

The background features several thin, geometric lines in orange and blue. These lines form various rectangular and L-shaped patterns, some of which are partially visible at the edges of the frame. The lines are thin and have a consistent color throughout the image.

E-COMMERCEU

MARKET BASKET ANALYSIS

E C O M M E R C E U B 2 C

EXECUTIVE SUMMARY

Business Problem

- The GMV YoY dropped 15,6%
- The AOV YoY dropped -13,1%
- The Transactions YoY dropped -2,6%
- The ABS YoY dropped -7,32%

Business Objective

Re-evaluate again about product sales based on products items to improve our GMV at least can reach the same revenue as 2021

Recommendation

Create bundling and cross selling scheme that combined with vouchers

E-COMMERCE BUSINESS PERFORMANCE TREND

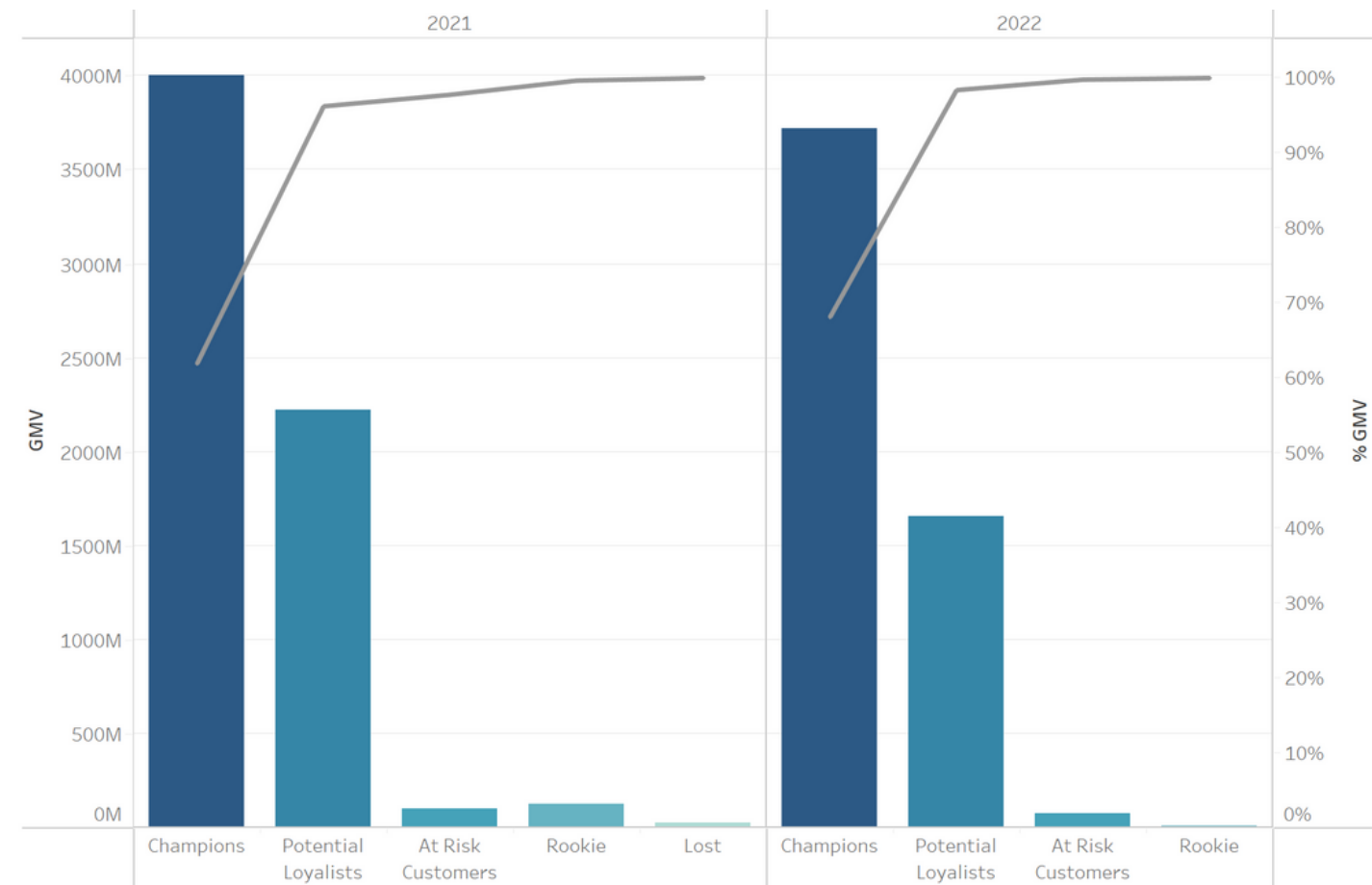
Sales trend over time



- Starting from **2019-2021**, the **sales are highly increase**. But, in **2022** the sales have **dropped**.
- **The Sales** increased by **92,5%** in **2021** and **decreased to -15,6%** in **2022**

CUSTOMER CLUSTER OVERVIEW

Cluster GMV Pareto



We focus on **Champions and Potential Loyalists**
Customer Segments that give the **top 2 huge**
GMV contributor

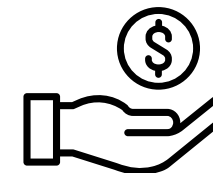


Champions

Highly valuable and loyal customers with high purchase frequency and monetary

1650 Users (28,04% of user base)

Recency : 188 days • Most are male
Frequency: 4 times • Most live in South Jakarta
Monetary : 42,85 B • used a virtual account for payment
• Most didn't used any vouchers



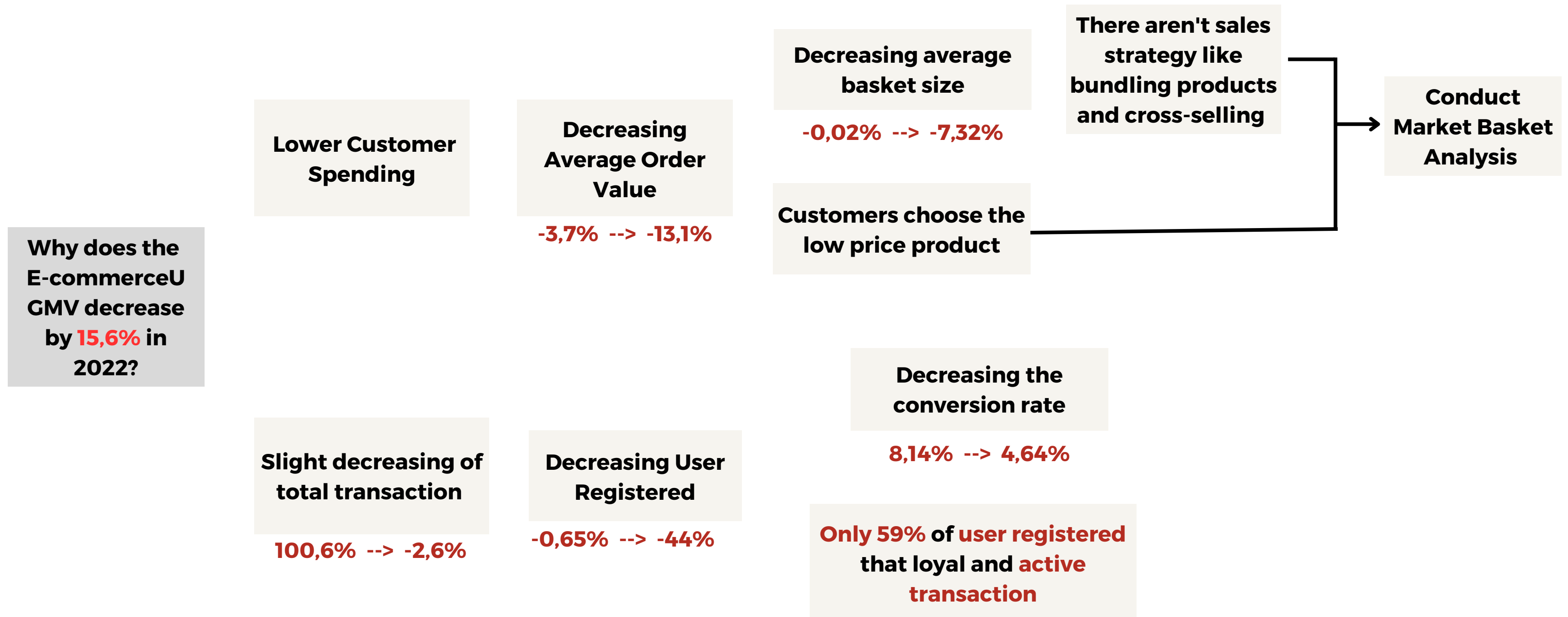
Potential Loyalist

Moderate purchase frequency and monetary value that potential for becoming loyal customers

2413 Users (41,6% of user base)

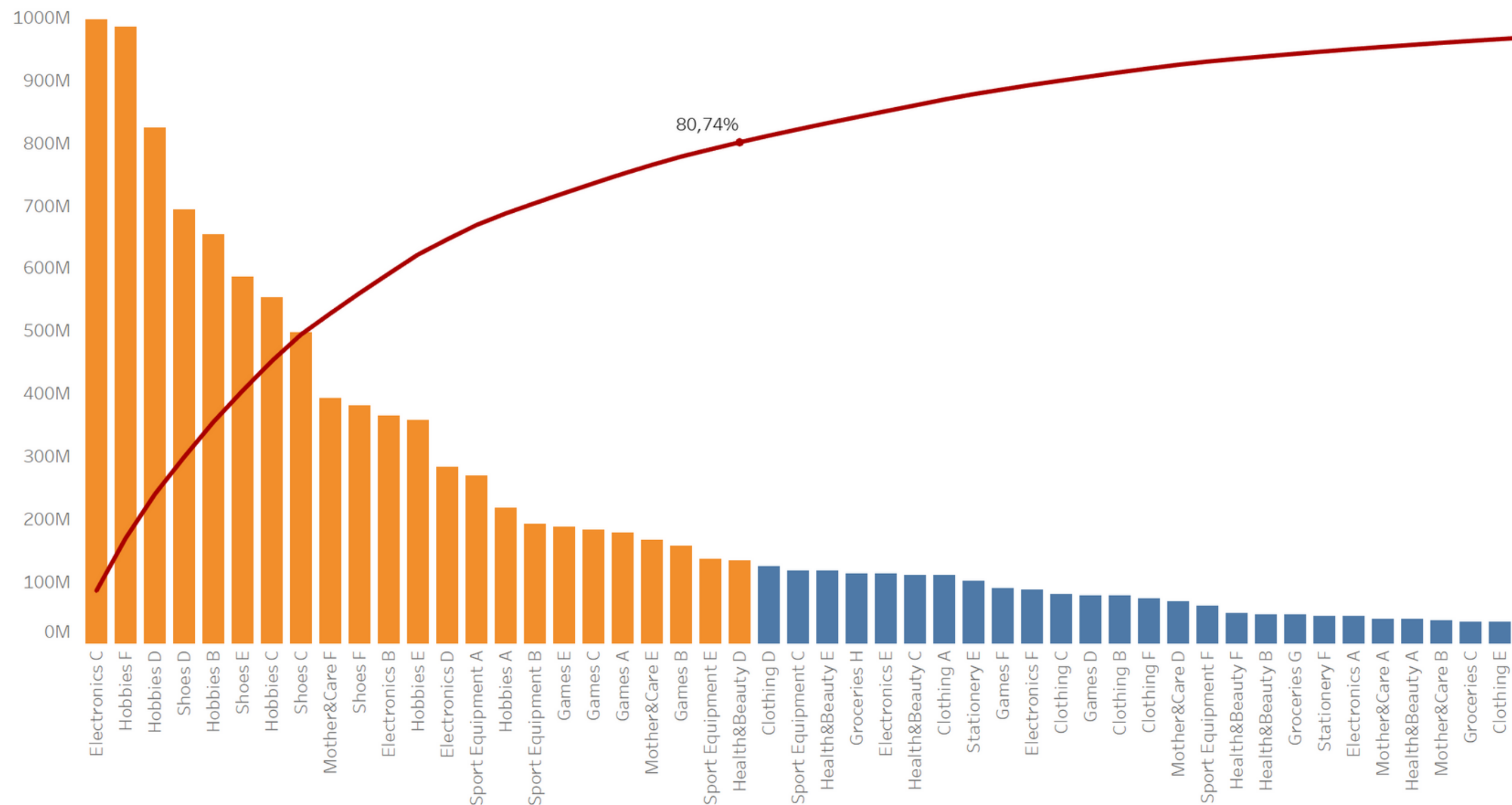
Recency : 305 days • Most are female
Frequency: 2 times • Most live in Tangerang
Monetary : 10,36 B • used a virtual account for payment
• Most used delivery fee discounts

ROOT CAUSE ANALYSIS



E-COMMERCE BUSINESS PERFORMANCE TREND

Product GMV Pareto



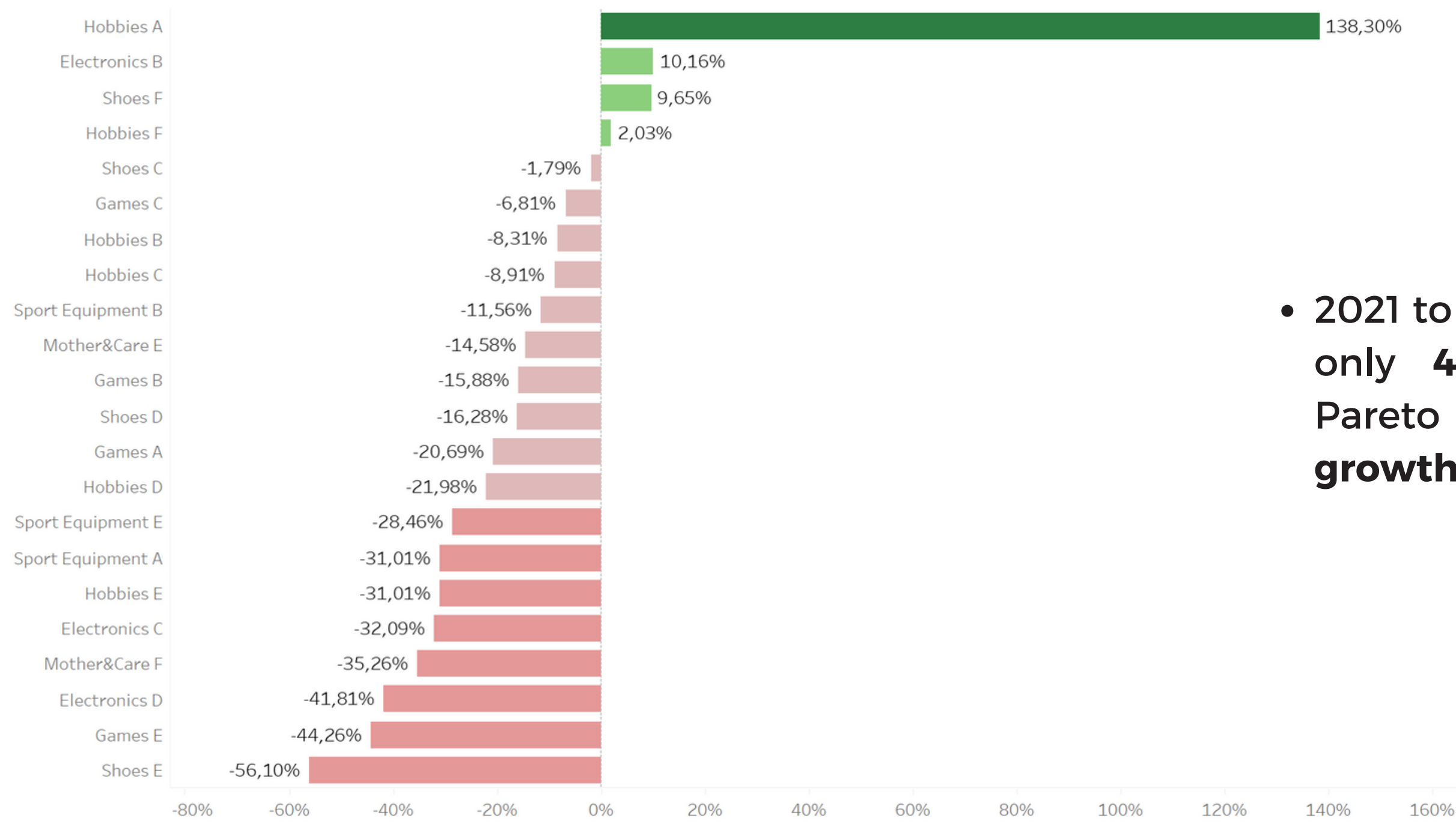
- There are **22 products** that give **80% GMV** in 2022

*This pareto was create based on top 2 customer cluster

E-COMMERCE BUSINESS PERFORMANCE TREND

Sales Growth per Product Based on The Pareto

Sales Growth per Product



- 2021 to 2022 products growth, only **4 of 22 products** in Pareto that have **positive growth**

*This chart was create based on product GMV pareto and top 2 customer cluster

CONSIDERATIONS AND RECOMMENDATION REASONS

Apriori Model



Product Categories

Same Categories (Bundling)
Different Categories (Cross Selling)



Pareto



VV

No Discount



VX

Discount



XV

Free Shipping



XX

Cashback

THANK YOU!

Product That Contributes to 80% GMV					
X	Y	Support	Confidence	Lift	Voucher Recommendation
Electronics B	Hobbies A	0.0079	0.0878	1.79	No Discount
Electronics B	Hobbies B	0.0279	0.3108	2.33	No Discount
Electronics B	Hobbies C	0.0182	0.2027	2.02	No Discount
Shoes F	Sport Equipment E	0.0612	0.3607	1.62	Discount
Shoes F	Sport Equipment F	0.043	0.2536	1.61	Discount
Games B	Groceries G	0.0067	0.0576	1.86	Discount
Hobbies B	Hobbies C	0.0279	0.2091	2.08	No Discount
Clothing G	Games A	0.0133	0.2821	1.79	Free Shipping
Electronics F	Games B	0.0061	0.2083	1.8	Free Shipping
Electronics F	Hobbies B	0.0085	0.2917	2.19	Free Shipping
Electronics F	Hobbies C	0.0079	0.2708	2.69	Free Shipping
Games E	Hobbies D	0.1964	0.6545	1.6	Free Shipping
Groceries B	Shoes F	0.0339	0.2887	1.7	Free Shipping
Groceries G	Hobbies A	0.003	0.098	2	Free Shipping
Health&Beauty A	Hobbies A	0.0109	0.0789	1.61	Free Shipping
Shoes B	Hobbies B	0.0024	0.4444	3.33	Free Shipping
Shoes B	Shoes E	0.0024	0.4444	1.71	Free Shipping

[Link Colab](#)
[Link Spreadsheets](#)

Pareto Product That has been increased in GMV (2022 - 2023)

Pareto Product That has been decreased in GMV (2022 - 2023)

Does not included in Pareto Product

MARKET BASKET ANALYSIS

Product 1	Product 2	Support	Confidence	Lift
Shoes B	Hobbies B	0.002424	0.444444	3.333333
Electronics F	Hobbies C	0.007879	0.270833	2.692018
Electronics B	Hobbies B	0.027879	0.310811	2.331081
Electronics F	Hobbies B	0.008485	0.291667	2.187500
Clothing H	Groceries I	0.002424	0.050633	2.088608
Hobbies B	Hobbies C	0.027879	0.209091	2.078313
Clothing G	Groceries G	0.003030	0.064103	2.073906
Groceries I	Sport Equipment F	0.007879	0.325000	2.062500
Groceries I	Games F	0.006061	0.250000	2.052239
Electronics B	Hobbies C	0.018182	0.202703	2.014816
Groceries G	Hobbies A	0.003030	0.098039	1.997095
Groceries I	Health&Beauty B	0.006061	0.250000	1.992754
Clothing I	Stationery F	0.010303	0.212500	1.992188
Electronics F	Sport Equipment D	0.004848	0.166667	1.950355
Groceries I	Games D	0.005455	0.225000	1.865578
Games B	Groceries G	0.006667	0.057592	1.863258
Groceries G	Stationery D	0.006061	0.196078	1.859364
Electronics F	Games B	0.006061	0.208333	1.799738

Product 1	Product 2	Support	Confidence	Lift
Clothing G	Games A	0.013333	0.282051	1.789941
Electronics B	Hobbies A	0.007879	0.087838	1.789289
Clothing I	Groceries H	0.018788	0.387500	1.742166
Games F	Groceries B	0.024848	0.203980	1.734882
Groceries I	Mother&Care B	0.006667	0.275000	1.725285
Shoes B	Shoes E	0.002424	0.444444	1.713396
Groceries B	Shoes F	0.033939	0.288660	1.701031
Clothing I	Stationery D	0.008485	0.175000	1.659483
Clothing I	Mother&Care B	0.012727	0.262500	1.646863
Clothing H	Groceries G	0.002424	0.050633	1.638124
Games F	Stationery F	0.021212	0.174129	1.632463
Groceries E	Stationery F	0.057576	0.173358	1.625228
Shoes F	Sport Equipment E	0.061212	0.360714	1.621740
Clothing I	Groceries G	0.002424	0.050000	1.617647
Groceries B	Mother&Care B	0.030303	0.257732	1.616950
Shoes F	Sport Equipment F	0.043030	0.253571	1.609203
Health&Beauty A	Hobbies A	0.010909	0.078947	1.608187
Clothing I	Mother&Care D	0.015758	0.325000	1.605539
Games E	Hobbies D	0.196364	0.654545	1.602374

Appendix

Product That Doesn't Contribute to 80% GMV					
X	Y	Support	Confidence	Lift	Voucher Recommendation
Clothing G	Groceries G	0.003	0.0641	2.07	Cashback
Clothing H	Groceries G	0.0024	0.0506	1.64	Cashback
Clothing H	Groceries I	0.0024	0.0506	2.09	Cashback
Clothing I	Groceries G	0.0024	0.05	1.62	Cashback
Clothing I	Groceries H	0.0188	0.3875	1.74	Cashback
Clothing I	Mother&Care B	0.0127	0.2625	1.65	Cashback
Clothing I	Mother&Care D	0.0158	0.325	1.61	Cashback
Clothing I	Stationery D	0.0085	0.175	1.66	Cashback
Clothing I	Stationery F	0.0103	0.2125	1.99	Cashback
Electronics F	Sport Equipment D	0.0048	0.1667	1.95	Cashback
Games F	Groceries B	0.0248	0.204	1.74	Cashback
Games F	Stationery F	0.0212	0.1741	1.63	Cashback
Groceries B	Mother&Care B	0.0303	0.2577	1.62	Cashback
Groceries E	Stationery F	0.0576	0.1734	1.63	Cashback
Groceries G	Stationery D	0.0061	0.1961	1.86	Cashback
Groceries I	Health&Beauty B	0.0061	0.25	1.99	Cashback
Groceries I	Mother&Care B	0.0067	0.275	1.73	Cashback
Groceries I	Sport Equipment F	0.0079	0.325	2.06	Cashback
Groceries I	Games D	0.0055	0.225	1.87	Cashback
Groceries I	Games F	0.0061	0.25	2.05	Cashback

RECOMMENDATION OUTPUT

Product X	Product V	Type Sales	Pareto X	Pareto V	Voucher Recommendation
Electronics B	Hobbies B	Cross Selling	Pareto	Pareto	Free Shipping
Electronics B	Hobbies C	Cross Selling	Pareto	Pareto	Free Shipping
Electronics B	Hobbies A	Cross Selling	Pareto	Pareto	No Discount
Shoes F	Sport Equipment E	Cross Selling	Pareto	No Pareto	Free Shipping
Shoes F	Sport Equipment F	Cross Selling	Pareto	No Pareto	Cashback
Groceries G	Hobbies A	Cross Selling	No Pareto	Pareto	Cashback
Groceries B	Shoes F	Cross Selling	No Pareto	Pareto	Cashback
Health & Beauty A	Hobbies A	Cross Selling	No Pareto	Pareto	Free Shipping
Shoes B	Hobbies B	Bundling	No Pareto	Pareto	No Discount
Groceries I	Health&Beauty B	Cross Selling	No Pareto	No Pareto	Cashback
Clothing I	Stationery F	Cross Selling	No Pareto	No Pareto	Discount
Electronics F	Sport Equipment D	Cross Selling	No Pareto	No Pareto	Cashback

*12 examples of 31 bundling/cross selling products