

# Navigating the E-Commerce Terrain A Comparative Analysis of Top Shopping Websites

## Comparison of Top Shopping Websites

### Problem Statement

Today, we're going to discuss a comparative study of top e-commerce shopping websites in terms of various aspects. We will be comparing which website has how many brands, how many products, the average discount offered, the discount on specific products, the difference in prices for the same product and brand across multiple shopping websites, and the variance between actual and maximum prices. We're conducting this study to gain insights into the e-commerce landscape and understand how these websites perform relative to each other.

### Key Focus Areas for Comparative Analysis of Top 3 Shopping Websites

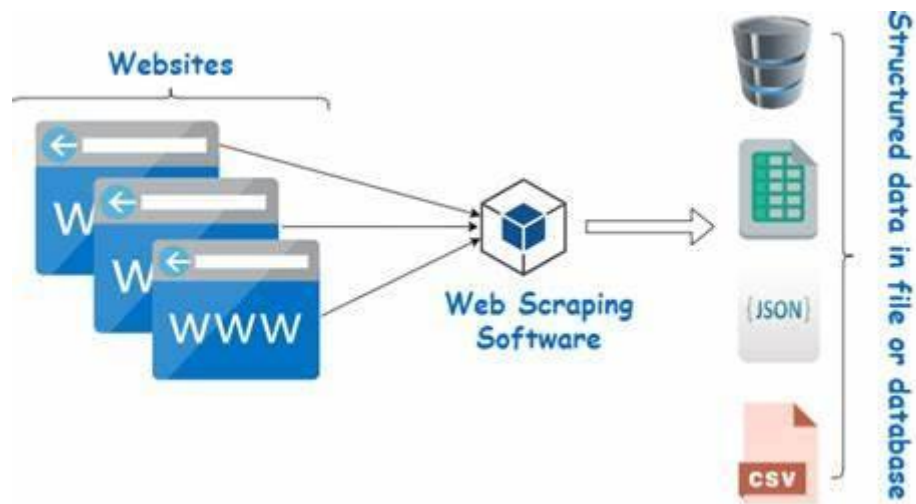
1. **Item Analysis**
2. **Price Analysis**
3. **Discount Analysis**

**Item Analysis:** In item analysis, we'll explore the total number of brands, products, and categories available on the website. By analyzing these aspects, we can determine which website offers the most products and brands.

**Price Analysis:** We will analyze the prices of products on the website by categorizing them into different price ranges. This will help us determine how many products are available at each price point. Additionally, we'll compare the prices of identical products from the same brand on different websites to see the difference between their actual and maximum prices. Through this analysis, we'll identify which website offers the best prices.

**Discount Analysis:** We will determine which website offers the highest discounts and what the average discount is on the website. To do this, we will categorize prices. For example, we'll see how much discount is offered on products up to 1000, up to 5000, up to 7500, and up to 10000. We'll compare this across multiple websites to find out which website provides the best discounts.

## Data Collection and Research Methodology



The biggest challenge was collecting data, so we utilized web scraping to extract information from various websites. We accomplished this using the Python programming language. Once the data was scraped, we imported it into a CSV file. Since we had data from multiple websites and their respective products in this CSV file, we performed various operations on the data in Excel. These operations included cleaning, replacing, and manipulating the data to ensure its accuracy and consistency.



**In MS Excel, you can clean your data by removing duplicates or fixing errors. You can replace specific values with others using the "Find and Replace" tool. Filtering lets you show only the data you need, hiding the rest. Sorting arranges your data in order, making it easier to analyze. These tools help make your data tidy and organized for better analysis.**

### **Utilizing Data Analysis and Visualization with Tableau**



**Tableau is a powerful visualization and business intelligence software application that enables users and other organizations to create shareable, interactive dashboards, reports, and data visualizations. It is widely used for data analysis and reporting purposes.**

### **Import CSV File In Tableau**

We first scraped data from a website and saved it in a CSV file. Then, we manipulated the data in Excel for cleaning and organizing. After converting the CSV data into a relational database management system (RDBMS), we imported it into Tableau for visualization. We created multiple charts and graphs to analyze shopping website data and generated a comprehensive report. This report was further converted into a dashboard, where we extracted various fruitful insights.

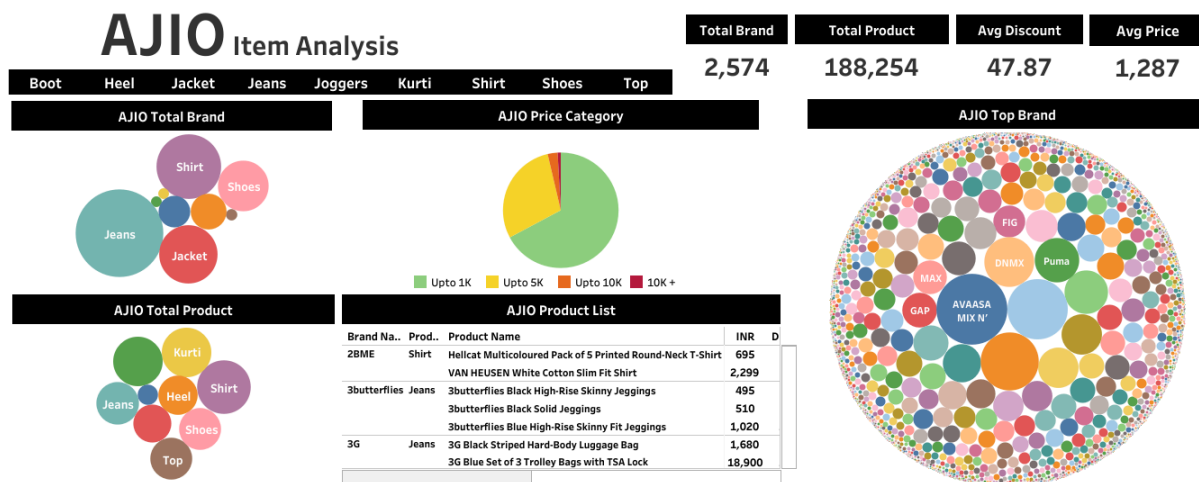
## **AJIO E-commerce Shopping website**

Ajio is a leading e-commerce shopping website that offers a wide range of fashion and lifestyle products for men, women, and kids. Launched by Reliance Retail in 2016, Ajio aims to provide a seamless shopping experience with a diverse selection of trendy clothing, footwear, accessories, and more. With a focus on curated collections from both Indian and international brands, Ajio caters to the fashion needs of every age group and style preference.

The platform also features exclusive designs and collaborations, along with regular discounts and offers to enhance the shopping experience. Ajo's user-friendly interface, convenient payment options, and efficient delivery make it a popular choice among online shoppers in India.

## Ajio Scrapped Data Analysis:

We've scrapped data from the Ajio e-commerce shopping website and created a dashboard report. In this report, we've extracted many useful insights. We'll share it with you. It includes the total number of brands on Ajio, the top brand, and the number of products they offer. We've categorized products into different categories and noted the discounts available on each product. We've also calculated the average discount for each brand and identified which product has the highest discount. Additionally, we've segmented products based on price categories.



While preparing the report for Ajio, we found various categories of products such as Boots, Heels, Jackets, Jeans, Joggers, Kurtis, Shirts, Shoes, and Tops. When it comes to brands on Ajio, there are a total of 2574 brands, and the total number of products available is 188254. The average discount on products is 47.84%, and the average price of products is Rs. 1287.

## Ajio Item Analysis:

For item analysis, we calculated the total number of brands and their products. Then, we used a Bubble chart where the size of the bubble represents the quantity of products in that category. So, the larger the bubble, the more products there are in that category.

1. Ajio has a high quantity of products available in the categories of Jeans, Shirts, and Jackets.
2. Boots, Shoes, and Heels are available on Ajio, but in comparison to the total number of products, they are available in average quantity.
3. Shirts, Joggers, and Tops are available in very few quantities compared to the total number of products.

### Ajio Discount Analysis:

For the average discount, we calculated the average discount of all products available on Ajio, which is 47.87%. Now, to find out which category of products is offering the highest discount, we used a Bubble chart. In this chart, the size of the bubble represents the category of products offering the highest discount.

1. When it comes to discounts on Ajio, Tops are offering the highest discount at 57.058%, followed by Kurtis at 56.12%.
2. There isn't much difference in discounts among categories. Heels offer a discount of 43.46%, Jackets 47.96%, Jeans 46.13%, Joggers 49.06%, Shirts 46.84%, and Shoes 43.99%.

### Ajio Price Analysis:

After looking at all products on Ajio, we found that the average price was Rs. 1287. Then, we categorized the total products into price categories to understand which price range of products is most available on the website. For this, we divided the products into 4 categories: Up to 1 K, Up to 5 K, Up to 10 K, and 10+ K, based on their prices

1. On Ajio, 67% of products are available up to Rs. 1,000.
2. For products up to Rs. 5,000, only 29% are available.
3. Products up to Rs. 10,000 make up 2.77% of the total.
4. Products priced at 10,000 or more constitute only 0.85% of the available products.

In the table below, we've provided details about all categories of products available on Ajio. We've mentioned how many brands are present in each product category and the number of products available for each brand on the website. Additionally, we've included information about discounts on products and their average prices.

**Fig 1.1 Table Ajio Analysis**

Product Category	Avg Discount	Avg Price	Total Product	Total Brand
Boot	0	3529	4679	193

Heel	43.46	1863	17615	247
Jacket	47.96	2302	16440	656
Jeans	46.13	1816	20720	1480
Joggers	49.06	572	28000	21
Kurti	56.12	687	28000	22
Shirt	46.84	989	32800	804
Shoes	43.99	2073	20000	494
Top	57.08	414	20000	25

In conclusion, on Ajio, we found a diverse range of products across different categories. Tops and Kurtis have the highest number of brands and products available, with significant discounts offered. Heels, Jackets, Jeans, Joggers, Shirts, and Shoes also have a considerable presence, each offering a variety of options. The average prices vary across categories, catering to different budget ranges. Overall, Ajio provides a wide selection of fashion items with attractive discounts, making it a popular choice for online shoppers.

# Shopclues E-commerce Shopping website

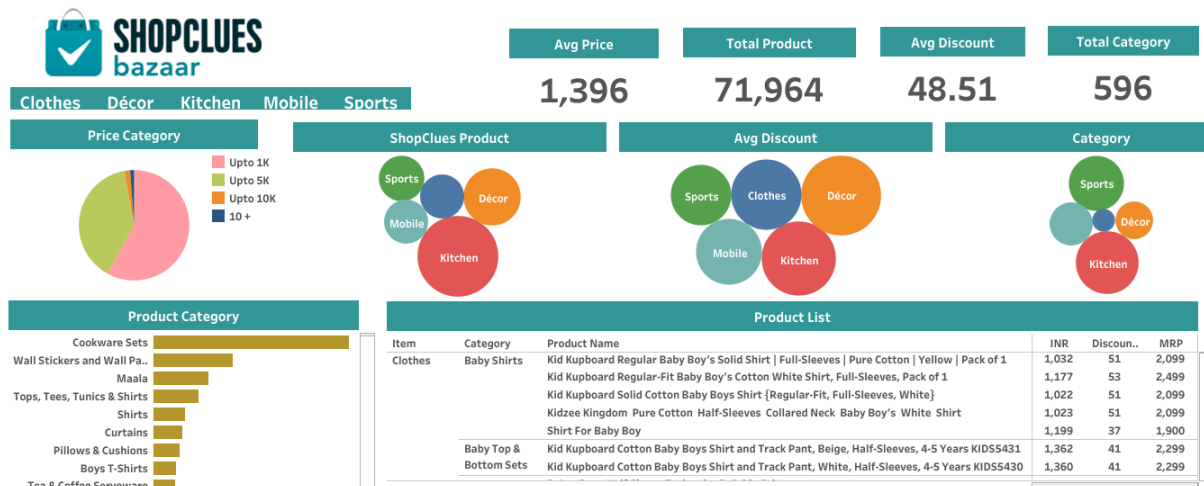
Shopclues is a popular e-commerce shopping website where you can find a wide variety of products at affordable prices. It offers everything from clothing, electronics, home appliances to accessories and much more. Launched in 2011, Shopclues aims to provide a convenient and hassle-free shopping experience to its customers. With numerous sellers on board, it offers a diverse range of products to choose from. Shopclues frequently offers discounts and deals, making it a favorite destination for budget-conscious shoppers. With easy navigation and secure payment options, Shopclues has become a go-to online marketplace for millions of shoppers in India.

## Shopclues Scraped Data Analysis:

After scraping data from the ShopClues e-commerce website and analyzing it, we gained many insightful findings. We imported the data into Tableau for visualization, creating pie charts, bubble charts, bar graphs, and tables. Then, we compiled all these visualizations into a dashboard and prepared a report. Here are some insights about the ShopClues e-commerce website.

1. Total number of brands
2. Number of product categories
3. Average discount offered
4. Average price of products

These insights provide a comprehensive understanding of the ShopClues platform, helping to make informed decisions and strategies.



After analyzing the data on ShopClues, here's what we found in terms of product categories: Clothes, Decor, Kitchen, Mobile, and Sports. There are a total of 596 brands on ShopClues offering a total of 71,964 products. The average discount on products is approximately 48.51%, while the average price is around ₹1,396.

## ShopClues Item Analysis:

When we analyzed items on Shopclues, we used a bubble chart to calculate the brands and products across multiple categories. By observing the size of the bubbles, we estimated which category of products is the most abundant on Shopclues.

1. On Shopclues, the most abundant products are from the Kitchen category, with 275 brands and 29,950 products found in this category.
2. Following Kitchen, the second most prevalent category is Decor, with 99 brands and 14,990 products.
3. Other categories include Clothes, with 36 brands and 8,662 products, Mobile with 130 brands and 8,885 products, and Sports with 212 brands and 9,477 products.

## ShopClues Discount Analysis:

To find the average discount on Shopclues, we calculated it to be 48.51% across all categories. However, we want to determine the average discount for each category separately. For this, we used a bubble chart where the size of the bubble indicates the estimated average discount for each category.

1. The highest discount of 59.09% is available on Decor.
2. Kitchen offers a discount of 51.00%.
3. Clothes have an average discount of 45.86%, Mobile offers 40.10%, and Sports provide a discount of 33.94%.

## ShopClues Price Analysis:

When we talk about the average price on Shopclues, it stands at 1396 rupees. However, we categorized prices into four categories: Up to 1k, Up to 5k, Up to 10k, and above 10k. To find out the distribution of products across these price categories, we used a pie chart where the size of each section indicates the proportion of products falling into each price category.

1. 58% of the products on Shopclues fall into the Up to 1K price category.
2. The Up to 5k price category accounts for 39% of the products.
3. Products in the Up to 10k price category constitute 1.69%.
4. The 10k+ price category includes 1.15% of the products.

You can see all the details of the data for the categories available on Shopclues in the table below. It shows the number of brands and products for each category, along with the average discount for products in that category.



**Fig 1.2 Table ShopClues Analysis**

<b>Product Category</b>	<b>Avg Price</b>	<b>Avg Discount</b>	<b>Brand</b>	<b>Product</b>
Clothes	701	45.86	36	8662
Decor	1086	59.09	99	14990
Kitchen	1352	51.00	275	29950
Mobile	2097	40.10	130	8885
Sports	2001	33.94	212	9477

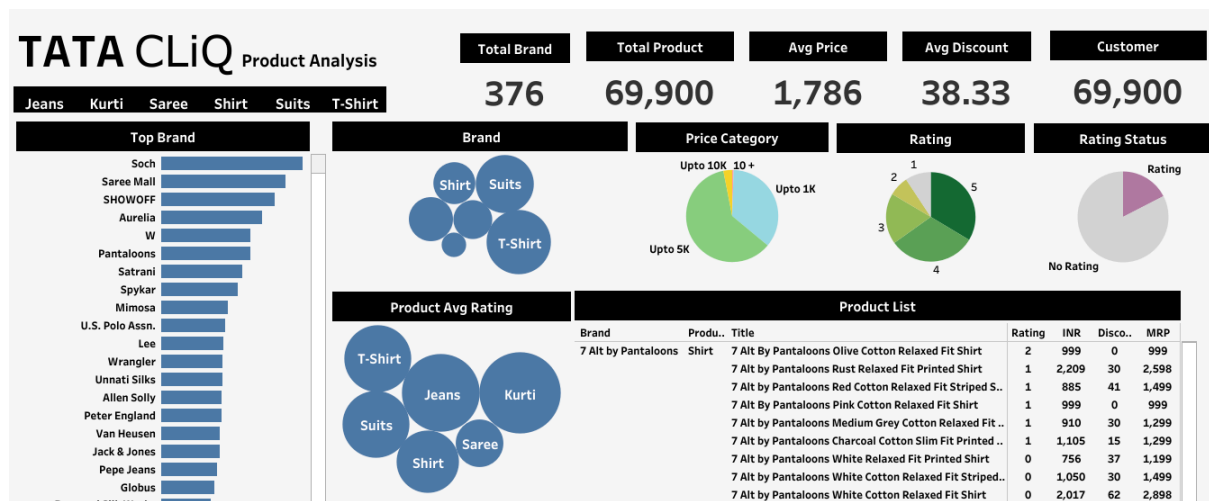
In conclusion, Shopclues offers a wide variety of products across different categories such as Kitchen, Decor, Clothes, Mobile, and Sports. The data shows that Decor items have the highest average discount, followed by Kitchen items. However, Clothes and Mobile products also have significant discounts available. Customers can find products across various price ranges, with a majority falling within the Up to 1k and Up to 5k categories. Overall, Shopclues provides ample choices with attractive discounts for online shoppers.

# TataCliq E-commerce Shopping website

Tata Cliq is an online shopping platform where you can buy a wide range of products from clothing and electronics to home appliances and more. It offers a convenient and hassle-free shopping experience, allowing you to browse through various categories and brands from the comfort of your home. With easy payment options and reliable delivery services, Tata Cliq makes online shopping simple and enjoyable for everyone.

## TataCliq Scraped Data Analysis:

You performed web scraping on the Tatacliq shopping website to gather data. After that, you analyzed the data by cleaning, filtering, and manipulating it in Excel. Then, you imported the Excel file into Tableau for further analysis and visualization. You created multiple graphs and charts to generate a report, which provided valuable insights. Through the analysis, you gained insights into item analysis, average discount analysis, and price analysis, by calculating various metrics on these aspects of the data.



After analyzing and visualizing the data from Tatacliq, a report was prepared. In that report, we found multiple categories of products such as Jeans, Kurti, Saree, Shirt, Suits, and T-shirt. We discovered a total of 376 brands on Tatacliq, with 69,700 products available on the website. The average price of these products was Rs 1,786, and the average discount offered was around 38.33%.

## TataCliq Item Analysis:

We performed item analysis on the data from the Tatacliq shopping website. We wanted to find out which category of products has the highest number of brands and products within it. For this purpose, we created a bubble chart. In this chart, we analyzed the data for multiple categories and gained insights by looking at the size of the bubbles. The larger the bubble, the more products are available in that category.

1. On Tatacliq, we found the item with the most products was T-shirt, with 200 brands and 19,940 products available under this category.
2. The other categories had approximately similar numbers: Kurti had 73 brands and 9,980 products.
3. Saree had 29 brands and 10,000 products available.
4. Suits had 85 brands and 9,980 products.
5. Among suits, there were 163 brands with 1,000 products available.
6. Jeans had 94 brands with 10,000 products available.

### **TataCliq Discount Analysis:**

On the Tatacliq shopping website, the average discount available is 38.33%. However, we wanted to find out the average discount for specific items. To do this, we used a bubble chart for each category of items. By observing the size of the bubbles, we could determine which category of items has the highest available discount.

1. On TataCliq, the highest discount is available on Sarees, with an average discount of 51.81%.
2. The average discount for other categories is approximately the same, with Jeans having a 39.26% discount, Kurtis at 33.24%, Shirts at 32.33%, Suits at 42.90%, and T-shirts at 34.36%.

### **TataCliq Price Analysis:**

On Tatacliq, the average price for all categories of products combined is Rs 1786. However, for price analysis, we categorized all products into four price ranges: Up to Rs 1000, Up to Rs 5000, Up to Rs 10000, and Rs 10000+. For this purpose, we created a pie chart where the size of each slice indicates the percentage of products available on the website in each price category.

1. On Tatacliq, products up to Rs 1000 comprise 35.54% of the total.
2. Products up to Rs 5000 constitute the highest percentage, with 60.88%.
3. Products up to Rs 10000 make up 3.06%.
4. And products priced at Rs 10000 and above are only 0.50%.

In this table, we provided details about multiple categories of products on Tatacliq. It includes the number of brands and products in each particular category, along with the average discount and average price of products in that category. All these details are shown for each category in the table.

**Fig 1.3 Table: TataCliq Analysis**

<b>Product Category</b>	<b>Avg Price</b>	<b>Avg Discount</b>	<b>Brand</b>	<b>Product</b>
Jeans	2079	39.26	94	10,000
Kurti	1292	33.24	73	9,980
Saree	2274	51.81	29	10,000
Shirt	1659	32.33	85	9,980
Suits	3149	42.90	163	10,000
T-Shirt	1022	34.36	200	19,940

In conclusion, Tatacliq offers a diverse range of products across various categories. From Jeans to Kurtis, Sarees to Shirts, Suits to T-shirts, each category boasts a significant number of brands and products. Sarees stand out with the highest average discount of 51.81%, while Jeans have the highest average price of Rs 2079. T-shirts, on the other hand, lead in terms of the sheer volume of products available, with 19,940 options from 200 brands. Overall, Tatacliq provides ample choices for shoppers across different preferences and budgets.

# E-commerce Shopping website Maximum VS Actual Price Relation

On e-commerce shopping websites, we often see two types of prices: a maximum price and an actual price. Today, we'll look into the relationship between these two prices and see how much difference there is between them. We're planning to conduct a comparative study on the top 3 websites, exploring various product categories. We'll analyze the variance between the actual price and the discounted price offered within each category.

## Data Collection and Research Methodology

To analyze the relationship between maximum and actual prices, our biggest challenge was obtaining the original data for these prices. Therefore, we utilized web scraping using the Python programming language to gather data from the Ajio, Shopclues, and Tatacliq shopping websites. The scraped data was stored in a CSV file. Since we obtained a large amount of data from these websites, we imported the CSV file into MS Excel for analysis. In Excel, we employed advanced functions for data manipulation, along with data filtering, sorting, cleaning, and replacement. Now, the data is ready for visualization.

We used Tableau, a Business Intelligence tool, to analyze the relationship between prices on the top 3 shopping websites. Tableau allows storing large amounts of data and creating multiple charts and graphs. We created graphs for our data and compiled them into a dashboard for reporting. By visualizing the data, we aimed to derive insightful conclusions to aid in making informed decisions. Since we had a large amount of data from web scraping, we imported it into Tableau. Within this data, we had two quantitative data points in the same category. We needed to determine the relationship between them, so we utilized a correlation graph to easily understand the correlation between the two prices.

Let's explain through this correlation graph. In this chart, we've related the difference between the maximum price and the actual price for items in various categories on the top websites like Ajio, Shopclues, and Tatacliq.



Through this dashboard, we have showcased multiple categories of products from the top websites, allowing us to observe the relationship between different categories of items and their prices on each website.

We scraped data from the websites of Ajio, Shopclues, and Tatacliq for multiple categories of items. From Ajio, we obtained data for items in categories such as Boots, Heels, Jackets, Jeans, Joggers, Kurtis, Shirts, Shoes, and Tops. From Shopclues, we obtained data for items in categories like Clothes, Decor, Kitchen, and Sports. Lastly, from Tatacliq, we collected data for items in categories like Jeans, Kurtis, Sarees, Shirts, Suits, and T-shirts.

Let's see how much difference there is between the actual price and maximum price of products on the website.

### Ajio Maximum Price Vs Actual Price

After calculating the average difference between the maximum price and actual price across all categories on Ajio, it appears that there is a 31.22% gap. This means that, on average, the maximum price listed is 31.22% higher than the actual price for products across all categories. Now, let's delve into specific categories on Ajio to see how much this difference varies.

We can see the difference between Ajio maximum price and actual price for all categories of products through the table below.

**Fig Table 1.1: Ajio Maximum Vs Actual Price Relation**

Product Category	Maximum Price	Actual Price	Difference	Per. Difference
Boot	3529	3529	0	0
Heel	2482	1863	619	24
Jackets	4363	2302	2061	47
Jeans	2416	1816	600	24
Joggers	818	572	246	30
Kurti	1080	687	393	36
Shirt	1872	990	882	47
Shoes	3585	2073	1512	42
Top	630	415	215	34

1. When we look at specific categories on the Ajio website, we find the highest difference in prices in the Jackets category at 47%, followed by Tops at 47%, and Shoes at 42%.
2. Kurtis show a price difference of 36%, while Tops have an average price difference of 34%, and Joggers have a difference of 30%.
3. Heels and Jeans have a price difference of 24%.
4. There is no difference in prices in the Boot category.

## Shopclues Maximum Price Vs Actual Price

We found a significant difference between maximum price and actual price on Shopclues, with an average difference of 42.67% across all categories. We scraped data from the Clothes, Decor, Kitchen, and Sports categories on the website, where we observed the highest differences in prices among all these categories.

We can see the difference between Shopclues maximum price and actual price for all categories of products through the table below.

**Fig Table 1.1: Shopclues Maximum Vs Actual Price Relation**

Product Category	Maximum Price	Actual Price	Difference	Per. Difference
Clothes	1367	701	666	48
Decor	2674	1086	1588	59
Kitchen	2923	1352	1571	53
Sports	2001	2001	0	0

1. On Shopclues, we found the highest difference of 59% in the Decor category.
2. There's also a significant difference of 53% in the Kitchen category products, which is quite high.
3. We observed a difference of 48% in Clothes category products as well.
4. However, when it comes to Sports category products on Shopclues, there is a 0% price difference.

## TataCliq Maximum Price Vs Actual Price

We found a difference of 34.41% between maximum and actual prices on the Tatacliq website. We scraped data for multiple categories including Jeans, Kurtis, Sarees, Shirts, Suits, and T-shirts to observe the price differences.

We can see the difference between Tatacliq maximum price and actual price for all categories of products through the table below.

**Fig Table 1.1: TataCliq Maximum Vs Actual Price Relation**

Product Category	Maximum Price	Actual Price	Difference	Per. Difference
Jeans	3463	2079	1384	40
Kurti	2087	1292	793	38
Saree	4793	2274	2519	52
Shirt	2431	1659	772	31
Suits	3149	3149	0	0

T-Shirt	1577	1022	555	35
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1. We found the highest difference of 52% between maximum price and actual price for Sarees on Tatacliq.
2. There's a difference of 40% for Jeans.
3. Kurtis show a difference of 38%.
4. T-shirts exhibit a difference of 35%.
5. Shirts have a difference of 31%.
6. However, there is no difference available for Suits.

We looked at how prices on e-commerce sites differ from their maximum to actual rates. We checked Ajio, Shopclues, and Tatacliq to see these differences. Ajio had an average difference of 31.22%, with big gaps in Jackets, Tops, and Shoes. Shopclues had a 42.67% difference, with Decor and Kitchen showing the biggest gaps. Tatacliq had a 34.41% difference, with Sarees having the highest gap at 52%.



# Comparative Analysis of Discounts on Top E-Commerce Websites

In today's time, when it comes to e-commerce shopping websites, every other person prefers online shopping. A person would prefer to shop from a website where they are getting the most discounts. Let's discuss this today. With so many online shopping websites available on the internet, we'll conduct a comparative study on the top 3 websites to determine which one offers the highest discounts. For this, we have listed the discounts available on the products of each website in different categories. Now, we will figure out which website offers the most discounts in each category.

## Data Collection and Research Methodology

We needed to find out the discounts available on products across all categories on the top e-commerce websites. The biggest challenge we faced was obtaining data for all categories of products from these websites. To address this, we used the Python programming language to perform web scraping on the Ajio, Shopclues, and Tatacliq websites. We stored the scraped data in CSV files. We ended up with a large amount of data from multiple websites in multiple CSV files. However, there were many mistakes in this data. To analyze the data, we imported the CSV files into MS Excel and used advanced functions such as TEXTJOIN, TRIM, COUNTIF, and VLOOKUP for data manipulation. We cleaned, filtered, and replaced the data to prepare it for visualization.

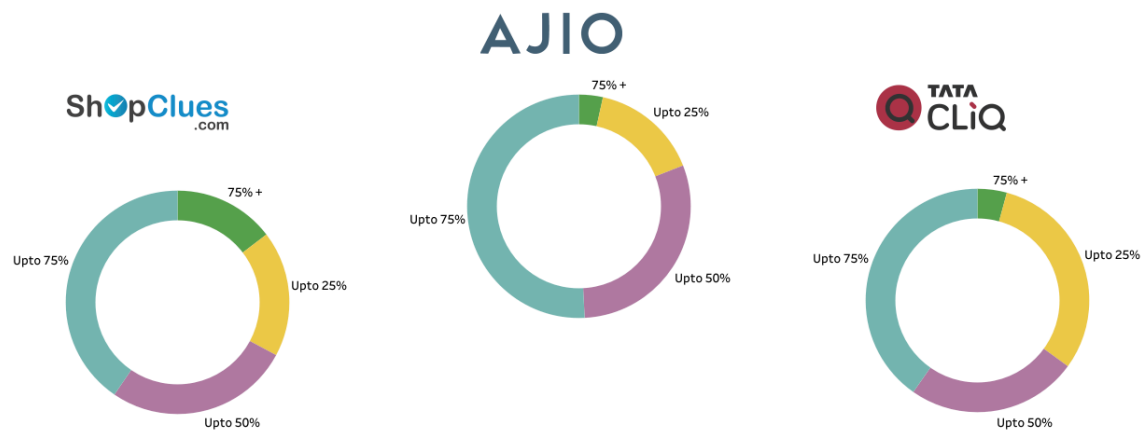
Now, we needed to prepare a report by visualizing this data. For this purpose, we used Tableau, a Business Intelligence tool. Tableau allows us to store large amounts of data and create multiple graphs and charts for data visualization. We created various graphs and charts and compiled them into a dashboard for reporting. This dashboard helps in obtaining fruitful insights from the data and facilitates making informed decisions. We stored all the data in Tableau and created a donut chart. To create this chart, we categorized the discount data into four categories: Up to 25%, Up to 50%, Up to 75%, and 75%+. Now, within these categories, all the products were included. With this chart, we could easily identify the discount category for each product.

**We used a donut chart for visualizing this data because it allows for easy comparison of multiple categories at once.**

We categorized the discounts available on total products of the shopping website into four categories: Up to 25%, Up to 50%, Up to 75%, and 75%+. Now, to understand this data better, we used a donut chart. This chart allows us to inquire about multiple category data. We displayed the categories in different colors and now, based on the size of each category's color, we can determine which category has the highest discount.

Let's use this chart to understand which website offers the highest discounts on its products.

## Comparative Analysis of Discounts on Top E-Commerce Websites



In this donut chart, we have shown the products offering the highest discounts among the top 3 shopping websites, namely Ajio, Shopclues, and Tatacliq. We categorized the discounts into 4 categories.

**Fig Table 1.1: Exploring Discounted Products on Various Websites**

Discount Category	Shopclues	Ajio	Tatacliq
Upto 25%	18%	15%	30%
Upto 50%	26%	30%	24%
Upto 75%	40%	50%	40%
Upto 75+ %	14%	3%	4%

We're talking about products that have different discounts: up to 25%, up to 50%, up to 75%, and over 75%. We're trying to see how many products fall into each category on these websites.

1. On Tatacliq, about 30% of products have discounts up to 25%. On Shopclues, it's 18%, and on Ajio, it's 15%.
2. On Tatacliq, 24% of products have discounts up to 50%. On Shopclues, it's 26%, and on Ajio, it's 30%.
3. Tatacliq, Shopclues, and Ajio each have 40% to 50% of products with discounts up to 75%.
4. Tatacliq, Shopclues, and Ajio have a small percentage of products between 3% and 14% with discounts of 75% or more.

In conclusion, our analysis of discounts on the top e-commerce websites reveals some interesting findings. Tatacliq emerges as the leader in offering discounts of up to 25% and up to 75%, while Shopclues offers the highest discounts in the up to 50% category. Ajio, on the other hand, consistently maintains competitive discounts across various categories. Despite variations in discount offerings, all three websites show a significant portion of products with discounts of up to 75%. However, discounts of 75% or more are less common across all platforms. This comparative analysis aids consumers in making informed decisions by highlighting the websites offering the best discounts across different product categories.

## **Conclusion**

Based on our comparative analysis of Ajio, ShopClues, and TataCliqu, Ajio emerges as the most favorable e-commerce platform for online shoppers. It offers the widest range of products and brands, with 2,574 brands and 1,88,254 products, along with a competitive average price of ₹1287 and a substantial average discount of 47.87%. While ShopClues provides the highest average discount at 48.53%, its catalog is relatively limited in terms of both products and brands. TataCliqu, although a well-known platform, lags behind in all key metrics offering fewer products, fewer brands, and the highest average price at ₹1786. Overall, for consumers seeking better variety, affordability, and attractive deals, Ajio proves to be the most value-driven choice.

## Comparative Study of E-Commerce Websites

In today's time, everyone prefers online shopping. However, individuals tend to prefer shopping from platforms that offer a wide variety of brands and products, along with good discounts and reasonable prices. Let's conduct a comparative study of the top e-commerce websites to determine which one fits these criteria best. We'll analyze each website to find out how many brands they have, how many products they offer, which website offers the highest discounts, and what the average prices are for products in different categories. Based on your requirements, I'll recommend the most suitable website.

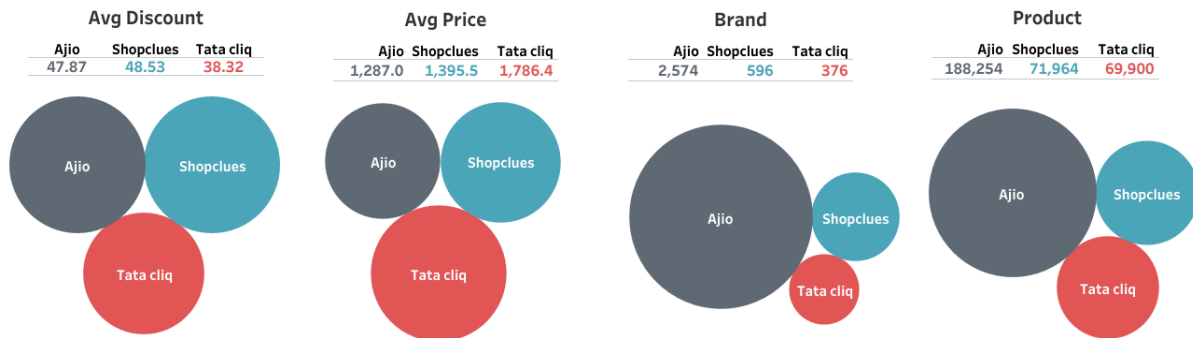
### Data Collection and Research Methodology

We needed to conduct a comparative study of the top e-commerce shopping websites, and for that, we faced a big challenge: obtaining data from the websites. We decided to use the Python programming language for web scraping to gather data from the top three websites. We stored this data in CSV files. Since we had a large amount of data, we encountered some duplicate values that needed to be filtered out. To accomplish this, we utilized Microsoft Excel. In Excel, we performed data analysis using advanced functions like TEXTJOIN, TRIM, VLOOKUP, COUNTIF, along with Conditional Formatting to sort, filter, and clean the data, removing duplicate values. Now, the data was ready for visualization.

**We used a bubble chart for visualizing this data because it allows for easy comparison of multiple categories at once.**

Now our next challenge was to visualize the data so that we could conduct a comparative study of the top e-commerce websites. For this purpose, we needed to use Tableau Tools. Tableau is a Business Intelligence tool that stores large amounts of data and creates multiple charts and graphs to make dashboards and reports, extracting fruitful insights from the data. We stored a large amount of data on Tableau, including qualitative and quantitative data from multiple categories. We created a Bubble chart where we represented the data of shopping websites. By looking at the size of the bubbles, we could understand which category has more products or brands. Let's understand by looking at the table below which website has how many brands, products, average price, and average discount available.

## Comparative Study of E-Commerce Websites



Shopping Platform	Avg Discount	Avg Price	Brand	Product
Ajio	47.87	1287	2574	1,88,254
Shopclues	48.53	1395	596	71,964
Tatacliq	38.32	1786	376	69,900

### Average Discount Analysis:

We did an analysis of average discounts on the top e-commerce websites. ShopClues offers a discount of 48.53%, whereas Ajio offers an average discount of 47.87%. Tatacliq, on the other hand, provides a discount of 38.32% on average.

### Brand Analysis:

When it comes to brand analysis, Ajio has the highest number of brands with 2574 available, followed by ShopClues with 596 brands available, and Tatacliq with 376 brands available.

### Product Analysis:

When we look at products on the top e-commerce websites, Ajio has the highest number of products with a total of 188,254 products, putting it in the first position. ShopClues has 71,964 products available, and Tatacliq has 69,900 products available.

### Average Price Analysis:

When it comes to average prices, Ajio has many brands and products available at a lower price. Ajio's average price is ₹1287, while ShopClues has an average price of ₹1395. On the other hand, Tatacliq's average price is ₹1786.

In today's world, online shopping is a favorite among many. People prefer platforms that offer a wide range of brands, products, discounts, and reasonable prices. Let's compare the top e-commerce websites to see which one fits these criteria best. We collected data using Python for web scraping and then refined it using Excel to remove duplicates. This data was then visualized using Tableau, where we created a Bubble chart for easy comparison. Ajio stands out with the highest number of brands 2574 and products 188,254, offering an average discount of 47.87% and an average price of ₹1287. ShopClues follows with 596 brands and 71,964 products, providing an average discount of 48.53% and an average price of ₹1395. Tatacliq has 376 brands and 69,900 products, with an average discount of 38.32% and an average price of ₹1786. In summary, Ajio seems to be the most favorable choice due to its extensive range of brands, products, and attractive pricing.