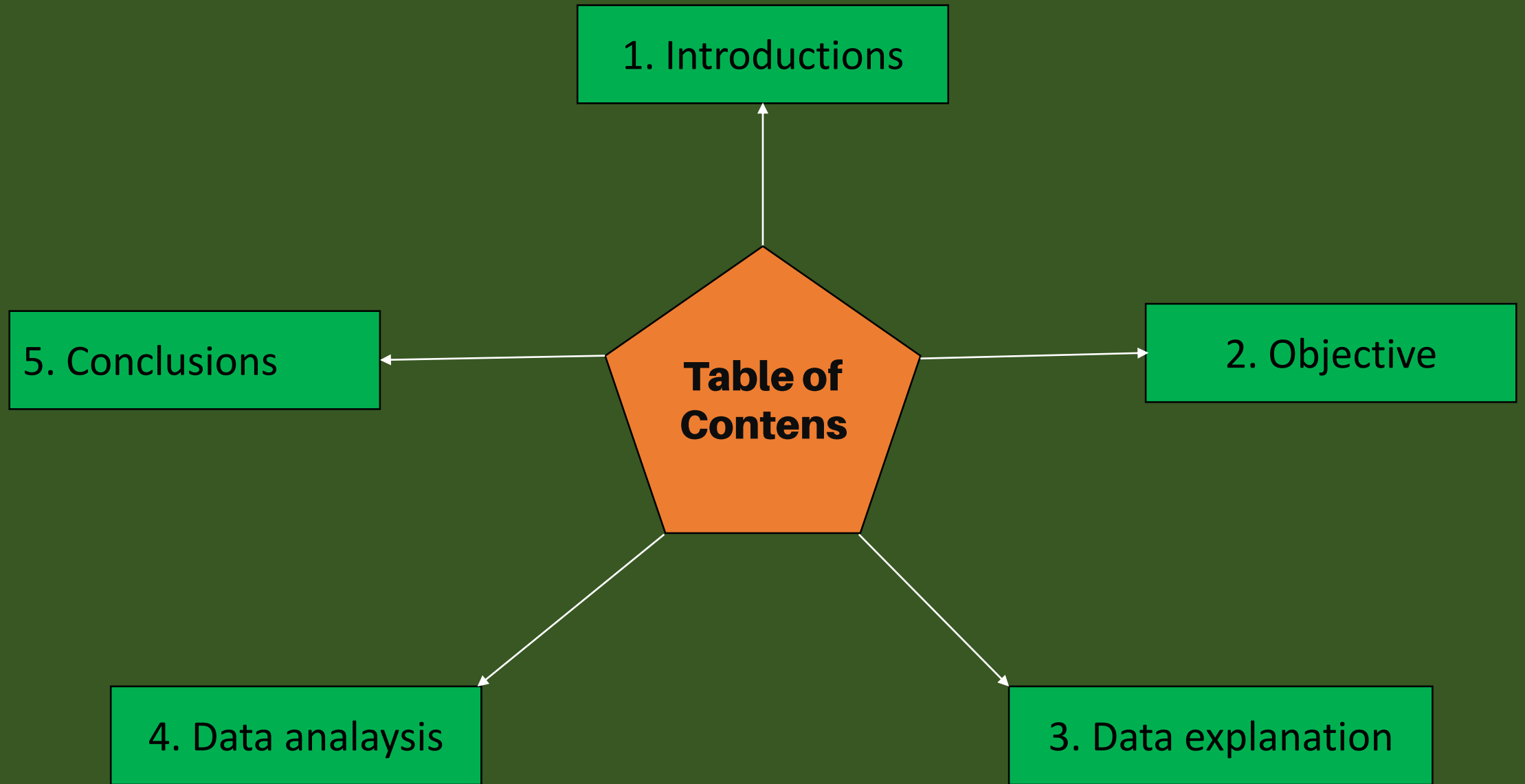




Analysis Data of Customer Shopping 2021 to 2023 in Istanbul, Turki





Introductions



- Dataset contains a collection of information from 10 shopping centers from 2021 and 2023, located in Istanbul, Turkey.
- This data has been grouped by age and gender, to provide a comprehensive picture of shopping habits in Istanbul.
- This data consists of 8 product categories, which have various prices.

Data source

<https://www.kaggle.com/datasets/mehmettahirasan/customer-shopping-dataset>

Objective



- ✓ To find out customer shopping behavior from 2021, 2022, to 2023.
- ✓ As a reference for creating marketing strategies in the coming year, so that sales can be increased.

Data Explanation



- Create a top contributing products category
- Analyze customers with the most purchases
- Analyze popular categories
- Analyze total orders in each shopping center
- Analyze popular payment methods
- Analyzing the number of orders based on gender
- Calculate total daily, weekly, monthly and annual revenue
- Perform cohort analysis
- Conduct price elasticity analysis

Data Analysis

Category (Transaction Volume)

Populer 79.690
Low 19.767

Category (Total Revenue)

Populer 81.567
Low 17.890

Final Segmentation

Super Populer 71.797
Low 27.660

Top 5 Customer Based On Quantity Order

customer_id
C100004 5
C211342 5
C154312 5
C324260 5
C211345 5

Top Category 2021 - 2023

category	invoice_no
Clothing	34487
Cosmetics	15097
Food & Beverage	14776
Toys	10087
Shoes	10034
Souvenir	4999
Technology	4996
Books	4981

Count Category	Final Segmentation
-Populer : <20% -Normal : 20% - 80% -Low : >80%	Transaction volume : Total revenues -Populer : Populer = Super Populer -Populer : Normal = Populer -Low : Low = Low

Total Order Per Shopping Mall

category	Books	Clothing	Cosmetics	Food & Beverage	Shoes	Souvenir	Technology	Toys
shopping_mall								
Cevahir AVM	258	1729	732	772	490	240	256	514
Emaar Square Mall	236	1651	760	692	498	247	263	464
Forum Istanbul	252	1729	770	712	458	261	234	531
Istinye Park	462	3353	1458	1490	1001	515	487	1015
Kanyon	1013	6840	3023	2909	2017	1037	997	1987
Mall of Istanbul	1025	6923	3050	2957	2023	948	1017	2000
Metrocity	752	5268	2265	2244	1457	738	772	1515
Metropol AVM	476	3525	1541	1517	1074	531	464	1033
Viaport Outlet	246	1708	734	733	497	225	256	515
Zorlu Center	261	1761	764	750	519	257	250	513

Total Order

Mall of Istanbul	19943
Kanyon	19823
Metrocity	15011
Metropol AVM	10161
Istinye Park	9781
Zorlu Center	5075
Cevahir AVM	4991
Forum Istanbul	4947
Viaport Outlet	4914
Emaar Square Mall	4811

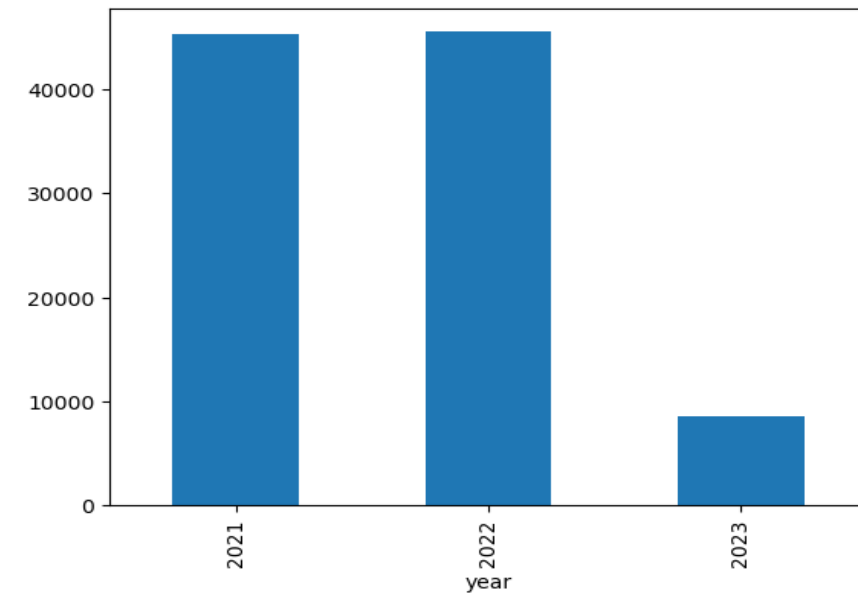
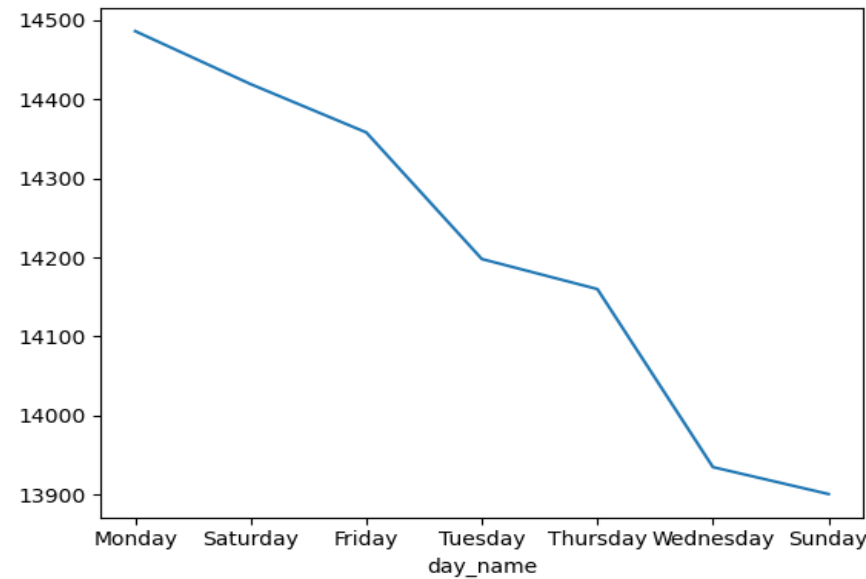
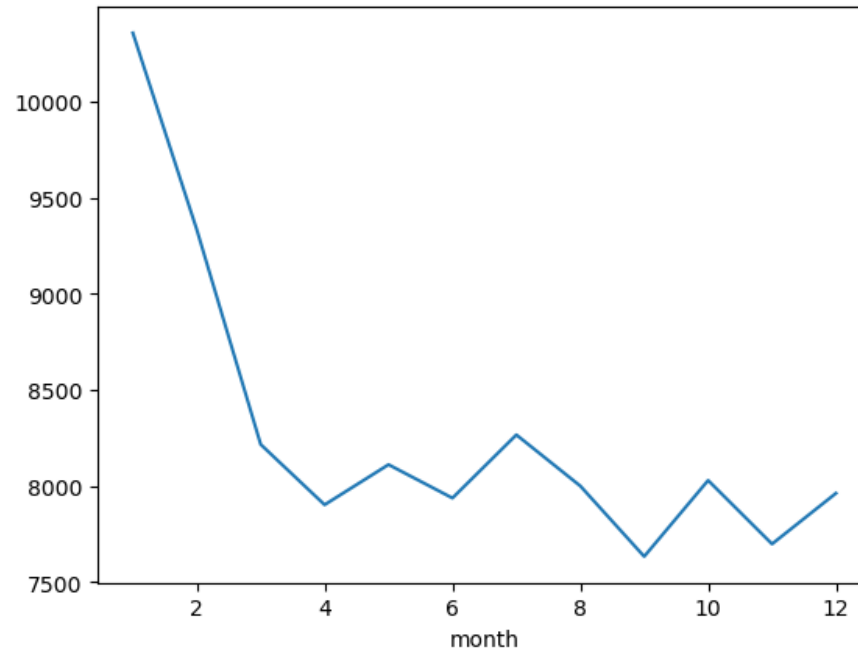
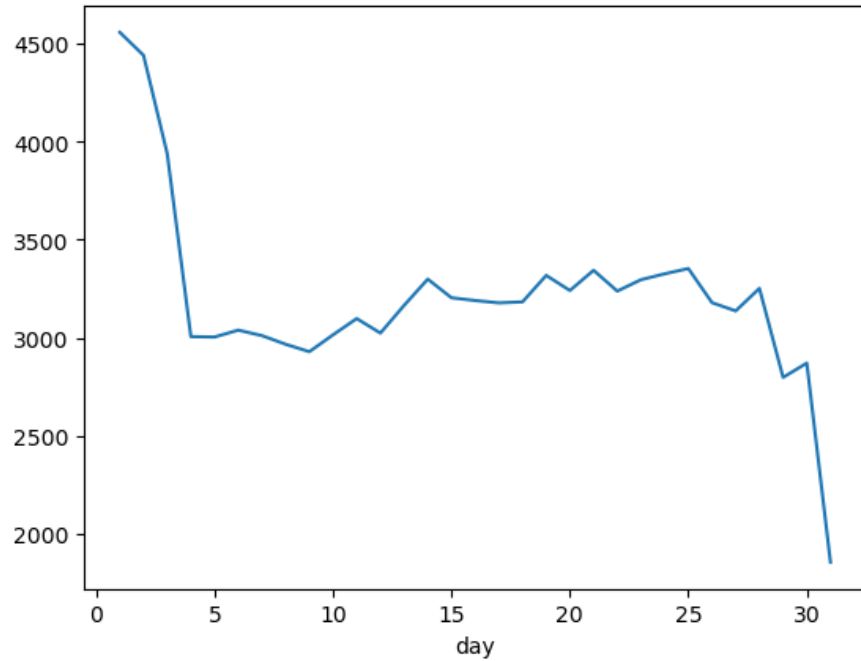
Most Popular Payment Method

category	Books	Clothing	Cosmetics	Food & Beverage	Shoes	Souvenir	Technology	Toys	
payment_method									
Cash	2268	15456	6674	6587	4474	2211	2235	4542	44.447
Credit Card	1696	12025	5336	5250	3553	1770	1753	3548	34.931
Debit Card	1017	7006	3087	2939	2007	1018	1008	1997	20.079

Total Order Per Category Based on Age

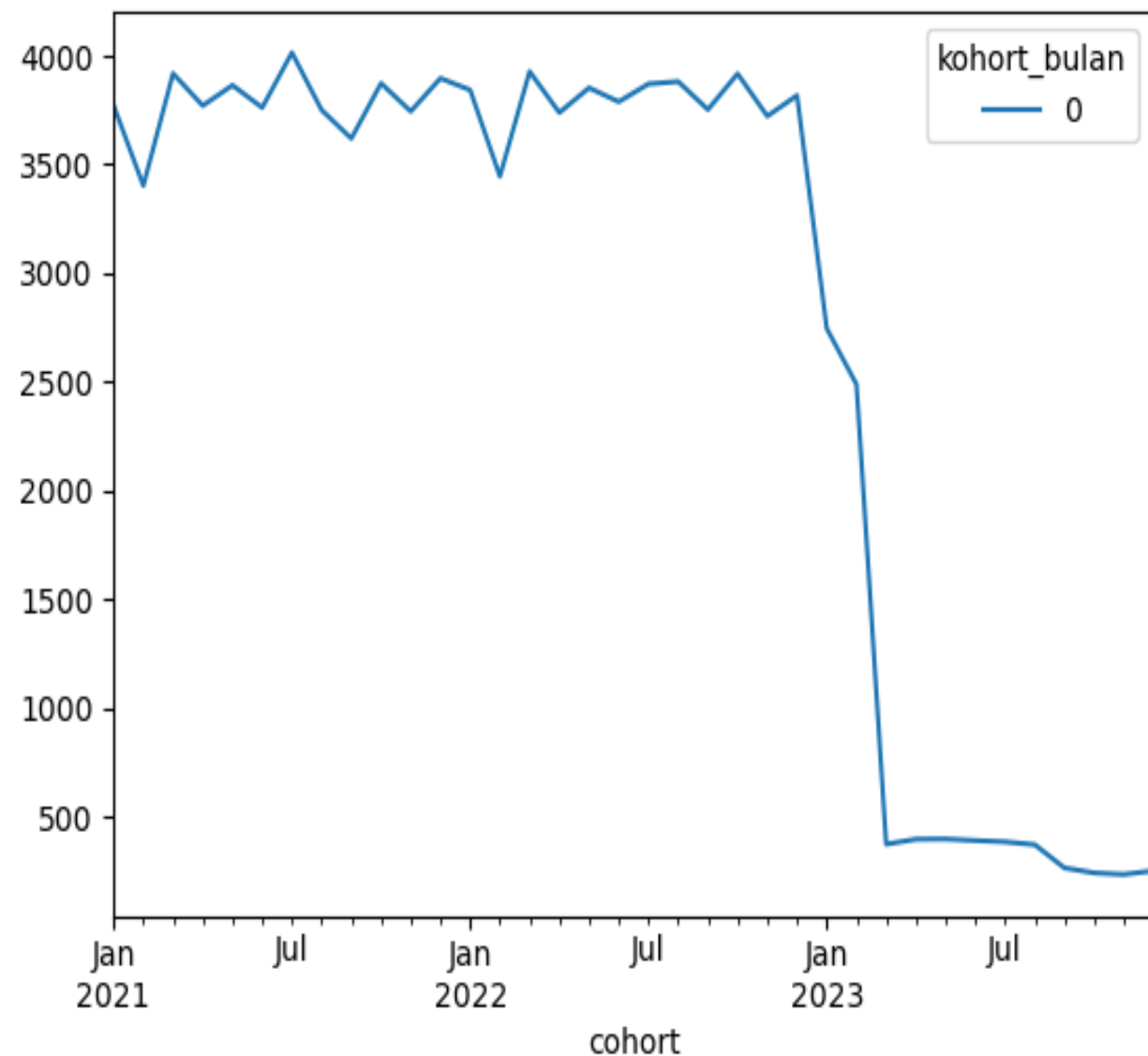
category	Books	Clothing	Cosmetics	Food & Beverage	Shoes	Souvenir	Technology	Toys	
gender									
Female	2906	20652	9070	8804	5967	3017	2981	6085	59.482
Male	2075	13835	6027	5972	4067	1982	2015	4002	39.975

Total Revenues 2021 - 2023

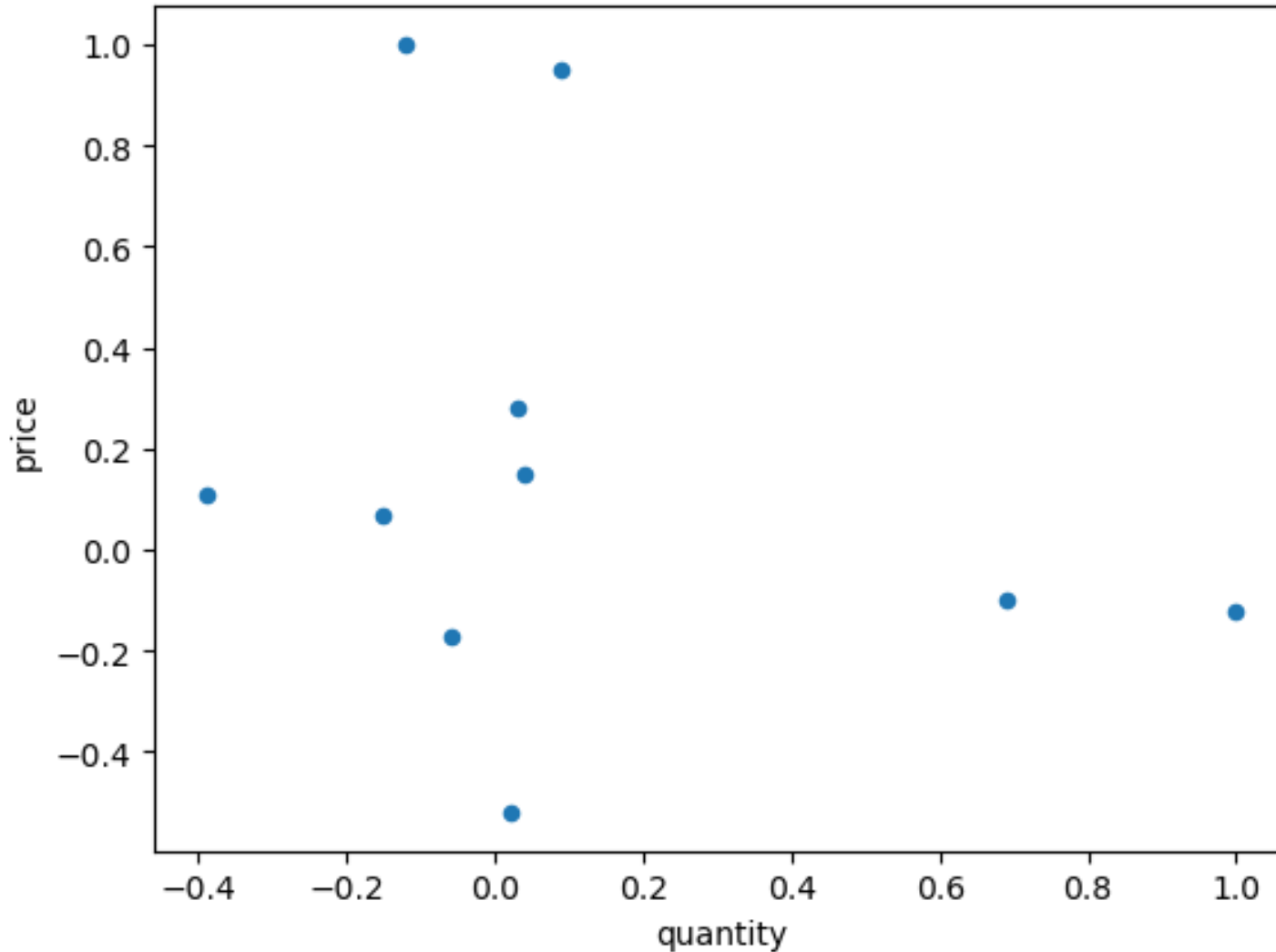


Cohort Analysis

kohort_bulan	0	kohort_bulan	0	kohort_bulan	0
cohort		cohort		cohort	
2021-01	3771	2022-01	3842	2023-01	2745
2021-02	3402	2022-02	3445	2023-02	2488
2021-03	3918	2022-03	3927	2023-03	372
2021-04	3770	2022-04	3738	2023-04	395
2021-05	3864	2022-05	3852	2023-05	396
2021-06	3761	2022-06	3788	2023-06	389
2021-07	4014	2022-07	3870	2023-07	383
2021-08	3750	2022-08	3881	2023-08	370
2021-09	3619	2022-09	3752	2023-09	263
2021-10	3873	2022-10	3917	2023-10	240
2021-11	3744	2022-11	3722	2023-11	233
2021-12	3896	2022-12	3817	2023-12	250



Price Elasticity



Category Product	Quanttity	Price Change (%)
Food & Beverage	2	-0.99
Food & Beverage	1	-0.96
Shoes	3	1.0
Shoes	2	3.0
Clothing	3	2.0
Clothing	2	0.07
Toys	5	0.6
Toys	2	-0.95

Note

- Price increases: The number of orders decreases
- Price decreases: The number of orders increases

Conclusions

- Most popular product category
Clothing
- Most popular shopping place
Mall of Istanbul
- Most popular payment
Cash
- Most orders
Female
- Highest total revenue
 - Day : 1
 - Weekly : Monday
 - Monthly : 1
 - Yearly : 2022
- Price elasticity
Prices rise (quantity purchased falls) and vice versa

Recommendation

- Buyers are recommended to shop at Mall of Istanbul, Kanyon or Metrocity, because these are the 3 most popular shopping centers.



Thank You

