STAT 515 MIDTERM REDESIGN PROJECT

Redesign the World's Gold Demand Visualization

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OBJECTIVE

The main objective is to gain experience by applying the class design guidelines using programming language taught in class and present data analytic results.

ABSTRACT

Visualization is an approach in which we can represent all the data that is collected in one place. Businesses use visualizations to mislead the audience and hence they are not completely trusted. Visualizations can be good or bad, in my redesign project I have considered a bad visualization and made a good graph of it.

Firstly, analysis of data is done. Then the data is entered manually in R programming language and good graph is created using R programming language. Few additional plots are also created to make the data more understandable. Moreover, there is a comparison of demand in the years 2019 and 2020.

INTRODUCTION

The main objective of the report is to create a good graph for the dataset . The dataset is related to the period of market volatility, investors invested in gold to minimize their risk of losing money. As a result of the coronavirus, which has caused the worst volatility in financial markets in a decade's gold has seen its highest weekly rise since 2008. I have selected this visualization because the visualization looked a little disturbing and lacked to give detailed information. When a graph is visually pleasing and simple to understand, it is deemed good. All axes and data points should be accurately depicted and proportioned, and it should be properly labeled. There should be no stray marks or faulty data points on the graph as well. Color distinction across different data sets can also help consumers distinguish between data sets and avoid information overload. In addition to being clear and succinct, a good graph is easy to understand. It should express the facts in an easy-to-understand manner, with no unnecessary details or ambiguous data.

DATASET SOURCE

The dataset is collected from the Back to World Gold Council. The Gold Hub has done research that gives us the gold demand trends of the year 2019.

BAD GRAPH

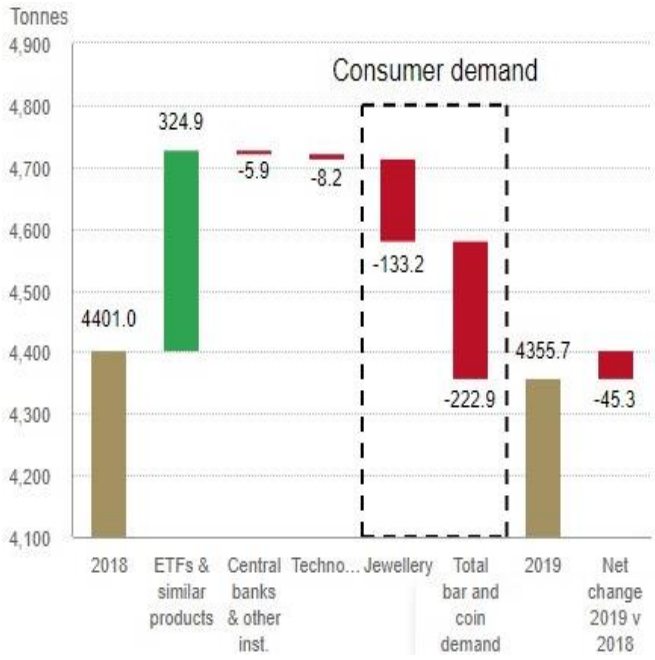

Image 1: Graph of World Gold Council

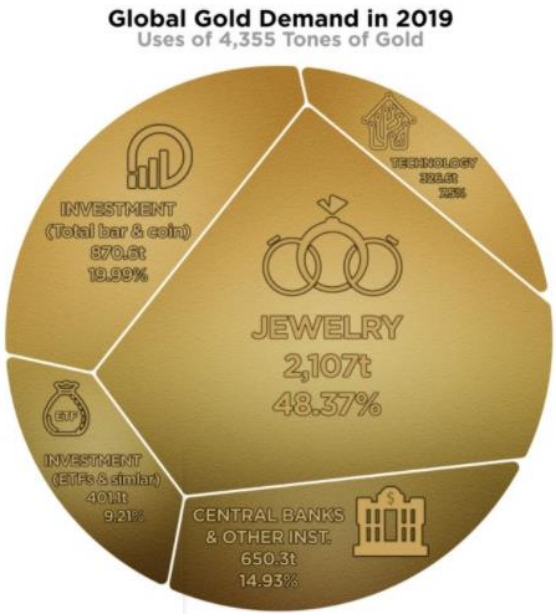

Image 2: Additional graph in howmuch.net

ISSUES WITH BAD GRAPH

In the bar graph, Data is not easily readable and is vaguely presented which is not suitable for the dataset. The plots are not placed in an order. The scale in the graph is also not correct. Also, The colors in the bar graph are not appropriate. It is very difficult to analyze this graph because it does not mention the values and the plots are not organized. The x axis is not labelled correctly as we can see that it cannot accommodate words that are beyond 8 characters and the name “Jewellery” is not correctly spelled. Overall, the graph fails to convey the required information to the viewer. The actual graph selected from the web does not have a title and lacks to give the user information about how is graph about.

The pie chart gives us the all the information, but it does not give the analyzed information, and hence we cannot find out the details of the dataset precisely. Deducing things like highest demand and least demand are difficult in this visualization as we must see everything and read all the details provided. The visualization is considered bad also because there isn't enough space to write the information in the tiniest portion, it's tough to read the data written there. Overall, this visualization is very clumsy, not organized and has a lot of unnecessary details.

REDESIGNED GRAPH

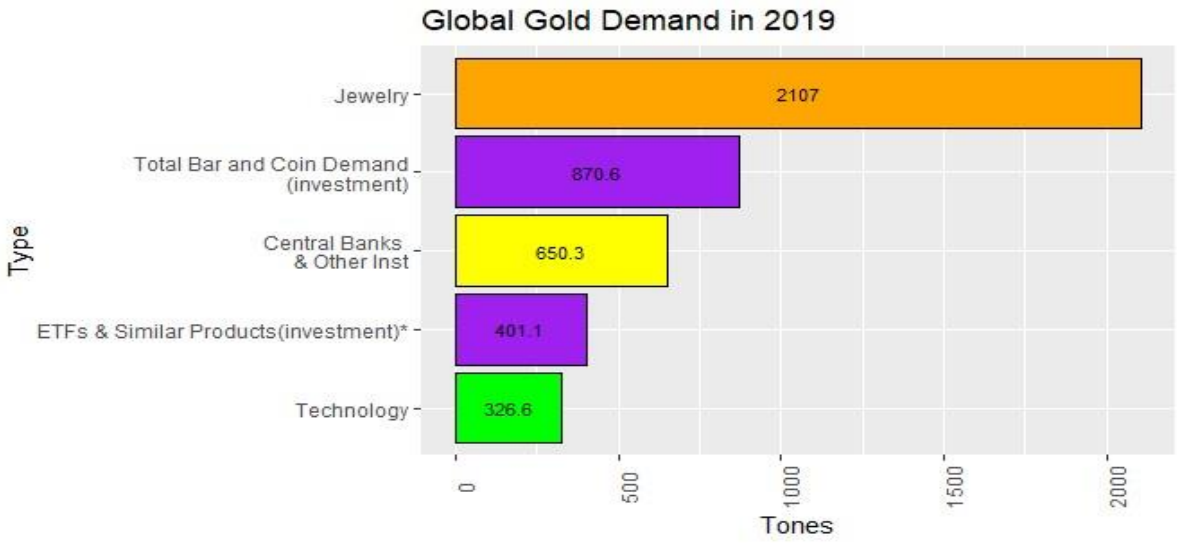

Image 3: Redesigned Bar plot.

In the redesigned graph, it is convenient to interpret every detail about the type of demand. There are grid lines in the background that help in generating more precise comparisons. The order of arranging the plots makes the appearance look simple and gives a good summary to the analyzed dataset. The colors have been contrasted from each other but there two plots that are in same color because they are the subtypes of one type of demand. The graph is ordered in descending order i.e. from the highest type of demand to the lowest type of demand with accurate tonnes labelled on the plots. The graph keeps the attention of the viewer with its different colors and labelling the number of tonnes of gold demand in 2019. The correction of spellings is done and this graph does not have a character limit for the labelling the demand types on axis as all the words can be seen evidently.

ADDITIONAL VISUALIZATIONS

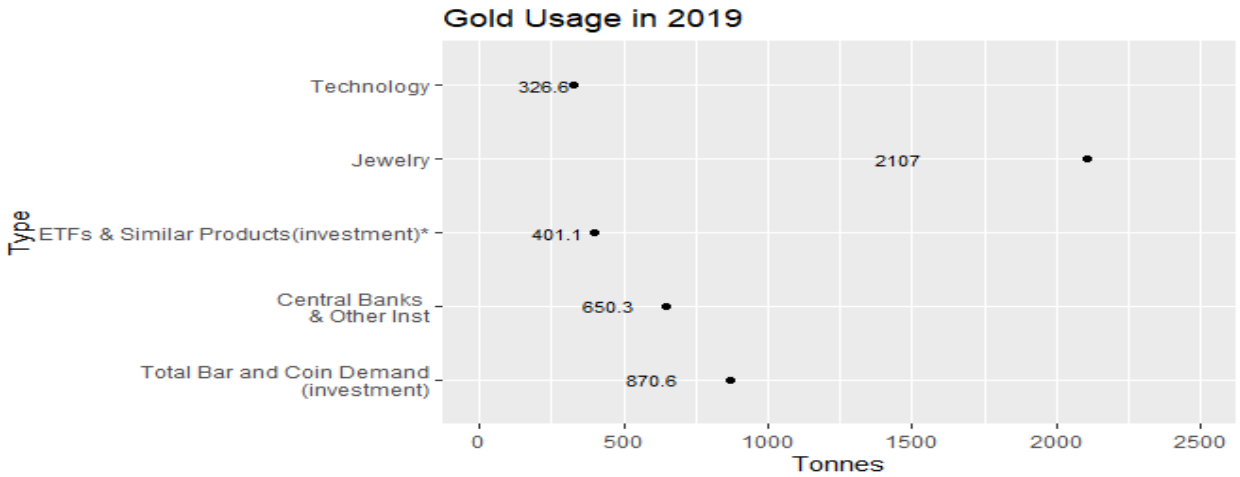

Image 4: Redesigned Scatter Plot.

Additionally, I researched the gold demand data in 2020 and used it for the visualizations for the users to get more information about the data for comparing year wise.

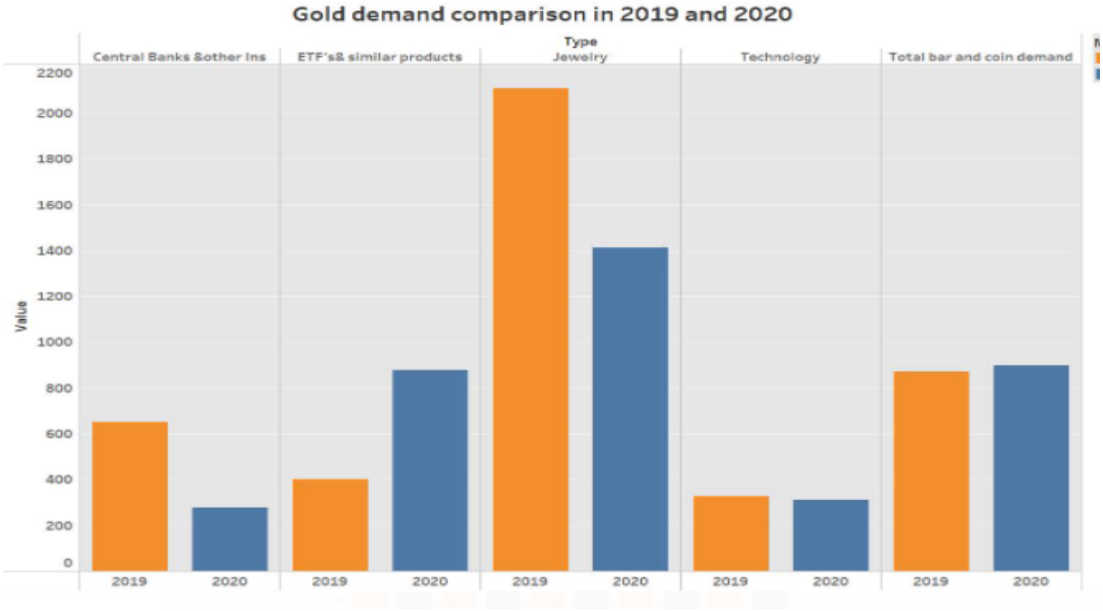

Image 5: Redesigned graph for comparing demand in the year's 2019 and 2020.

CONCLUSIONS

Bar charts represent more factful data than pie charts. They are a common method to visually illustrate the data. The considered (Actual) graph does not have the information properly visualized also it is not appealing. I have redesigned the actual graph into a bar plot by liquidizing the data into an easy understanding format. Bar plot is user friendly, and it only conveys the information that is extremely important. The representation of data is depicted in a very organized and systematic manner. Bar graph is more suitable way to represent the data graphically as it makes understanding easier in order to interpret the data for drawing conclusions, which can show the changes over time. Thus, using the redesigned graph users have a source to compare the type of demands along with considering the number of tonnes.

TOOLS AND SOFTWARE USED

R programming, Rstudio, Tableau

References

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