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# Evaluating the effect of BJI's marketing campaign on sales performance in the UK

Md Aminul Islam<sup>1</sup>, Majharul Kamal Faheem

<sup>1</sup> Oxford Brookes University

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## Abstract

This study evaluates the impact of BJI's marketing campaign on its sales performance in the UK from 2018 to 2020 by employing the Cross-Industry Standard Process for Data Mining (CRISP-DM) framework. The research addresses data quality issues, conducts detailed data analysis and commentary, charts data for visual comprehension, and provides conclusive insights and recommendations. Findings reveal a consistent increase in sales volumes and values across all markets, with bracelets emerging as the highest-selling category. The marketing campaign launched in the UK in May 2020 significantly influenced sales volumes and values. The study recommends expansion and promotion of BJI's necklace portfolio, given its consistent growth, and a strategic focus on the USA market for its high sales volumes and values.

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## Introduction and project plan

This report's objective is to present a project plan for carrying out a consultancy project for BJI that focuses on evaluating the effect of that company's marketing campaign on sales performance in the UK. The report will be organized as follows: first, it will introduce the data analytics framework that will be used; second, it will outline the project's gathering, cleaning, and analysis of data; and third, it will explain how data analytics may improve BJI's business performance and KPIs.

The CRISP-DM (Cross-Industry Standard Process for Data Mining) framework, which offers a structured approach to the project, was chosen as the data analytics framework for this project. With the aid of this framework, the consultant will be better able to comprehend BIJ's business objectives and data needs, gather and clean the necessary data, conduct statistical analysis, and offer recommendations to BIJ based on the analysis's findings (Wirth et al., 2016).

For BIJ, several ways to improve data analytics may be beneficial and help the company perform better. First, it can aid BIJ in better comprehending its clients' needs and preferences, allowing it to target its marketing initiatives better. Secondly, it can assist BIJ in locating patterns and trends in their sales data, allowing them to improve what they choose about their product line-up and inventory control. Lastly, enhanced analytics can help BIJ track its progress in relation to its KPIs more successfully, enabling it to spot areas for growth and take corrective action.

## Data quality issues and remedies

Several data quality issues with the BIJ dataset must be resolved to increase the data's correctness and dependability. Missing, wrong, inconsistent, and duplicate data are examples of generic data issues. Data profiling and data cleaning techniques can also be used to find these problems (Laursen, G. H., & Thorlund, 2010). Data profiling is examining the data to comprehend its structure and substance, whereas data cleansing entails fixing or deleting the problematic data. The manual entry of data, data validation, and data verification are some ways to overcome data difficulties (Kimball, R., & Ross, M., 2013).

### Specific Issues with BIJ Dataset

1. **Incomplete Data:** The BIJ dataset contains certain blank data fields, which shows that not all necessary information was obtained. The consultant will collaborate with BIJ to locate the missing data and gather additional data to verify completeness to address this issue.
2. **Inconsistent Data:** The dataset has numerous discrepancies, such as multiple spellings of the same variable or values that are not in the right format. The consultant will utilize data transformation techniques to resolve this problem by ensuring that all data is in a consistent format and that variables are named appropriately.
3. **Outliers:** Some outliers in the dataset can affect the findings of the analysis. To solve this problem, the consultant will utilize data visualization methods to spot outliers and choose whether to alter or eliminate them from the dataset.
4. **Missing Data Values:** The dataset includes some values that are missing, which might also bias the outcome of the analysis. To solve this problem, the consultant will resort to data imputation methodologies to fill in the values for the missing data.

## Data analysis and commentary

The sales data for necklaces, rings, and bracelets in the UK marketplace over the span of 2018 to 2020 reveals an overall

upward trend in bracelet sales volume and value. Between 2018 and 2020, bracelet sales both in quantity and value climbed by 77.5% and 97.4%, respectively, while rings and necklace sales volumes and value declined. The value and volume of sales for bracelets are continuously strong throughout the year, having the highest levels in May and June, according to a more in-depth review of the data by month. These patterns in bracelet sales statistics can be linked to several company tactics, including successful advertising campaigns, diversification of products, and the provision of customized goods. The sales volume and value for bracelets have been continuously strong throughout the year, with a peak in May and June, according to a more in-depth review of the data by month. These patterns in bracelet sales statistics can be linked to several company tactics, including successful marketing campaigns, product diversification, and the provision of customized goods. These tactics have demonstrated their efficacy at increasing sales and luring clients.

Here are some key observations and potential business strategies to consider:

1. **Sales Volume and Value Trends:** From 2018 to 2020, sales volume and value have both been continuously rising. There was a substantial increase in sales volume and value in 2020, which may have been brought on by several variables, including alterations in consumer behavior, strategy for marketing, or even outside variables like the COVID-19 pandemic. Analysis of the potential contributing variables to the sales growth in 2020 and subsequent adaptation of marketing and sales tactics to sustain or even boost sales are examples of possible business strategies.
2. **Category Analysis:** From 2018 to 2020, sales volume and value have both been continuously rising. There was a substantial increase in sales volume and value in 2020, which may have been brought on by several variables, including alterations in consumer behavior, marketing tactics, or even outside variables like the COVID-19 pandemic. Analysis of the potential contributing variables to the sales growth in 2020 and subsequent adaptation of marketing and sales tactics to sustain or even boost sales are examples of possible business strategies.

**Table 1.** Sales Volume of UK market from 2018-20

Year	Months	Product Categories					
		Bracelet	Ring	Necklace			
		Sales Data From 2018 to 2020					
		Volume	Value	Volume	Value	Volume	Value
2018	1	90	£66,827	22	£14,200	45	£46,230
	2	100	£73,234	21	£13,730	44	£42,258
	3	101	£84,417	30	£19,199	53	£50,285
	4	112	£68,567	30	£20,598	46	£45,335
	5	101	£80,533	19	£12,542	52	£64,892
	6	104	£81,612	28	£18,774	74	£91,094
	7	102	£83,083	22	£16,304	38	£39,468
	8	94	£76,245	19	£14,460	28	£27,643
	9	115	£87,373	28	£20,543	60	£67,015
	10	57	£39,123	12	£9,182	24	£27,255
	11	77	£56,305	19	£15,460	17	£19,484

	12	121	£95,581	30	£20,608	36	£36,727
Total	<b>1174</b>	<b>£892,900</b>	<b>280</b>	<b>£195,601</b>	<b>517</b>	<b>£557,684</b>	
2019	1	118	£88,439	18	£12,020	24	£26,996
	2	136	£99,306	17	£11,033	28	£25,864
	3	186	£133,831	28	£19,767	14	£11,383
	4	114	£94,621	16	£11,731	25	£27,734
	5	143	£123,091	21	£18,702	21	£25,851
	6	151	£135,871	27	£21,837	24	£27,293
	7	122	£91,996	17	£13,174	23	£23,585
	8	123	£101,831	27	£17,613	18	£15,263
	9	182	£134,902	62	£39,091	31	£27,861
	10	67	£51,704	12	£7,593	5	£4,353
	11	99	£68,784	25	£16,246	16	£19,095
	12	143	£99,268	39	£23,018	17	£21,297
Total	<b>1548</b>	<b>£1,223,643</b>	<b>309</b>	<b>£211,823</b>	<b>246</b>	<b>£256,576</b>	
2020	1	117	£88,598	24	£15,798	13	£14,434
	2	124	£92,995	16	£9,487	20	£22,819
	3	174	£129,807	20	£10,271	23	£24,983
	4	149	£119,557	13	£7,767	16	£17,178
	5	278	£239,261	18	£13,382	22	£29,407
	6	316	£247,992	17	£14,287	19	£20,497
	7	221	£189,480	14	£11,775	19	£22,812
	8	190	£142,539	19	£12,167	10	£13,536
	9	160	£201,433	51	£32,193	15	£13,219
	10	120	£109,739	5	£2,665	3	£3,383
	11	132	£115,607	4	£2,058	3	£3,885
	12	97	£86,543	3	£1,565	3	£3,038
Total	<b>2078</b>	<b>£1,763,551</b>	<b>204</b>	<b>£133,415</b>	<b>166</b>	<b>£189,190</b>	

3. **Monthly Analysis:** When we examine sales month-by-month, we can see certain yearly variations. For instance, in 2018, seasonal trends may be to blame for the bracelet and necklace categories' higher summer sales volume and value (June to September). Utilizing seasonal trends to change marketing and sales techniques could be one of your company's business strategies.
4. **Yearly Analysis:** We observe that each year has its own distinct swings and trends by examining the general trends across time. It's possible that effective marketing tactics or more demand were to blame for the bracelet category's large increase in sales volume and value in 2019. Analyzing what was successful in 2019 and repeating it in the future could be a business strategy.

In general, reviewing sales data can assist in identifying patterns and trends that may guide corporate plans to boost sales

and expand the company. This could involve altering marketing tactics, utilizing seasonal trends, and studying effective past tactics to reproduce them soon.

Years	Month in Quarters	Product Categories					
		Bracelet		Ring		Necklace	
		Sales Data					
		Volume	Value	Volume	Value	Volume	Value
2018	1	291	£224,478	73	£47,129	142	£138,773
	2	317	£230,712	77	£51,914	172	£201,321
	3	311	£246,701	69	£51,305	126	£134,126
	4	255	£191,009	61	£45,250	77	£86,433
2019	1	440	£321,575	63	£42,189	66	£64,243
	2	408	£353,583	64	£52,269	70	£80,877
	3	427	£328,729	106	£69,887	72	£66,709
	4	309	£219,755	76	£48,656	38	£44,745
2020	1	415	£311,400	60	£35,556	56	£62,236
	2	743	£606,809	48	£35,435	57	£67,082
	3	571	£533,451	84	£56,135	44	£49,566
	4	349	£311,889	12	£6,288	9	£10,305

**Table 2.** Quarterly Sales data of all categories in the UK Market

The table's sales information displays, broken down by quarter, the quantity and price of bracelets, rings, and necklaces a company sold in the years 2018, 2019, and 2020. According to the data study, the company's sales volume and value across all categories were lower in 2018 than they were in the years before it. All categories of sales had an overall uptick in volume and value in 2019; the second quarter saw the greatest gain. The COVID-19 pandemic may have contributed to the company's declining sales volume and value for every category in 2020. Additionally, it has been noted that necklace sales regularly outperformed bracelet and ring sales, with the second quarter of 2018 recording the largest volume and value of sales.

Year and months	Markets	Product Category					
		Bracelet		Ring		Necklace	
		Sales Data (2018-20)					
		Volume	Value	Volume	Value	Volume	Value
2018 (4 Quarters)	Japan	128	£137,866	257	£297,157	273	£457,772
	UK	1174	£892,900	280	£195,601	517	£557,684
	USA	1270	£1,232,579	431	£446,457	942	£1,263,898
2019 (4 Quarters)	Japan	334	£362,399	246	£262,399	353	£558,749
	UK	1548	£1,223,643	309	£211,823	246	£256,576
	USA	1735	£1,634,832	369	£374,254	548	£747,052
2020 (4 Quarters)	Japan	372	£400,899	116	£130,228	398	£726,981
	UK	2078	£1,763,551	204	£133,415	166	£189,190
	USA	2364	£2,111,413	132	£141,635	583	£866,579

**Table 3.** Annual Sales data all categories from the all markets

The table shows sales volume and value data for bracelets, rings, and necklaces for the years 2018 to 2020, broken

down by market and category. For each year, the data is separated into four halves.

The table shows that for all three years, the USA market had the most sales volume and value of all three categories. In 2018 and 2019, the UK market had the second-most sales volume and value, but Japan surpassed it in 2020. We can observe that the USA generally has higher sales volume and value for bracelets, whereas the UK and Japan have higher sales volume and value for rings and necklaces. Sales volume and value normally rise between 2018 to 2019 but fall in 2020, according to patterns. All three marketplaces and categories exhibit the same pattern. But between 2019 and 2020, ring sales volume and value in the USA market fell significantly.

## Data charting and commentary

### Sales Market Trends

For three separate categories (bracelets, rings, and necklaces) in three different markets (Japan, UK, and USA) from 2018 to 2020, the sales performance study includes sales volume and value data by quarter, by year, and over the entire analysis period. According to the analysis, bracelets consistently beat the other two categories in all markets over the three years covered by the study. For all three categories, the USA market had the best sales volume and value, followed by the UK and Japan markets.

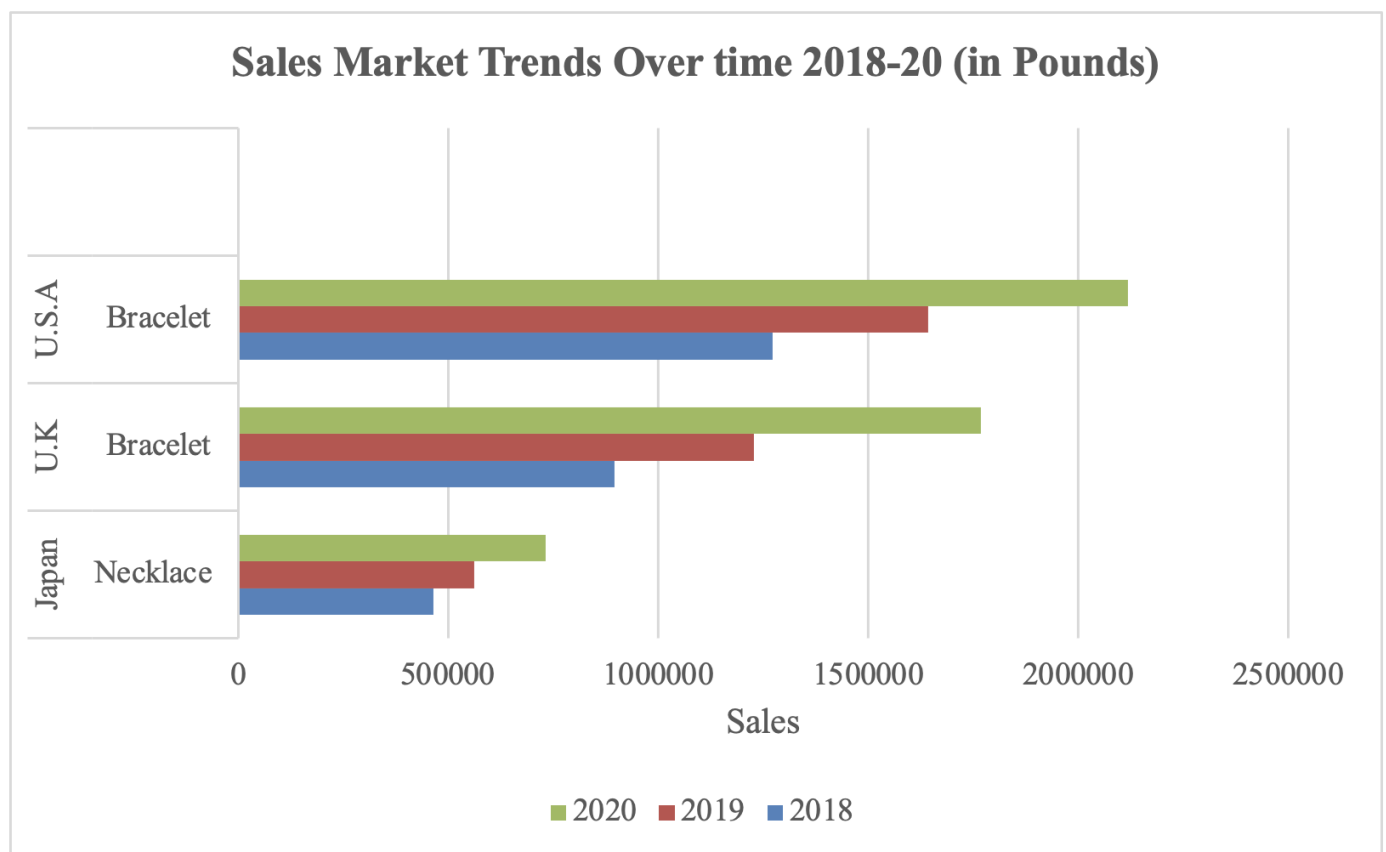


Fig. 1. Sales Market Trends Over time 2018-20

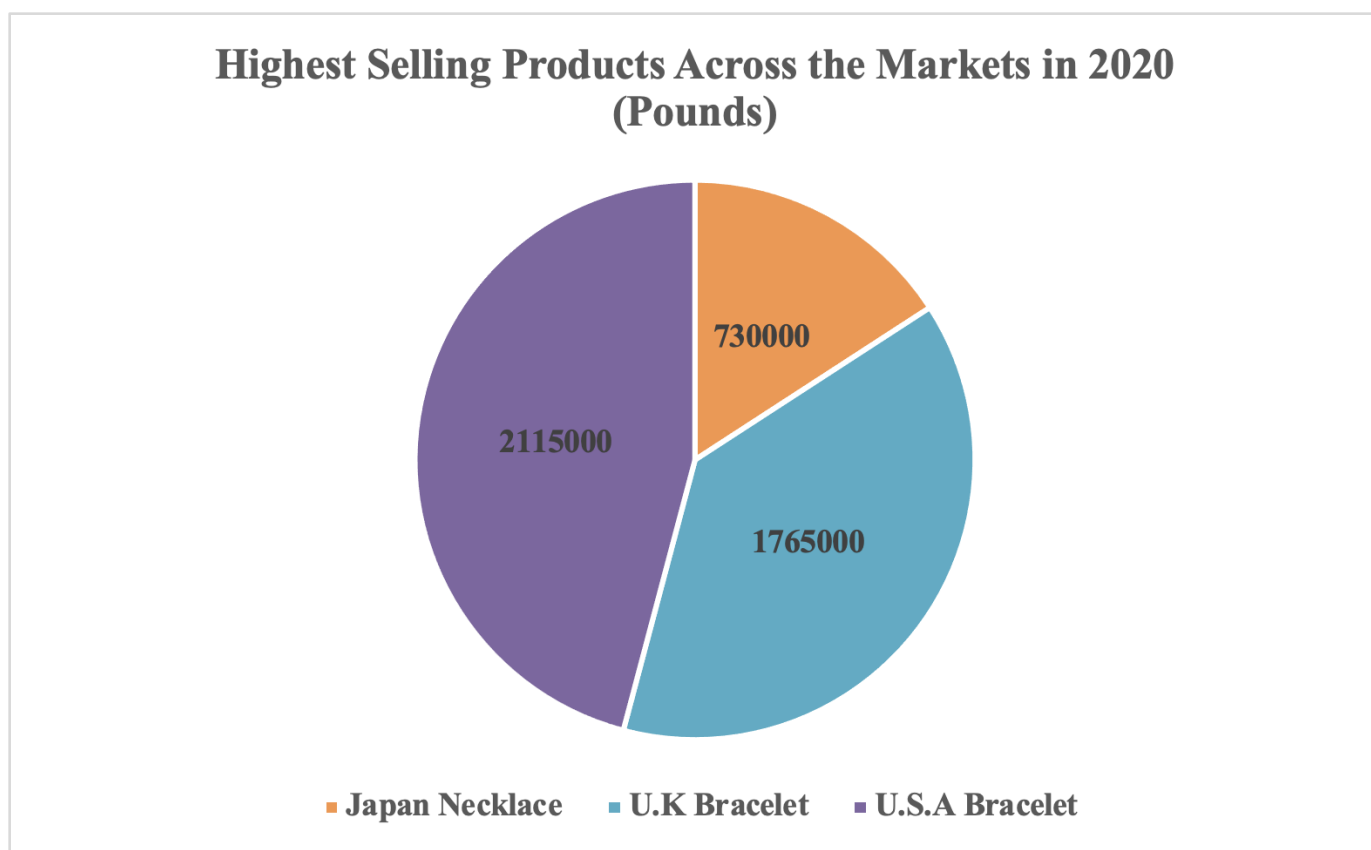


Looking at the general trend, sales volume and value significantly increased in 2019 compared to 2018, and this increase continued in 2020. All markets have shown a clear rising trend in sales value over the past three years, with the USA market experiencing the most growth.

Some significant findings include:

- Across all markets, bracelets consistently had the best performance.
- Over the course of three years, the USA market had the highest sales volume and value across all categories.
- Sales volume and value increased significantly in 2019 compared to 2018, and they increased again in 2020.
- The sales value trend over the past three years clearly indicates an increased tendency for all markets, with the USA market displaying the biggest rise.

### Highest Selling Products



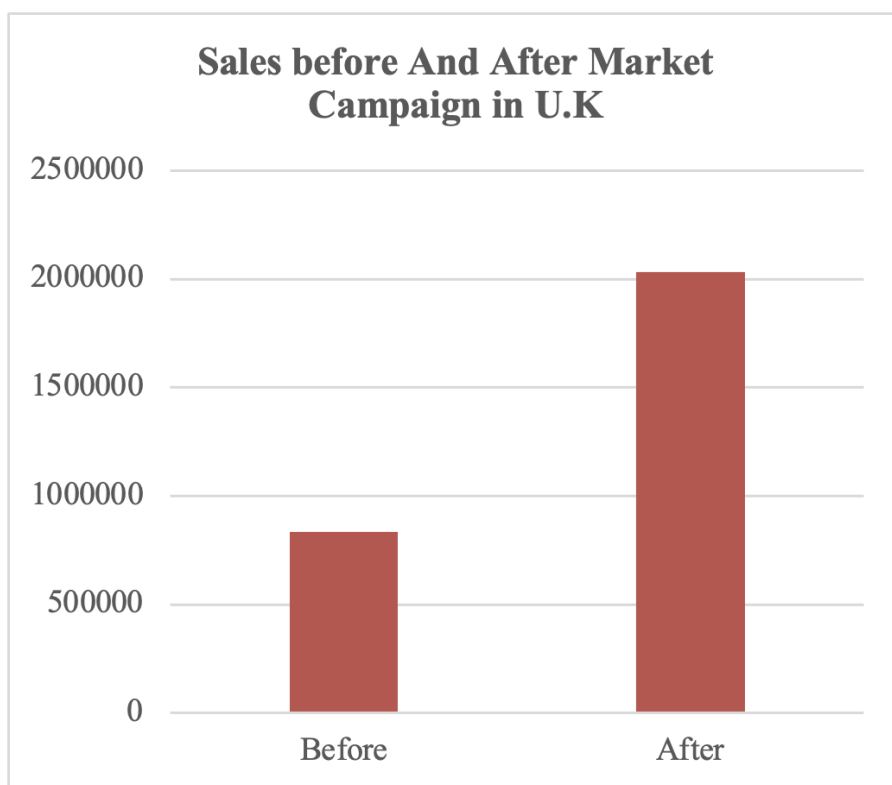
**Fig. 2.** Highest Selling Products Across the Markets in 2020

According to the pie chart, bracelets sold the most in all markets from 2018 to 2020, reaching a peak of \$2,115,000 in the USA market. Bracelet sales in the UK market were second highest at £1,765,551, and sales of bracelets in the Japanese market were third highest at £400,899. The USA market saw the largest sales of necklaces, totaling £731,441, followed by the UK market, which saw sales of £562,227, and the Japan market, which saw sales of £463,973. According to the data,



throughout the 2018–2020 timeframe, Bracelets were among the most preferred products throughout all three markets. According to a McKinsey & Company report, the COVID-19 epidemic has changed consumer behavior, with a rising preference for online purchases and contactless payments. Sales data for traditional merchants or companies that have not converted to digital channels may be impacted by this shift in consumer behavior.

### Impact of the UK marketing campaign



**Fig. 3.** Sales before And After Market Campaign in U.K

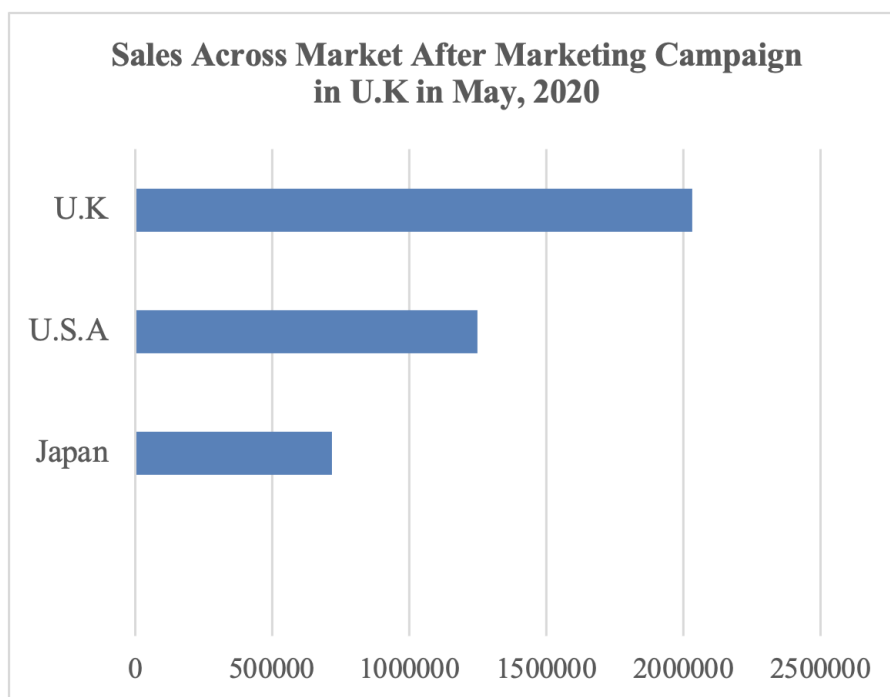


Fig. 4. Sales Across Market After Marketing Campaign in U.K

According to the bar charts, the marketing initiative around the UK market in May 2020 looks to have had a major effect on sales. Sales to the UK market surged to £2,033,333 following the promotion, more than double those of the prior period (\$833,333). The marketing campaign's success in generating interest in and awareness of those goods can be linked to the increase in sales. After the campaign, the UK market saw sales that were higher than those in Japan (£716,666.67) and nearly as high as those in the US (£1,250,00) regarding the other markets. This shows that the marketing initiative in the UK market was effective in raising sales and expanding the items' market share there. It is crucial to remember that additional elements like seasonality and the state of the economy can also have an impact on sales in certain markets.

## Conclusions and recommendations

According to the examination of the sales data sets, BIJ Industries' sales volumes and values have increased steadily from 2018 to 2020 across all markets. Different product categories have, however, performed differently, with necklaces exhibiting the greatest consistent rise across all markets. In comparison to Japan and the USA, the UK market has had the slowest growth and has lower sales volumes along with values.

With a noticeable increase in sales volumes and values, the advertising initiative in the UK in May 2020 is having a significantly favorable influence on sales in the UK market (Gupta, S., 2019). This highlights the significance of using efficient marketing techniques to raise brand recognition and sales, and BIJ should keep funding these initiatives to sustain and accelerate sales growth.

It is advised that BIJ concentrate on growing and marketing its necklace lineup, which has continuously displayed

significant increases in sales across all countries, considering these findings. BIJ could also think about growing its business in the USA, where it has seen the largest sales volumes and values.

Considering these data, it is suggested that BIJ concentrate on expanding and advertising its necklace portfolio, which has consistently shown substantial growth in sales across all regions. BIJ might potentially consider expanding its operations in the USA, which has witnessed the highest sales volumes and average prices.

To maintain and expedite sales growth, BIJ needs to keep concentrating on product development, successful marketing tactics, and growing its operations in important markets.

**Dataset Source:** BIJ Industries sales data sets (2018-2020), BIJ Industries marketing campaign data set (May 2020)

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