

A vibrant, stylized illustration of a unicorn in a dynamic, rearing pose. The unicorn is rendered in shades of pink and purple, set against a background of soft, ethereal clouds in similar colors. The overall aesthetic is magical and modern.

Unicorn Company

Thriving for business growth

Business Challenges & Data Report

For all steps taken by the DA team, a consistent overview of all steps taken during the data exploration and data explanation are represented on the following pages.

So make sure to read even more insights than just a one-pager 🦄 | We created also two Tableau Dashboards to guarantee a holistic overview (make sure to check it out)

[Business Challenge: Overview Sheet](#)

[Data Analysis: Overview Steps](#)

[Data Explanation: Main Insights and Recommendations](#)

Link to Google Colab SQL Queries: [!\[\]\(003082e50e3009141f59bd5df831749f_img.jpg\) Google Colab Unicorn Project.ipynb](#)

Link to Google Sheet Data analysis: [!\[\]\(17413706fd4997a1a4bdf85c6864eee1_img.jpg\) Unicorn_dataset_combined](#)

Business Scenario:

Identifying growth potentials for customer segments and product main categories in geographical regions.

Business Challenge: Overview Sheet

Where we are

Market trends & developments over time:

- The online sector has been slowly eating up market share in the past two decades
- Online shopping now dominates a major part of the retail industry
- E-commerce platforms - like Unicorn - allow people to buy products online: from books, toys, clothes, and shoes to food, furniture, and other household items

Where we want to be

Mid-Term and Long-Term Business Goal Unicorn:

Unicorn is a family business and is owned by 2 stakeholders who are very invested in their business

Unicorn is seeking Mid-Term and Long-Term Business growth by increasing its company's size (e.g., expanding its data analytics department), revenue, market share, and profitability over time. Business Growth can also be typically achieved by developing new products or services, which, however, is excluded concerning the business model in the present analysis.

What we have to achieve

Challenge & Analysis Recommendations:

Unicorn is aiming to employ strategies to **increase market share** (= increase of total sales in relation to total industry sales) as well as a **higher profit margin**, and an increasing purchases-to-sales ratio to guarantee its business's profitability

Analysis goals:

- Identifying market opportunities (based on sales regions, cities and/or states) with lower market share
- Identifying relevant customer segments (based on sales & regions, purchase behavior) to increase customer demands, hence up-selling opportunities

- Identifying profitable product segments (high-profit margin, lower cost/discount) to increase both margin and product sales
- Identifying and excluding weak areas (including low-margin products, sales region and customer segments) to reduce the risk of stagnation and market loss

Data Analysis: Overview Steps

Unicorn is aiming to employ strategies to **increase market share** (= increase of total sales in relation to total industry sales) as well as a **higher profit margin**, and an increasing purchases-to-sales ratio to guarantee its business's profitability.

The Data Analytics Team is focusing on three key parameters:

1. **Analyzing the overall growth rate** of the unicorn business to estimate business profitability & sales over time.
2. **Identifying potential market share** opportunities (by customer penetration/increasing customer demand).
3. **Up-selling opportunities** for specific **product categories/segments**.

Those three key parameters aim to estimate future growth potential
Stakeholder choice: Growth Hacking Team

Please note: As we focus on growth rate opportunities using the key metrics 'Sales' & 'Profits', the metric 'Costs' (Sales - Margin) is excluded from this specific analysis. The DA team has too little information about how the company's costs (fixed and current assets) are distributed to provide adequate recommendations for possible cost reductions. Nevertheless, cost reduction options would have a direct possible impact on the profit margin, hence Unicorn's business rentability.

Step 1: Data Exploration

	Relevant Dimensions	Relevant Metrics
Growth Rate and Market Share Analysis	City/State/Region Customer Segment	Sales (absolute & growth rates) Profit (absolute & growth rates) Customer Count (New vs. Returning)
Product Up-selling	(Product) Product category Product Sub-Category	Sales (absolute & growth rates) Profit Margin Average Order Value

Step 2: Data Explanation

The Data Explanation will cover combined insights for our chosen Stakeholder, including recommendations on which customers, markets, and products are mostly likely relevant for Unicorns' long-term business growth

Only cross-joining multiple insights, hence different dimensions and metrics to each other, guarantees to identify sweet spots of market trends:

- The DA team should focus on regions with indicated high growth rates and market share potential: Within those regions, the DA team should analyze which customer segments are driving growth and can lead to potential up-selling possibilities
- By identifying high-profit margin products or categories, the DA team should analyze their performance across different customer segments and regions to find hidden opportunities
- The DA team + Growth Hacking may also explore up-selling and cross-selling possibilities for high-profit products within customer segments showing strong growth (above average line)

Note: Cross-selling opportunities could be investigated by exploring order behavior by customer segment and product (main) category: This will be more likely reachable by comparing sales to category and sharing first recommendations on cross-selling

Data Explanation: Main Insights and Recommendations

Customer Growth Strategy ↑:

- Business Growth Strategies are directly linked to Customer Acquisition and Retention Programs
- Analysis indicates a market saturation by Returning Customers (98,62% of all customers) by Q4 2018 -- up-selling and/or cross-selling options for high growing sales market given, but we strongly recommend investing in New Customer Campaigns to unlock new market shares

Sales Growth / Profitability by Region:

East & West ↑ | South ↑ | Central ↓

East & West ↑ - the main focus for further insights and recommendation

- Absolute Sales with a positive profit ratio over time (2015-2018) are constantly (or mostly) increasing in the East and West Region of Unicorns' business activities --- both regions mark sales above average with positive, quite steady, profit margins over time (+22% Avg. Profit Ratio for West Region, +16,80% Avg. Profit Ratio for Est Region over time)
- Market share values could potentially grow by up-selling changes within New Customer Acquisition and/or Returning Customer Retention Campaigns

South ↑

- The South Region indicates slow, but recovering sales development over time (after a strong sales peak back in 2015 and sales down in 2016) for the last two years (2017-2018) --- profit margins are growing back up to 15.31% in 2018
- Hidden-Champion Potential (market saturation not yet reached), further investigation on most profitable turn-overs by cities recommended

Central ↓

- Since Unicorns' market entrance in 2015, The Central Region marked negative profit margins, resulting from lower trading margins due to higher costs, lower sales, and larger discounts given, with an overall negative profit ratio of -10,40%
- As the DA team has no further information about how the costs (fixed and current assets) of the company are composed, we recommend that both Growth Team & Management analyze factors such as costs, external market trends as well as the discount policy of Unicorns Central Region activities

Customer Segment & Product Category Chances for East, West & South Region:

Consumer & Corporate 📈 | Home Office - stable, but little market 📈

- Consumer & Corporate Segment are the main drivers, both in Sales & Profit
- Consumer Segment is the highest sales driver across all segments and categories, constantly above average sales (total sales 1,168,676\$), making 50% of companies' total sale

West Region: Hidden Sales opportunities for the Office Supplies Category with higher profit margins for the Consumer & Corporate Customer Segment

- Even though Sales are high in Technology & Furniture, the most profitable Product Category is Office Supplies (Grand Profit Total of 52,596\$) > Market Shares are still low, so potential Growth Opportunities in a non-saturated market sector given

East Region: Technology is demonstrating the strongest Overall Sales with steady profit margins, Office Supplies Category is highly profitable in the Consumer Segment, Furniture Category has below-average profit margins, despite high sales > no profitability

- Technology is the main driver of profitability through all Customer Segments, showing an immense profit increase in 2018 for the Consumer & Home Office Segment