

# Monthly Growth Analysis

## -TheLook eCommerce-

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# 01 OVERVIEW

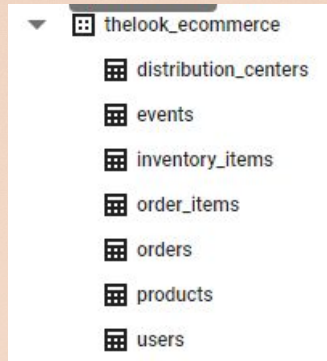






# Overview of The Dataset

TheLook is a fictitious eCommerce clothing site developed by the Looker team. The dataset contains synthetic database and provides contents for the purposes of product discovery, testing, and evaluation.



02

# Assignment Goals





# Questions

Find monthly growth of TPO (# of completed orders) and TPV (# of revenue) in percentage breakdown by product categories and analyze the monthly growth to gain insight (time frame Jan 2019 - Apr 2022);

# 03

## The Answer



# Find monthly growth of TPO (# of completed orders) and TPV (# of revenue) in percentage breakdown by product categories and analyze the monthly growth to gain insight (time frame Jan 2019 - Apr 2022)

Filter

Enter property name or value

Field name	Type	Mode
month	DATE	NULLABLE
product_category	STRING	NULLABLE
tpv	FLOAT	NULLABLE
tpo	INTEGER	NULLABLE
revenue_growth_percentage	STRING	NULLABLE
order_growth_percentage	STRING	NULLABLE

question6

QUERY

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DELETE

EXPORT

SCHEMA		DETAILS	PREVIEW			
Row	month	product_category	tpv	tpo	revenue_growth_percentage	order_growth_percentage
1	2022-04-01	Accessories	6370.0	158	-0.53%	-9.2%
2	2022-03-01	Accessories	6404.0	174	-2.94%	27.94%
3	2022-02-01	Accessories	6598.0	136	13.7%	11.48%
4	2022-01-01	Accessories	5803.0	122	21.71%	3.39%
5	2021-12-01	Accessories	4768.0	118	19.86%	18%
6	2021-10-01	Accessories	5227.0	107	71.88%	57.35%
7	2021-09-01	Accessories	3041.0	68	-27.66%	-27.66%
8	2021-08-01	Accessories	4204.0	94	12.71%	34.29%
9	2021-05-01	Accessories	2946.0	72	33.12%	50%
10	2021-03-01	Accessories	3241.0	72	93.38%	67.44%
11	2022-04-01	Active	7782.0	154	-1.89%	1.32%
12	2022-03-01	Active	7932.0	152	33.69%	12.59%
13	2022-02-01	Active	5933.0	135	22.3%	35%
14	2021-11-01	Active	4944.0	93	1%	9.41%
15	2021-06-01	Active	3542.0	68	15.56%	4.62%
16	2021-01-01	Active	3319.0	54	2.85%	-6.9%
17	2022-04-01	Dresses	8115.0	104	25.64%	38.67%
18	2021-08-01	Dresses	4139.0	50	51.95%	31.58%

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# SQL Syntax

For the query process & more info, [click here](#)

```
WITH order_products AS
(SELECT
  products.id AS product_id,
  products.category AS product_category,
  oi.order_id AS orders,
  products.retail_price AS sale_price,
  EXTRACT (YEAR FROM oi.created_at) AS year,
  DATE(DATETIME(oi.created_at)) AS dated
FROM bigquery-public-data.thelook_ecommerce.products AS products
INNER JOIN bigquery-public-data.thelook_ecommerce.order_items AS oi
ON products.id = oi.product_id
AND oi.status = 'Complete'
AND DATE(DATETIME(oi.created_at)) BETWEEN '2019-01-01' AND '2022-04-30'),
```

```
sales AS
(SELECT
  product_category,
  COUNT(orders) AS total_order,
  DATE_TRUNC (dated, MONTH) as month,
  SUM(sale_price) AS revenue,
  FROM order_products
  GROUP BY product_category, month),
```

```
growth_percent AS
(SELECT
  month,
  product_category,
  total_order,
  ROUND(revenue) AS total_revenue,
  (ROUND(LAG (revenue) OVER (PARTITION BY product_category ORDER BY month))) AS total_revenue_prev,
  (LAG (total_order) OVER (PARTITION BY product_category ORDER BY month)) AS total_order_prev
FROM sales
ORDER BY product_category)
```

```
SELECT
  month,
  product_category,
  COALESCE(total_revenue,0) AS tpv,
  COALESCE(total_order,0) AS tpo,
  CONCAT(COALESCE(ROUND(((total_revenue-total_revenue_prev)/total_revenue_prev)*100,2),0), '%') AS revenue_growth_percentage,
  CONCAT(COALESCE(ROUND(((total_order-total_order_prev)/total_order_prev)*100,2),0), '%') AS order_growth_percentage,
FROM growth_percent
ORDER BY product_category, month DESC;
```



# Result Overview

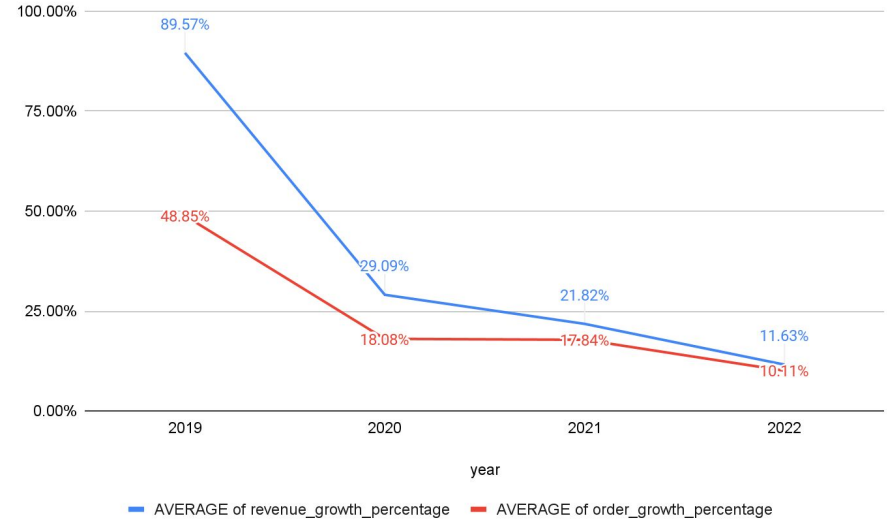
The query results the monthly growth of TPV (# of revenue) and TPO (# Completed Order) by product categories from the time frame of Jan 2019 - Apr 2022.



# Data Analysis

From the time range of 2019 - 2022 , a large drop of **Avg TPV** and **Avg TPO** of all **products category** occurs in 2020, before the curve starts to show the **downtrend** until 2022.

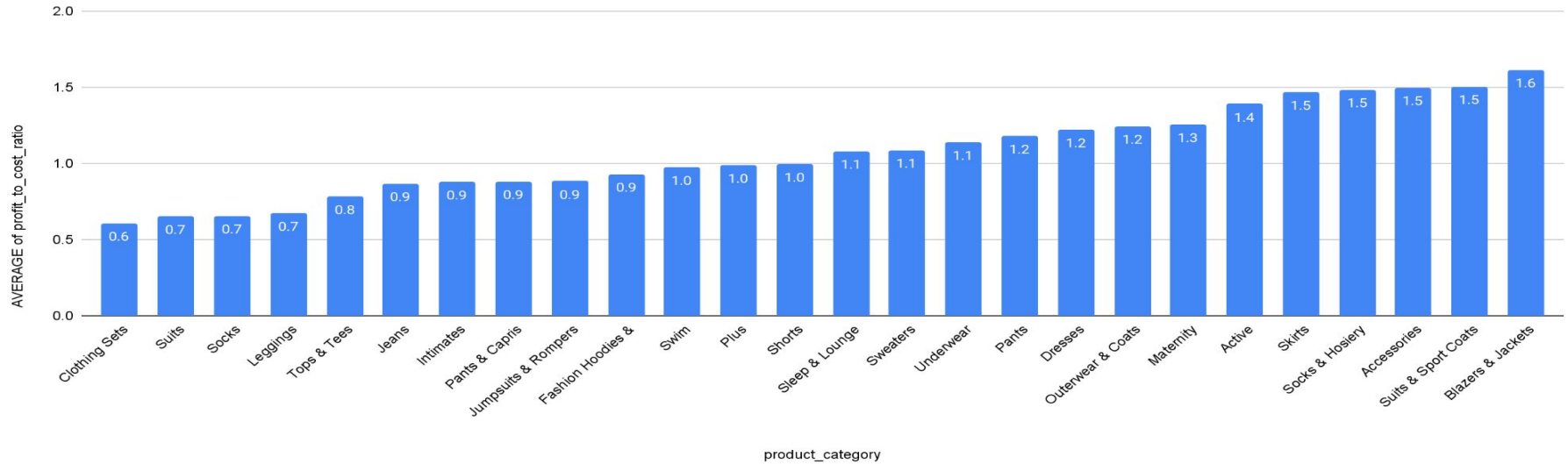
The Comparison of Average TPV and Average TPO



In 2022, the data provided only from Jan - June

For further analysis process, [click here](#)

Average of Profit to Cost Ratio



From the above **graph of profit to cost ratio from 2019 - 2022**, the product category that has the lowest ratio is **Clothing Sets**. And the **highest ratio** is **Blazers & Jackets**.

For further analysis process, [click here](#)



## Insight & Recommendation

The **profit to cost ratio** of each product category shows the total profit compared with the total cost, and **indirectly indicates the customer's consumption pattern**.

**And the Avg TPV and Avg TPO show the downward trend for the last 3.5 years,**

From the analysis, TheLook eCommerce **needs to evaluate** the product category that they sell in their marketplace to provides their **customer's consumption pattern and boost their TPV and TPO, so does the profit.**



**Thanks!**