



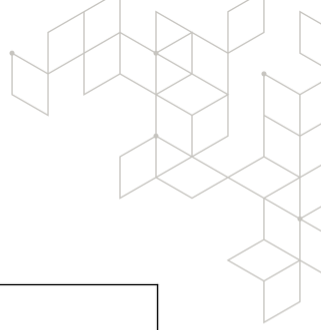
Perqara

Ahmad Dzikra Fatahillah

Data Scientist Assessment Test

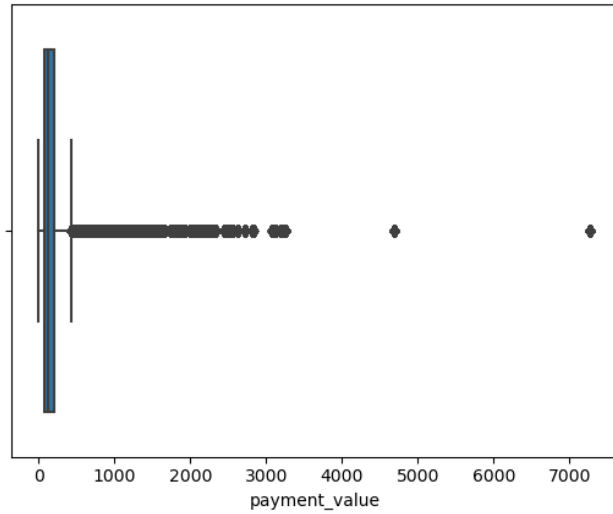


Data Preparation – Handling Outliers

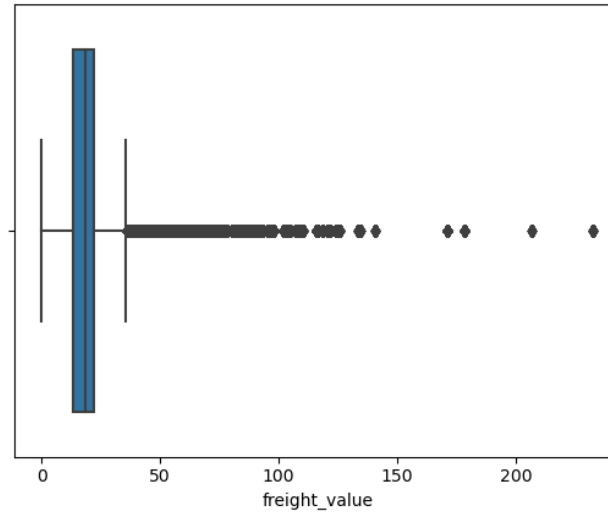


Before

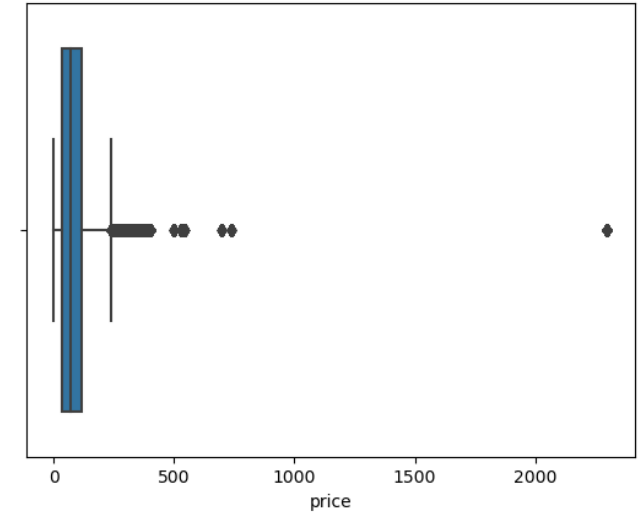
Payment Value



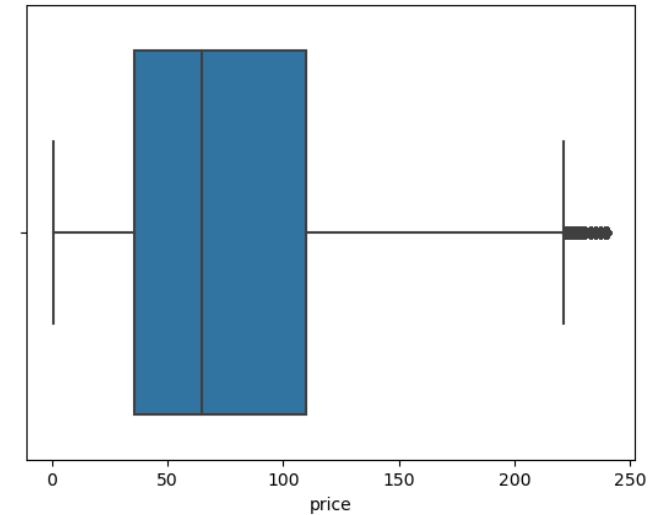
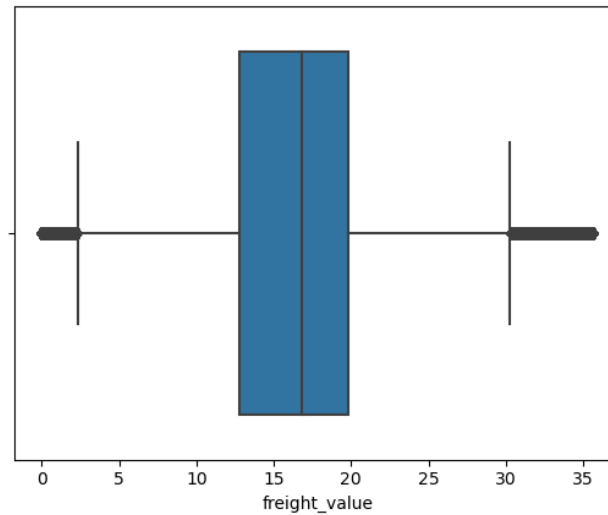
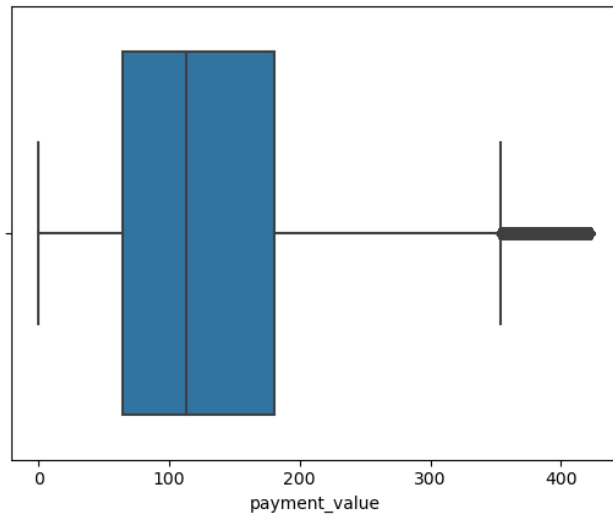
Freight Value



Price



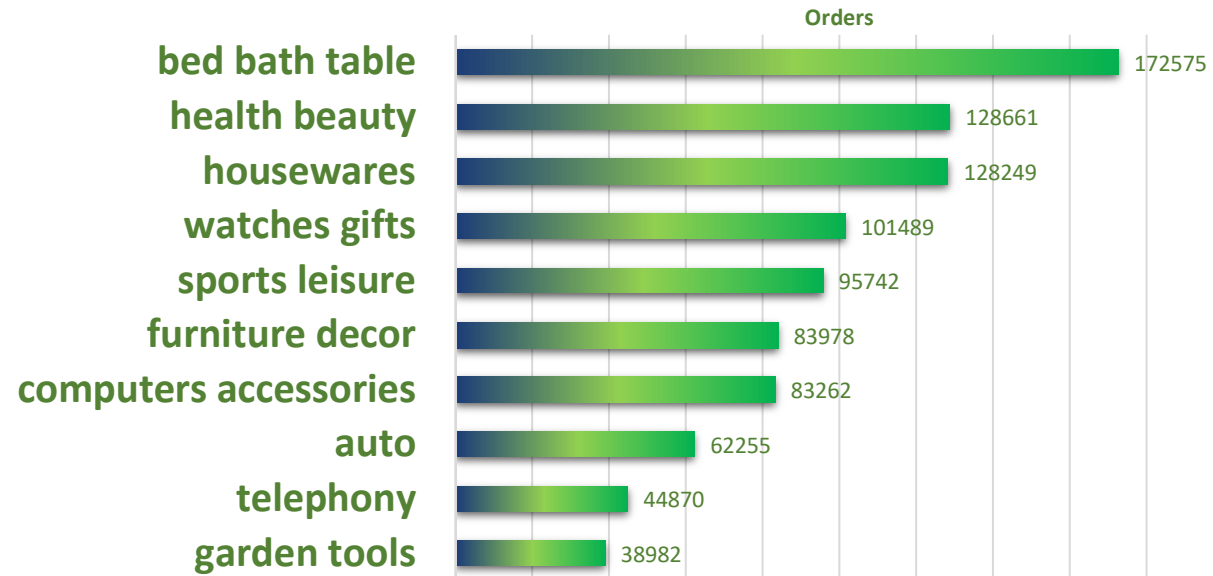
After



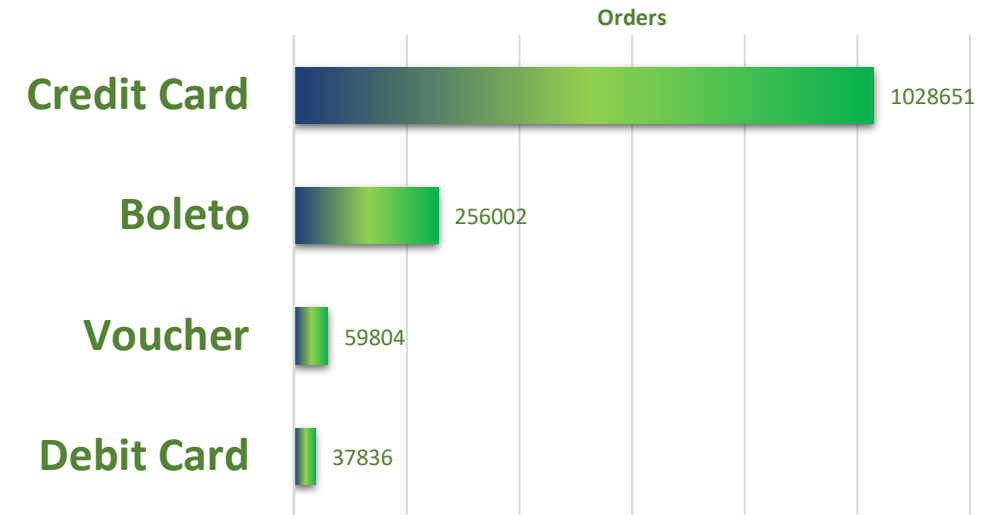


Exploratory Data Analysis

Categories by Orders



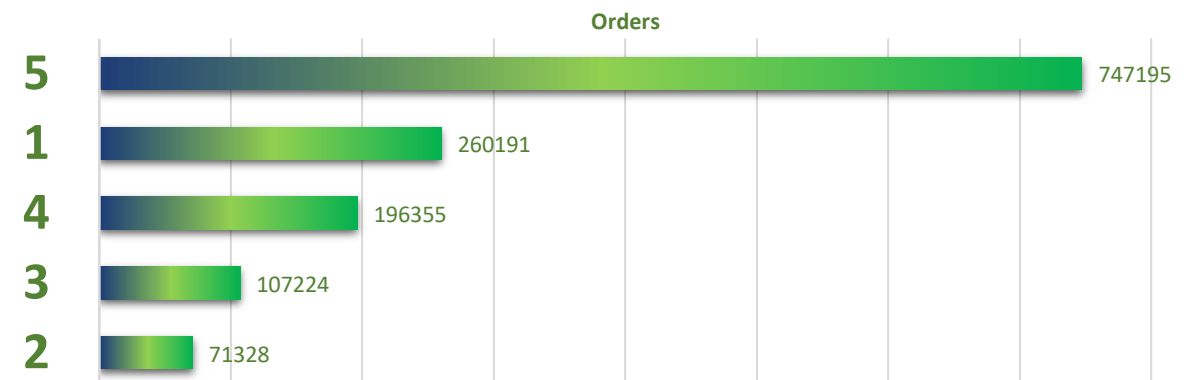
Payment Types by Orders



Payment Installments by Orders



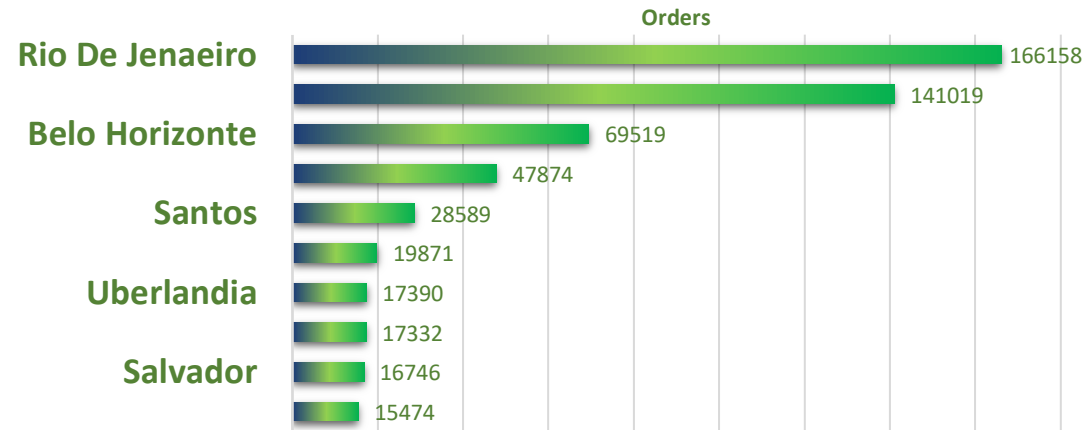
Review Scores by Orders



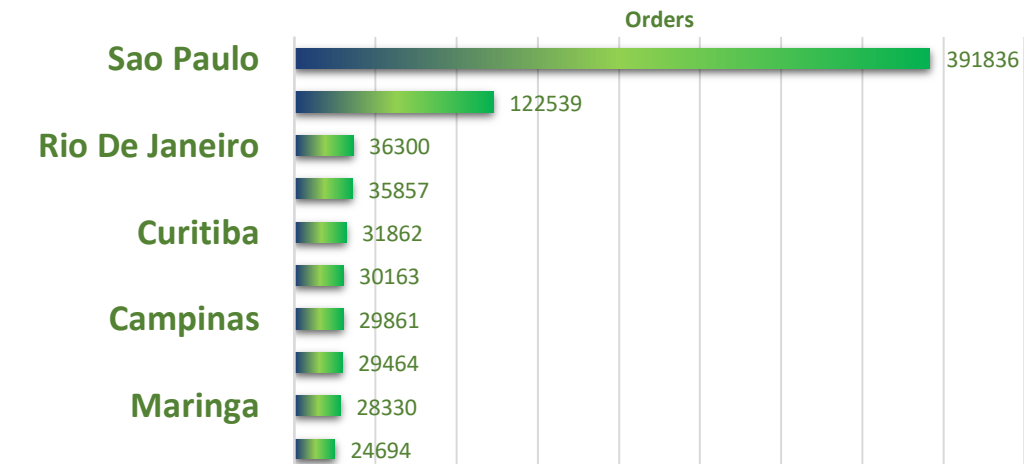


Geolocation Analysis

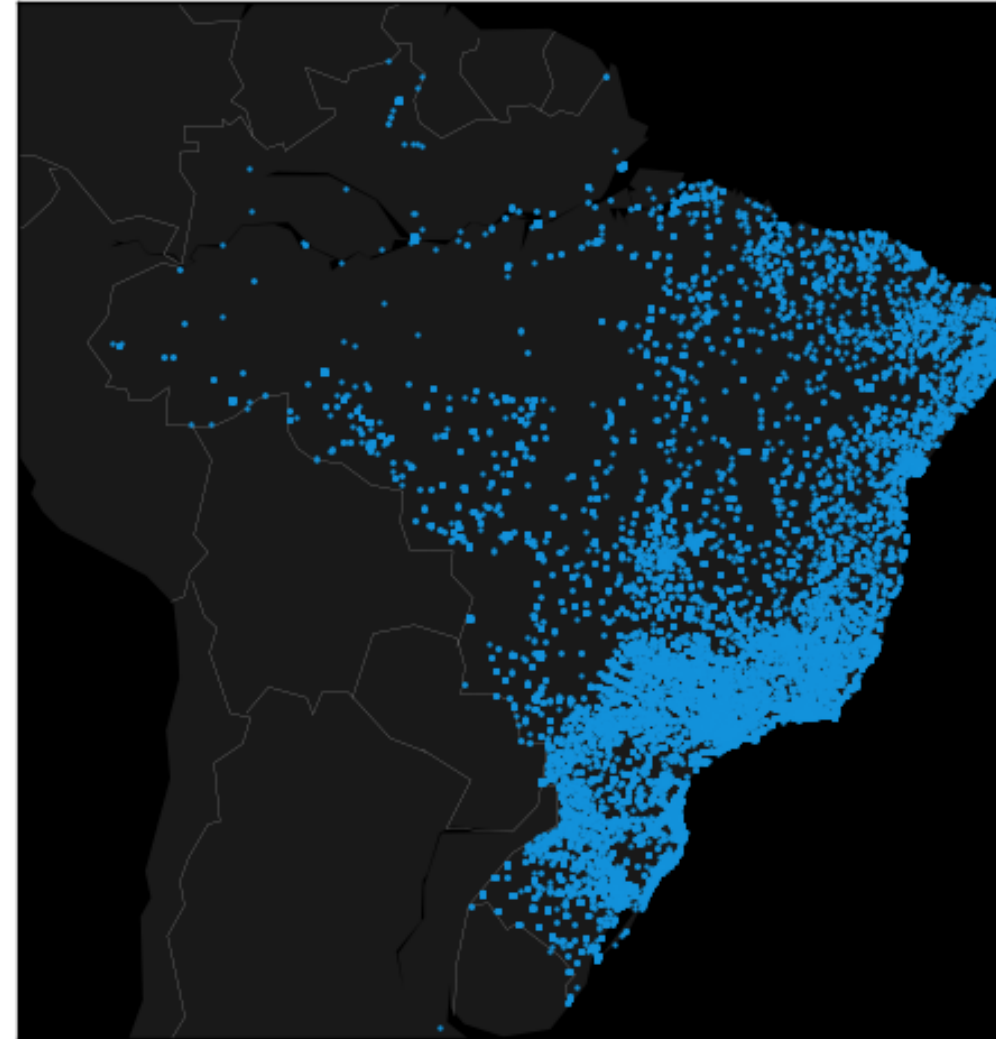
Customer City by Orders



Seller City by Orders



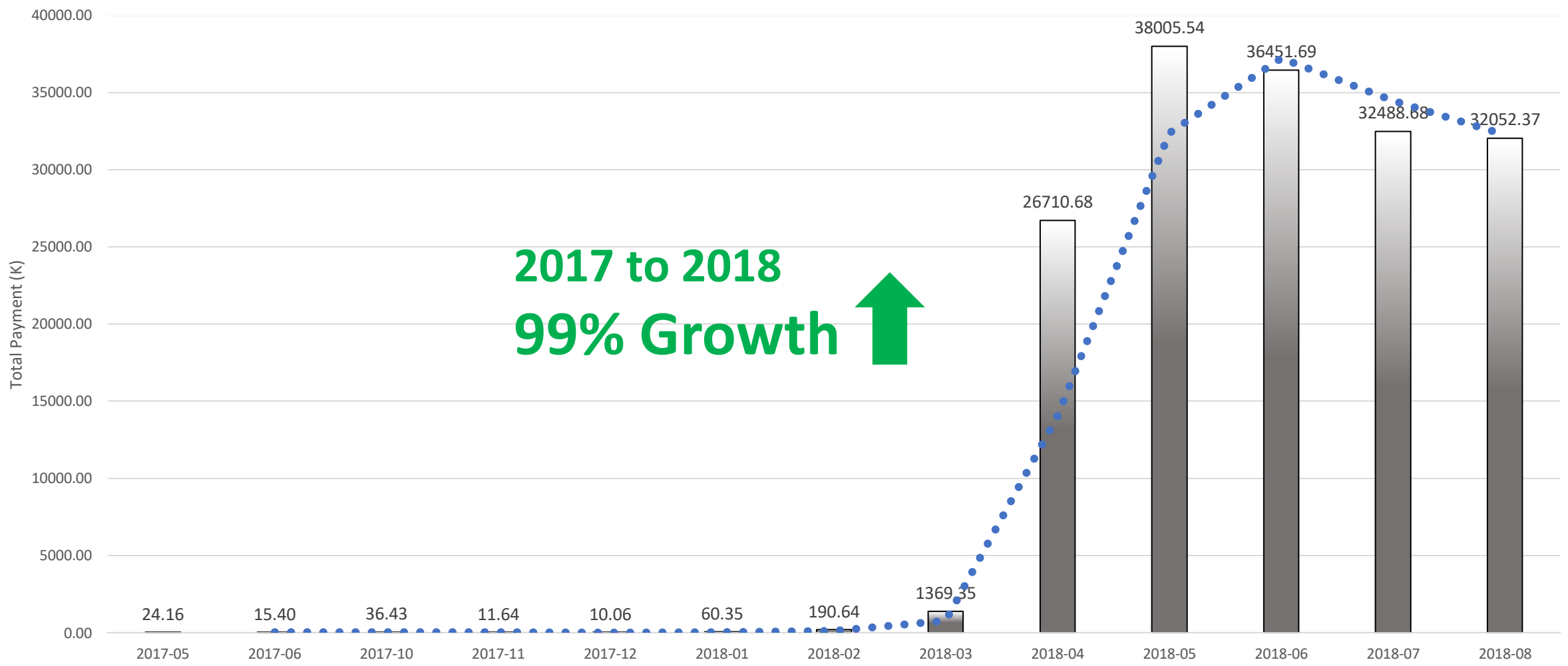
Brazil view of events





Growth - Payment (2017 to 2018)

Payment Growth





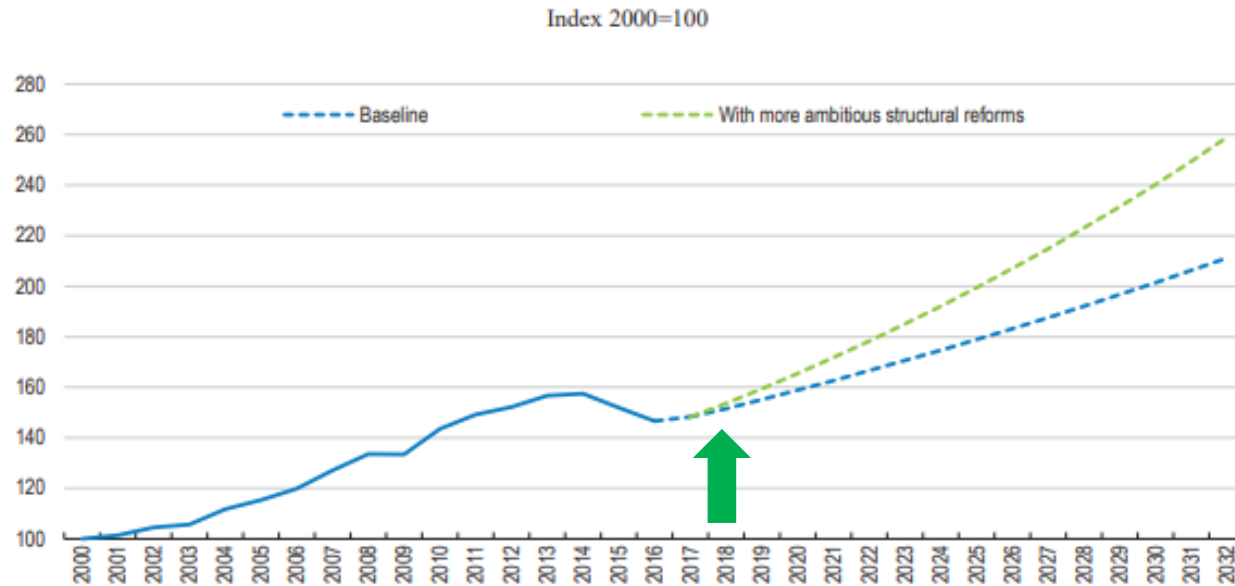
Growth – Total Order (2017 to 2018)





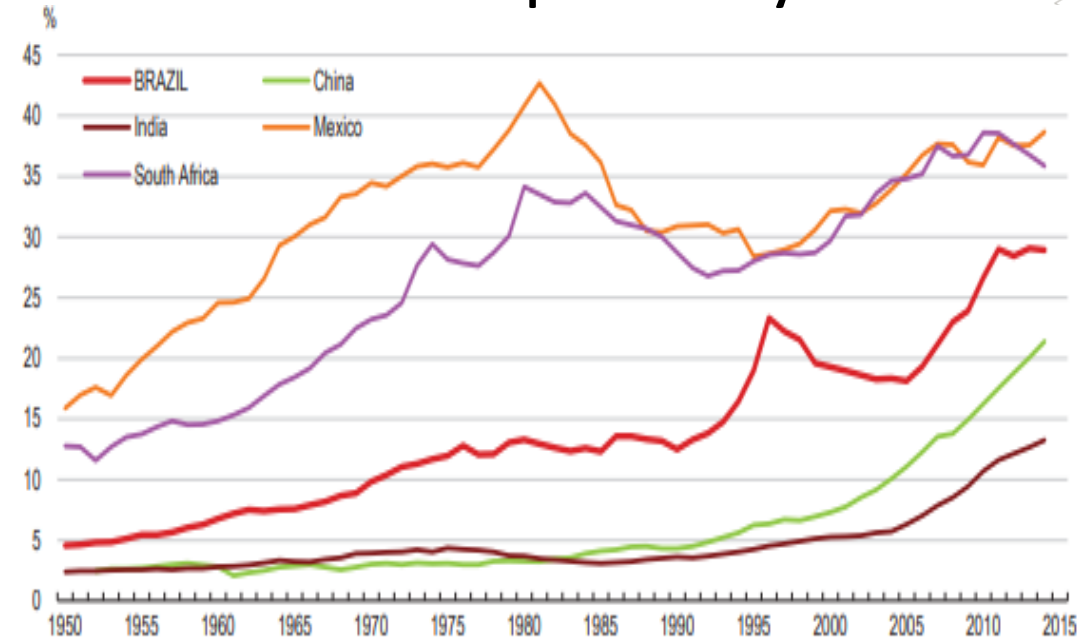
Brazil's GDP & Productivity

Payment & total order growth could be much stronger with more GDP growth



Well-being is significantly improving the effectiveness of public spending, and in particular public transfers, will be crucial for further social progress.

Labour productivity

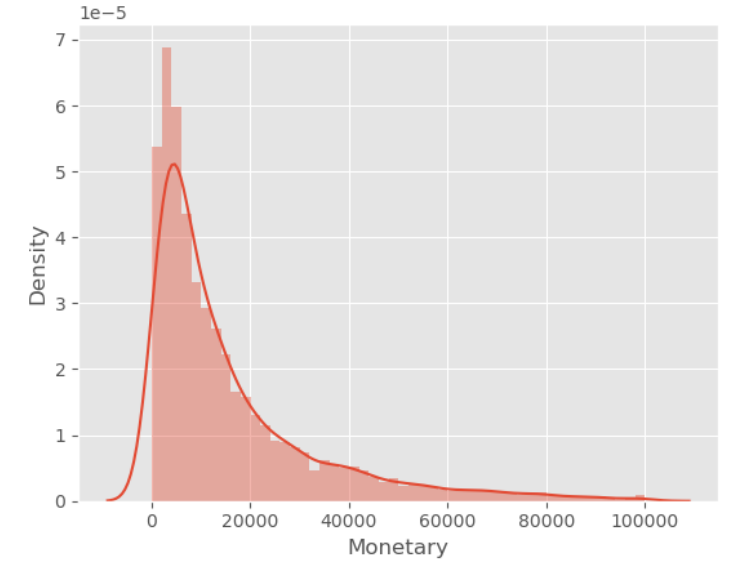
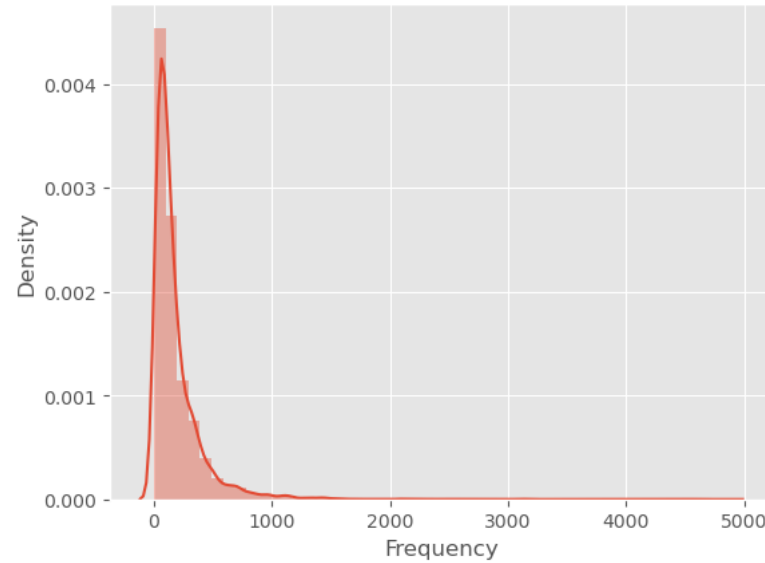
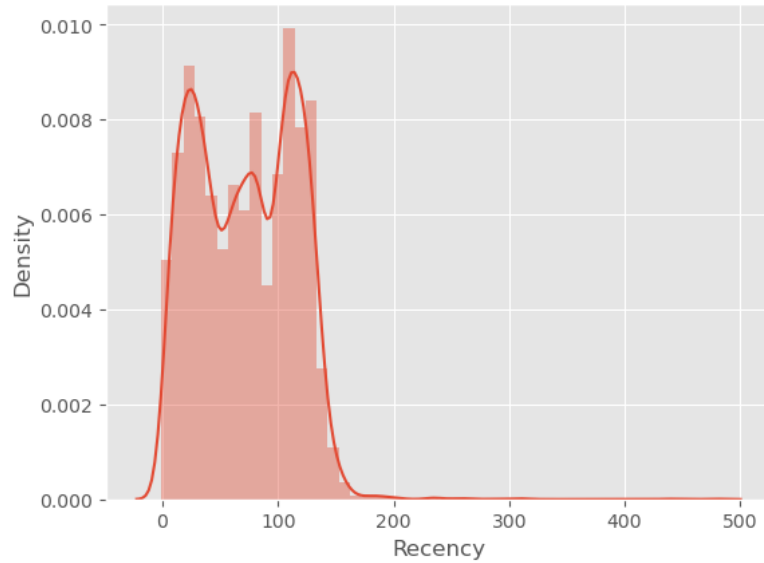


Source: OECD Economic Outlook database, Feenstra, Robert C., Robert Inklaar and Marcel P. Timmer (2015), "The Next Generation of the Penn World Table" American Economic Review, 105(10), 3150-3182, available for download at www.ggdc.net/pwt

Productivity will have to become the principal engine of growth, but that will require significantly higher investment and a wide-ranging agenda of microeconomic reforms.



RFM – Customer Segmentation



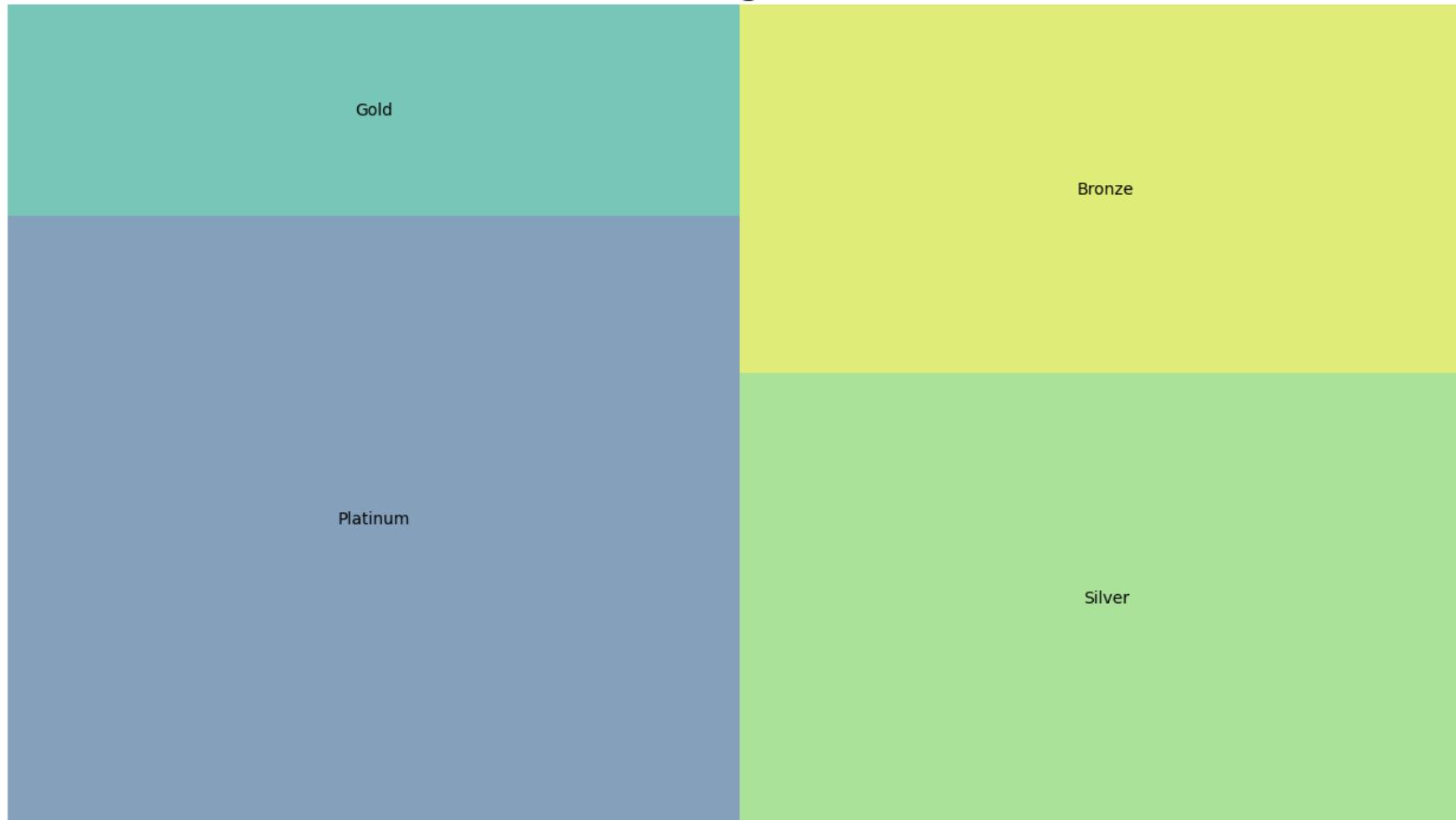
Top 5 Customer by Monetary

Customer Id	Recency	Frequency	Monetary	R	F	M	RFM Group	RFM Score	RFM Loyalty
9eb3d566e87289dcb0acf28e1407c839	81	4872	1188865.44	3	1	1	311	5	Platinum
57255fab455feb9858e2ef1490150eb0	126	2139	725826.87	4	1	1	411	6	Platinum
5c664af0ac60101f1ca9f331b338e66b	109	3144	647412.48	3	1	1	311	5	Platinum
bab47e7a1b74c94a99ea042acfa7ea66	36	2220	634964.4	2	1	1	211	4	Platinum
932289aae7b7195bc53d4c640ea071f4	51	2093	621662.86	2	1	1	211	4	Platinum



RFM – Customer Segmentation

RFM Segments



RFM help us to tailor and personalize our marketing, service, and sales efforts to the needs of specific groups



Total Order Prediction & Modeling using Linear Regression



Linear Regression of Total Order Prediction using Payment Value

We can input the data :

For example

Payment Value : 121

Review Score : 3

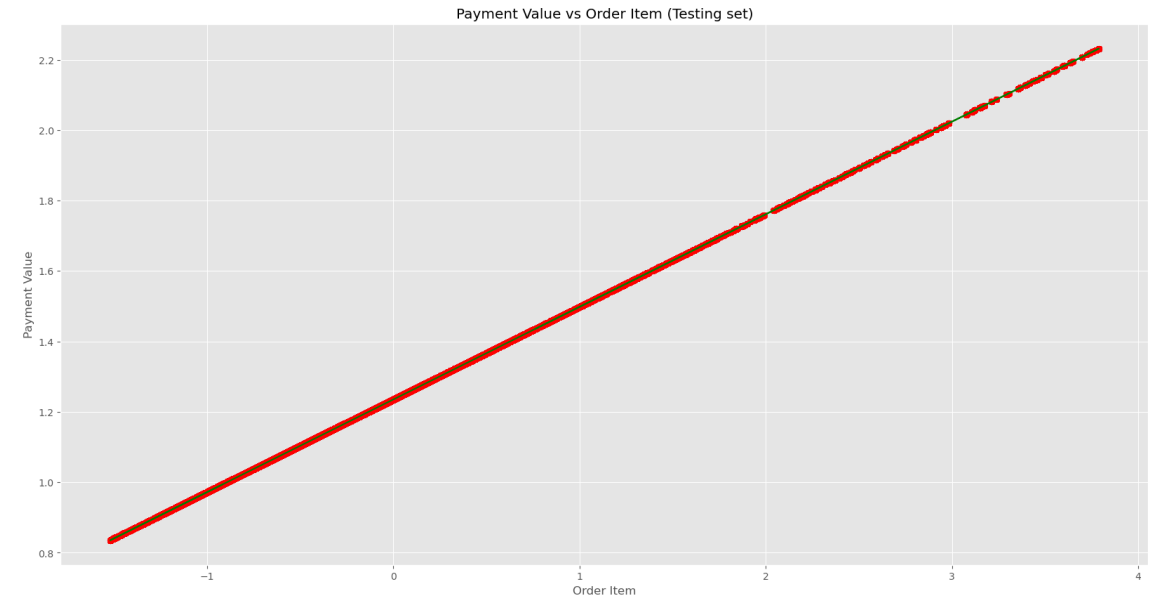
Price: 77

The Total Order Prediction Result: 29,88

Prediction Result

```
: ▶ user_input = [[121,3,77]]          #[payment_value', 'review_score', 'price']  
   user_pred = linear.predict(user_input)  
   print("Item Ordered by The Customer are:",user_pred)
```

Item Ordered by The Customer are: [29.88669288]



*adjustable data input

*adjustable parameter input