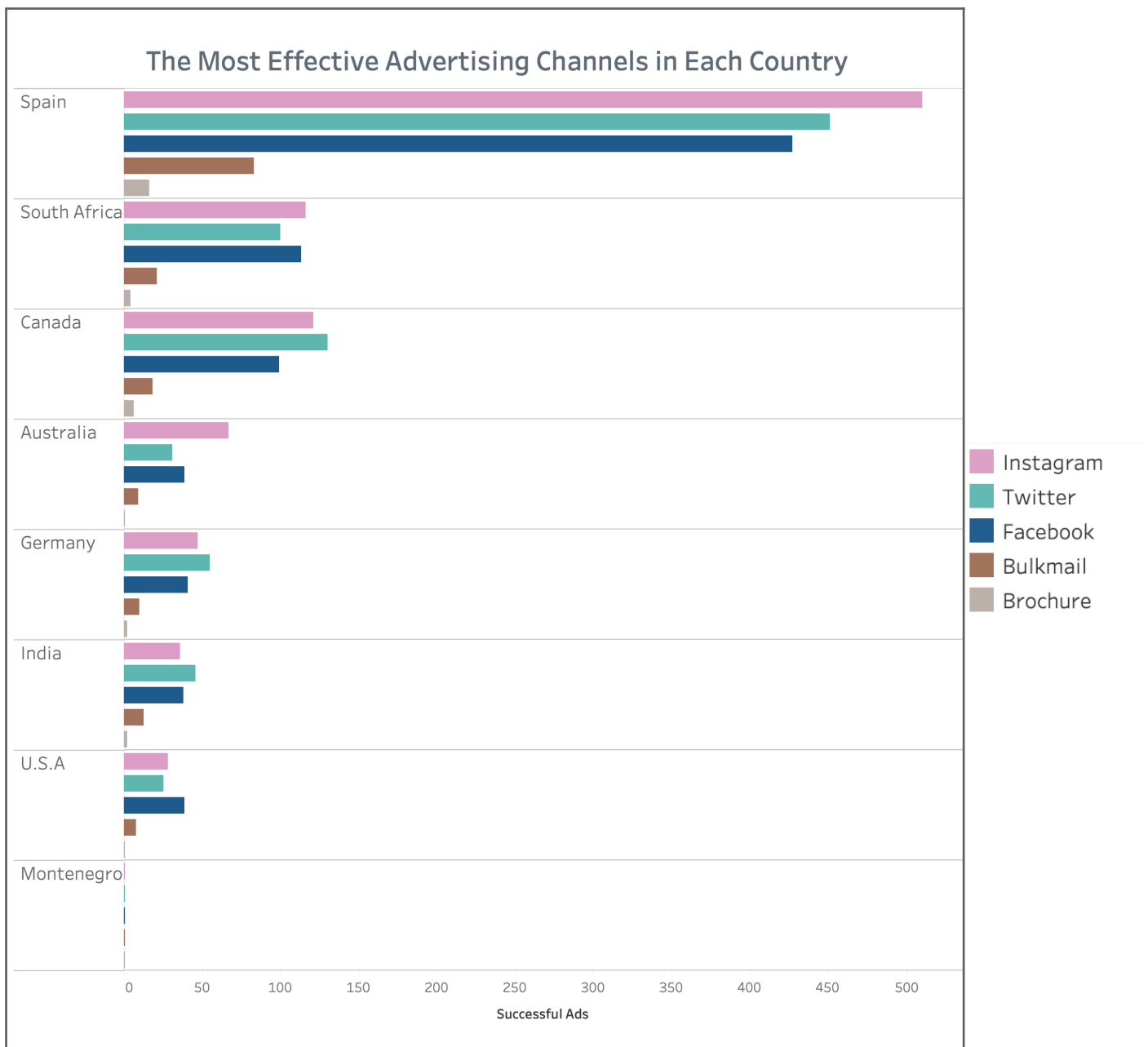


- The **'Married'** category make up 64% of the total number of customers and also hold an average age of **52**.

Each Country's Total Spend Per Category

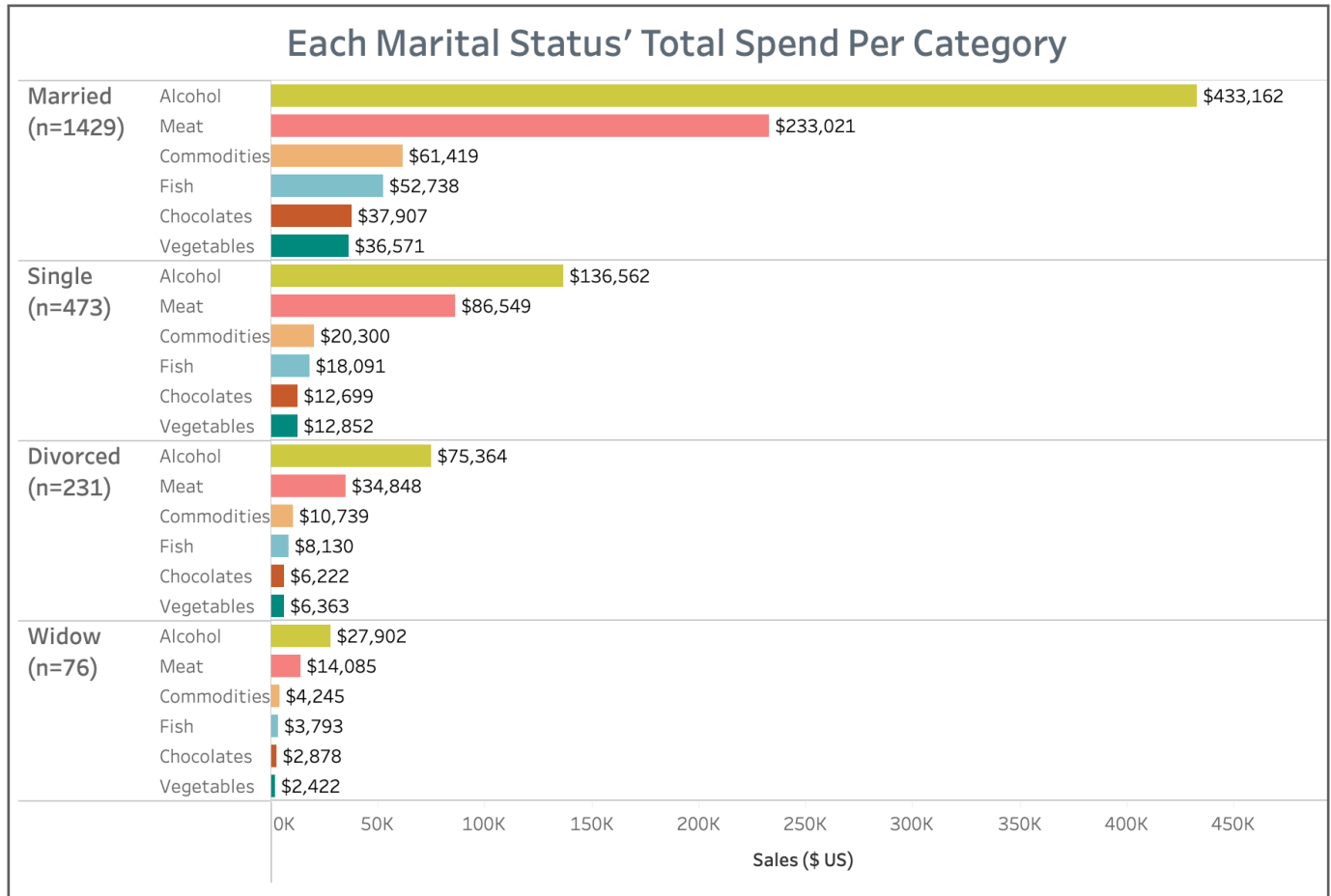


- Alcohol is the best selling product category by far in each country, marital status, and income bracket. It is also the most popular category amongst households with varying numbers of children.
 - Perhaps it is worth exploring more specific data on subcategories within product categories to gain a deeper understanding of which particular products do best in each category. This could help influence decisions regarding which suppliers / products to invest more in in each country's stores and websites.
- There is low ad success and low spending in the vegetable and chocolate categories.
 - Might it be desirable to increase marketing efforts for those products?



- Instagram is the joint most effective channel for advertising to countries along with Twitter.
 - Spain has a much higher Total Spend than all the other countries. This is due to the significantly higher number of records collected of Spanish customers than those from other countries.

- Are the same marketing campaigns used in Spain used for the other countries? If not, then perhaps it is worth looking at applying similar strategies across other countries to see if it affects the total number of lead conversions. If the same marketing strategies are used across all the countries, then it may be worth re-evaluating the strategy in countries other than Spain.



- People who are **'Married'** (**'Together'**) are the highest spenders in each product category by a significant amount, accounting for:
 - 64% of all alcohol sales;
 - 63% of all sales in every other category
- Instagram is the most effective channel for advertising to people who are **'Married'** / **'Together'**.
- Alcohol is also the preferred product category amongst **'Single'** people, as they account for
 - 20% of sales.
- As Bulkmail is the most effective channel for advertising to **'Single'** people, perhaps it is worth exploring options for improving / increasing the advertising of alcohol via this channel to achieve growth in the alcohol category with this demographic.

Dashboard Design & Development

- I placed a simple, aesthetic bubble chart displaying a broad overview in the top left portion of the dashboard to ease the viewer in.
 - I chose bold bubble colours that most closely represented each country, while using light green and dark red for distinguishability.
 - I made it large to draw the user in as a starting point.
- Underneath is a rotated bar chart displaying the most popular products within specific age ranges.
 - I chose a colour-blind palette - while increasing accessibility, I thought the bold colours would draw the viewer down to this chart next, as I thought a natural progression would be to break down category spend by country, then by age range.
 - I initially display only ages 30-69 as this range contains the most customers with the highest incomes. There is an age range filter that can show the other age ranges as desired.
- The right-hand portion of the dashboard is wholly focused on social media advertising as this aspect is crucial to 2Market's business problem.
 - As alcohol is the most successful product across countries and demographics, I chose to show how alcohol is best advertised in each country.
 - Underneath is a view of the effectiveness of social media advertising within the marital status demographics as '**Married**' people are a key demographic with high income who spend a lot.
 - The same pastel colours were used for each social media type across both charts for congruence.
- A variation of colour was used to differentiate between measures and charts.
 - Consistent, muted tones were used for borders and chart titles to make the chart colours stand out.
- I left data markers off charts for a more easily-digestible design throughout. Detail can be seen when looking at specific areas.
- Interactive filters for key demographics are included and apply to each element in the dashboard so as to be able to see how each measure is affected by manipulation with ease.