olist

empowering commerce

SQL and Tableau data analysis of e-commerce company Olist.

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01

Olist Business Model Summary

Olist Business Model Summary

(1) Market Places

- Build the middleware between marketplaces and merchants.
- E.g Walmart

(2) Retailers

- Connects small businesses to larger product marketplaces.
- help entrepreneurs sell products to a larger customer base.

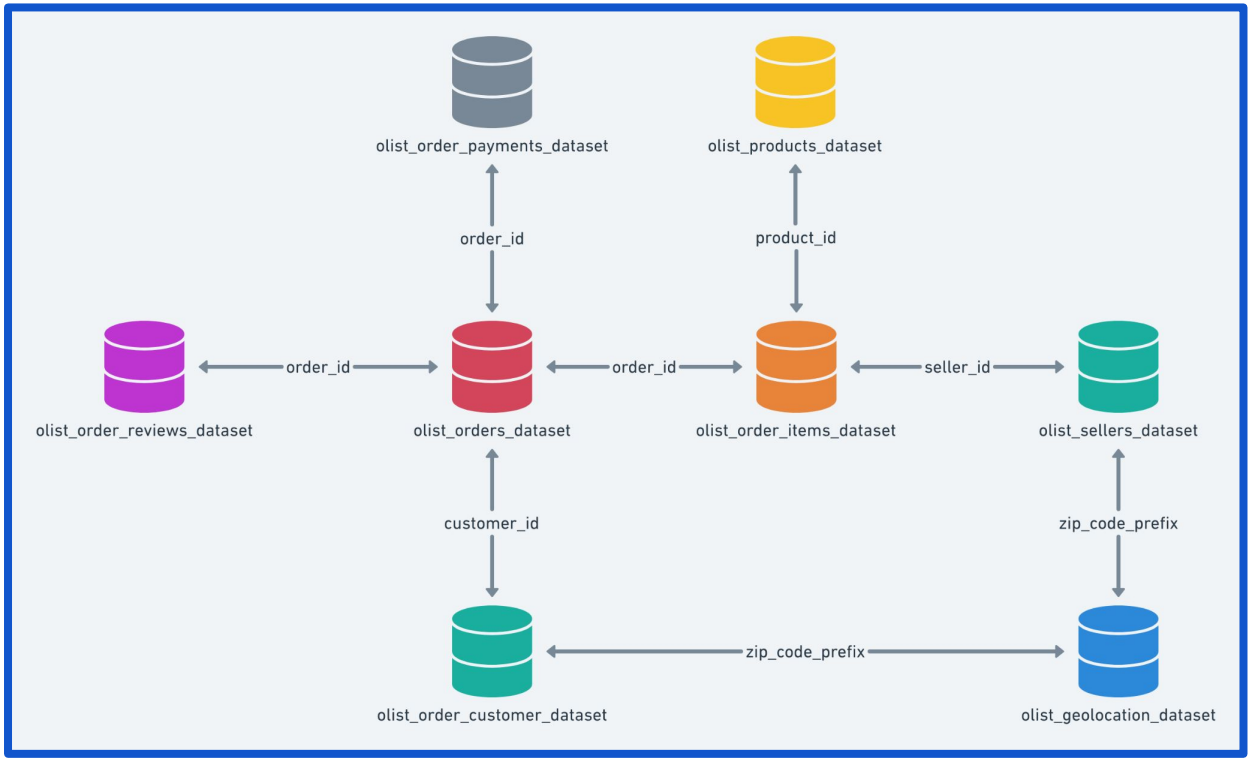
(3) Customers

- Buy through Olist
- Large product marketplace or small retailers businesses

Olist Dataset

Duration of data: 2016-2018

Orders: 100k orders



Data Visualization

Insight 1; What makes a good product?

Insight: Impact of Product description length and Quantity of photos.

Content: Many products have no or a little amount of photos and/or descriptions. These Products are reviewed worse.

Drive for Business Action:

Action: Prompt, guide or recommendation for vendors and sellers best practices for product photo quantity and product description length.

Value: Better descriptions and photographs for products -> Empowers customers to make better decisions -> Reduces return rates -> Increase customer retention.

Next Steps: Run regression analysis to determine causal effect of photo quantity and product description length, A/B testing for different recommendation.

	description_category	review_score	Number of Orders
1	Long description	4,09	10401
2	Very long description	4,07	2036
3	Medium description	4,05	53335
4	Short description	4,03	23375
5	Very short description	3,98	21627
6	No description	3,84	1598

Insight 2; **Managing profitable and unprofitable products.**

Insight: Many product categories have loss in certain cities due to high cost of product and high shipping rates.

Drive for Business Action:

Action: Discontinue products at specific regions at specific threshold or loss, create interorganizational with logistic shipping companies for regions with high freight rates, invest in inventory optimization, Real-time monitoring of products with high

Value: Cut-out products and services with loss margins, improve on What we have found out is that certain most profitable/ unprofitable categories in certain regions. Found most profitable product per city.

In the database Add product time

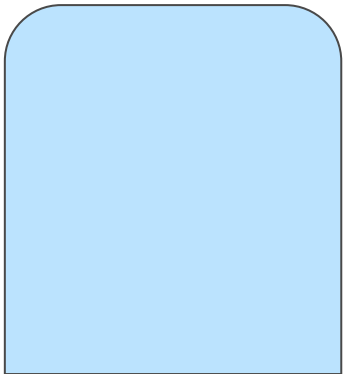
Marketing or promotions for products with high profit margins in certain regions.

	customer_city	category_name	Total Sales Amount	Total Cost	Profit Amount
1	cuiaba	garden_tools	457,99	13281,71	-12823,72
2	caxias do sul	computers_accessories	1436,46	10055,22	-8618,76
3	palmas	home_appliances_2	529,55	7413,7	-6884,15
4	natal	baby	1025,71	7179,97	-6154,26
5	niteroi	sports_leisure	1085,3	6511,8	-5426,5
6	atibaia	agro_industry_and_commerce	5405,76	10553,28	-5147,52
7	guarulhos	garden_tools	1177,88	5104,8	-3926,92
8	bom jesus dos perdoes	home_confort	317,8	3495,8	-3178
9	natal	health_beauty	666,71	3333,55	-2666,84
10	rio de janeiro	home_construction	507,76	3046,56	-2538,8
11	suzano	perfumery	322,55	2695,25	-2372,7
12	itaqui	computers_accessories	329,22	2611,08	-2281,86
13	sumare	home_appliances_2	227,9	2506,9	-2279
14	ilheus	health_beauty	210,39	2314,29	-2103,9
15	sao paulo	sports_leisure	5096,94	7020,23	-1923,29
16	salvador	telephony	1305,22	3031,21	-1725,99
17	sao paulo	housewares	161,32	1867,32	-1706
18	adamantina	furniture_decor	567,51	2243,71	-1676,2
19	guarulhos	computers	1590,25	3180,5	-1590,25

Insight 3;
When will I get my products?

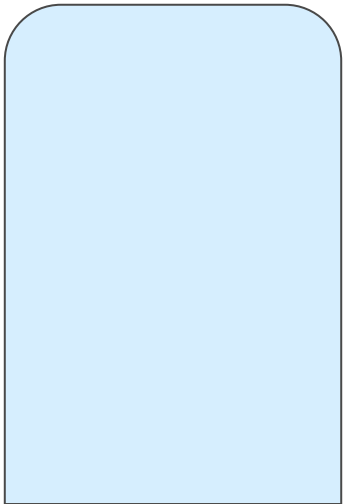
Insight

Impact of deliver time on review score.



Content

Difference of 1.61 scores for products that shipped late.



Drive for Business Actions:

Shipping optimization, create interorganizational with logistic shipping companies, improve shipping logistics.

	Is Delivered Later Than Estimated Date	review_score
1	No	4,16
2	Yes	2,55

```sql
--All Products making losses more than -100 dollars per city

SELECT customer_city,category_name,[Total Sales Amount],[Total Cost],[Total Sales Amount]-[Total Cost] AS [Profit Amount]
FROM
(SELECT  c.customer_city,
SUM([payment_installments]*op.payment_value) AS 'Total Sales Amount', --Gets the total sales value amount by including all the installments
p.category_name,
seller_id,
SUM(price+[freight_value]) AS [Total Cost] --Adds price and freight value to get total cost from suppliers
FROM  [dbo].[order_reviews] o
JOIN order_items oi ON o.order_id= oi.order_id
JOIN [dbo].[product_category_name_english] p ON oi.product_id=p.product_id
JOIN orders os ON os.order_id=oi.order_id
JOIN customers c ON c.customer_id=os.customer_id
JOIN order_payments op ON op.order_id=os.order_id
GROUP BY c.customer_city,p.category_name,seller_id
) AS  [Most Profitable Product Per City] -- Gets the most profitable product according to the city in which the customer bought the product
WHERE [Total Sales Amount]-[Total Cost]<-100 -- Negative Threshold of loss value assumed to be deemed "acceptable"
ORDER BY [Total Sales Amount]-[Total Cost]
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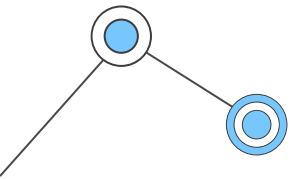

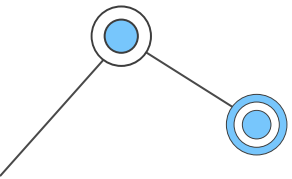
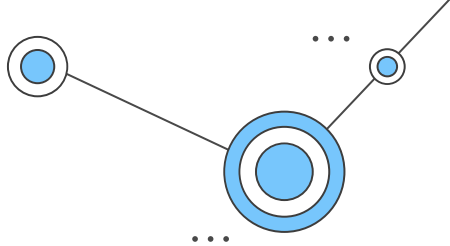
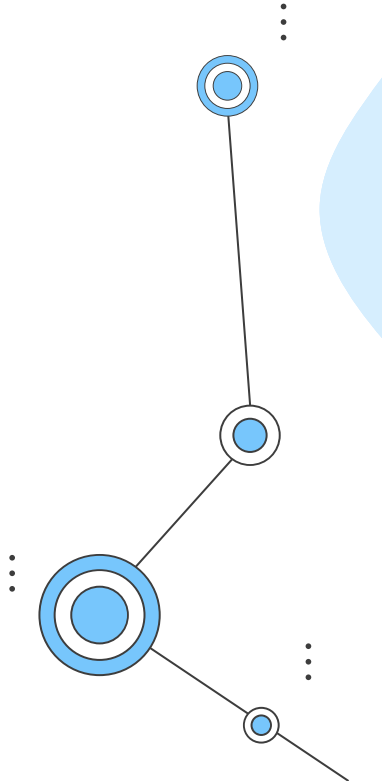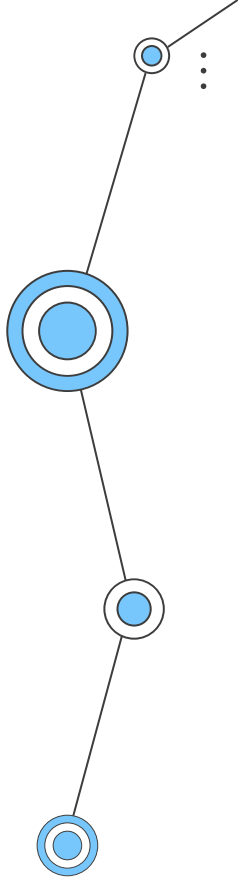
Thanks!