

Northwind Data Driven Consulting

By Dean Arazi for Analiza



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OUR COMPANY



Northwind, a wholesale distributor that supplies a wide range of food and beverage products to retail businesses, restaurants, and other companies around the world.

Northwind's mission is to provide quality products efficiently and to build strong relationships with its clients, ensuring they receive what they need when they need it.

OUR GOALS

Present data driven solutions for better profitability.

We will analyze Northwind's digital store to generate insights about its operations and discuss key findings

UNDERSTANDING THE RESEARCH QUESTIONS



Product assortment & pricing

How do we maximize
margin & sales?



Customer segmentation & revenue growth

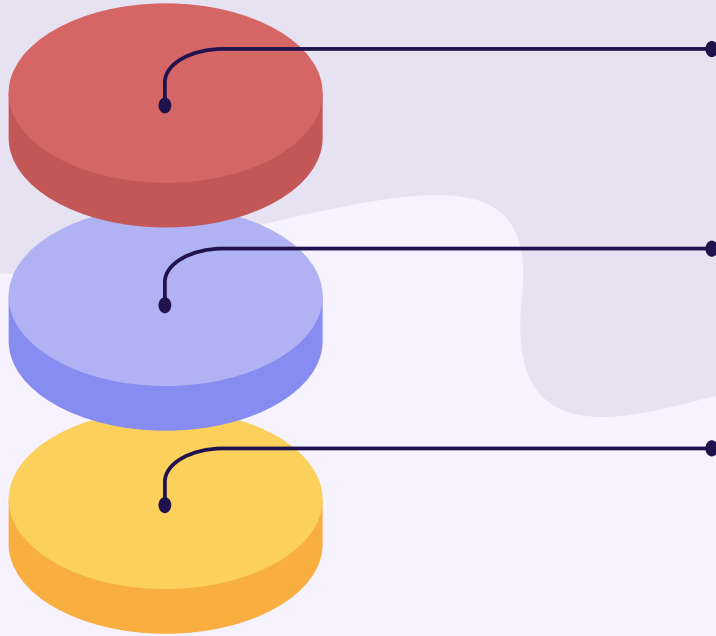
How do we capture and
improve CLTV(Customer
LifeTime Value)?



Operations & inventory

How do we reduce costs &
improve service?

QUICK KEY FINDINGS



1

Top product by Profit: *Côte de Blaye* - 59,316 ($\approx 11\%$ of total Profit).

2

Top 10 customers revenue share: 570,145.05 = 45.0% of total revenue (high customer concentration).

3

Order ship-delay : mean of 8.49 days, median of 7 days and max value of 37 days - notable variability in fulfillment time



01 Product Assortment And Pricing

1,265,793

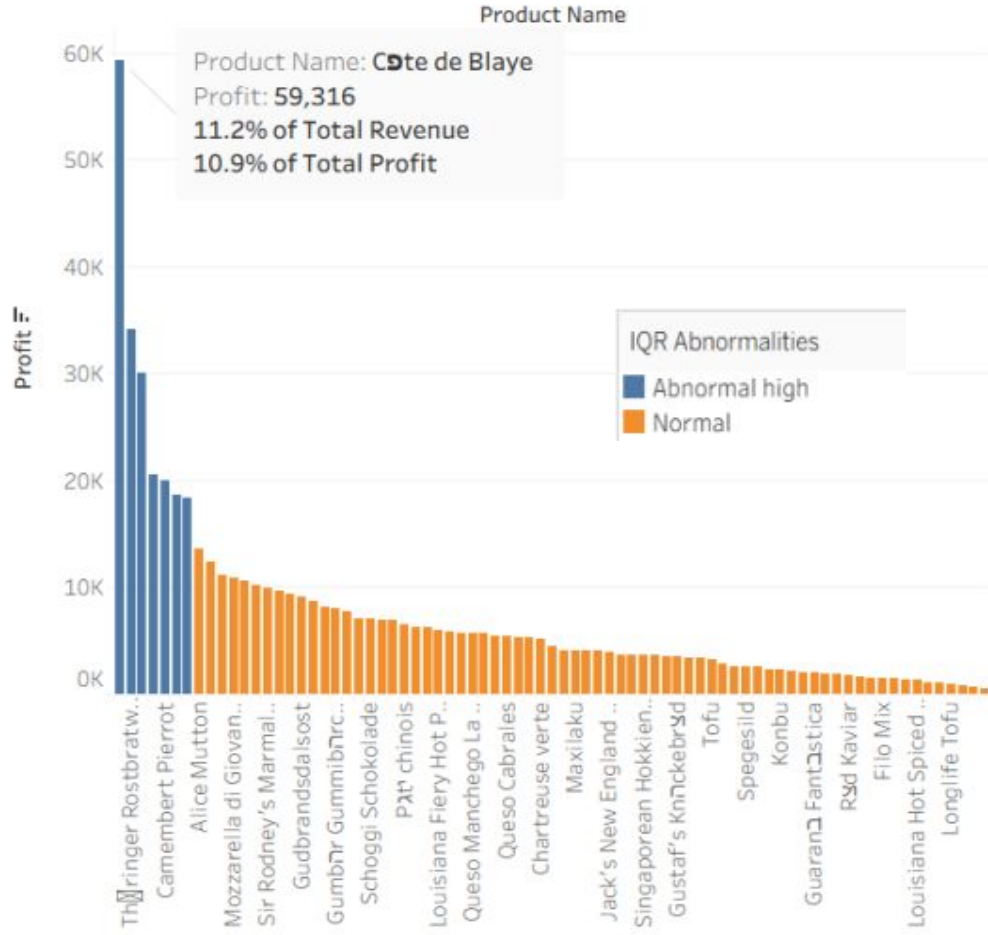
In Total Revenue

541,109

In Total Profit



Total Profit per Product



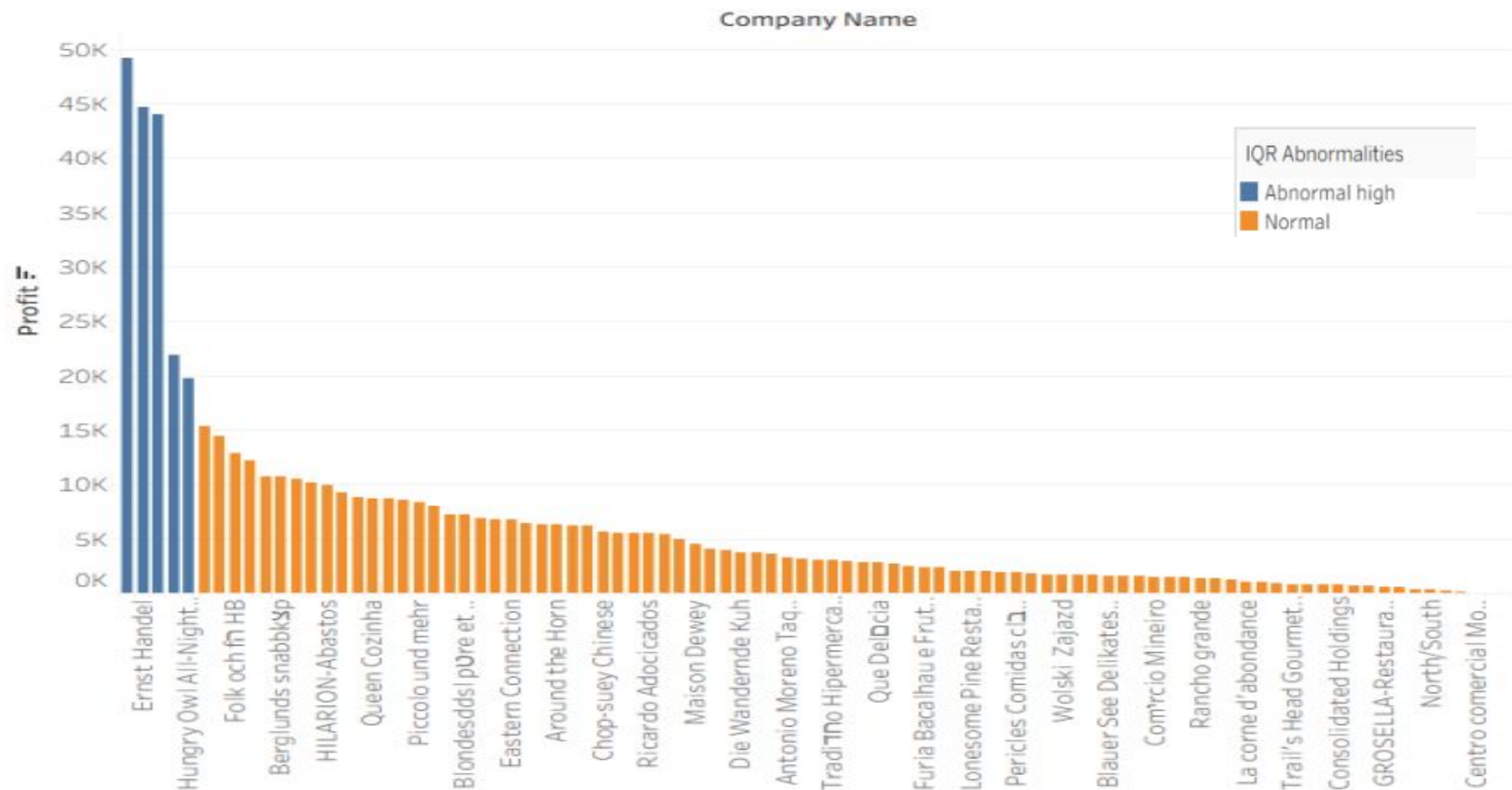
- A small set of products drives a large share of revenue (top products like *Côte de Blaye* and *Thüringer Rostbratwurst* are top earners).
- There are low-revenue items that may be clogging catalog or creating fulfillment overhead without contributing considerable margins.



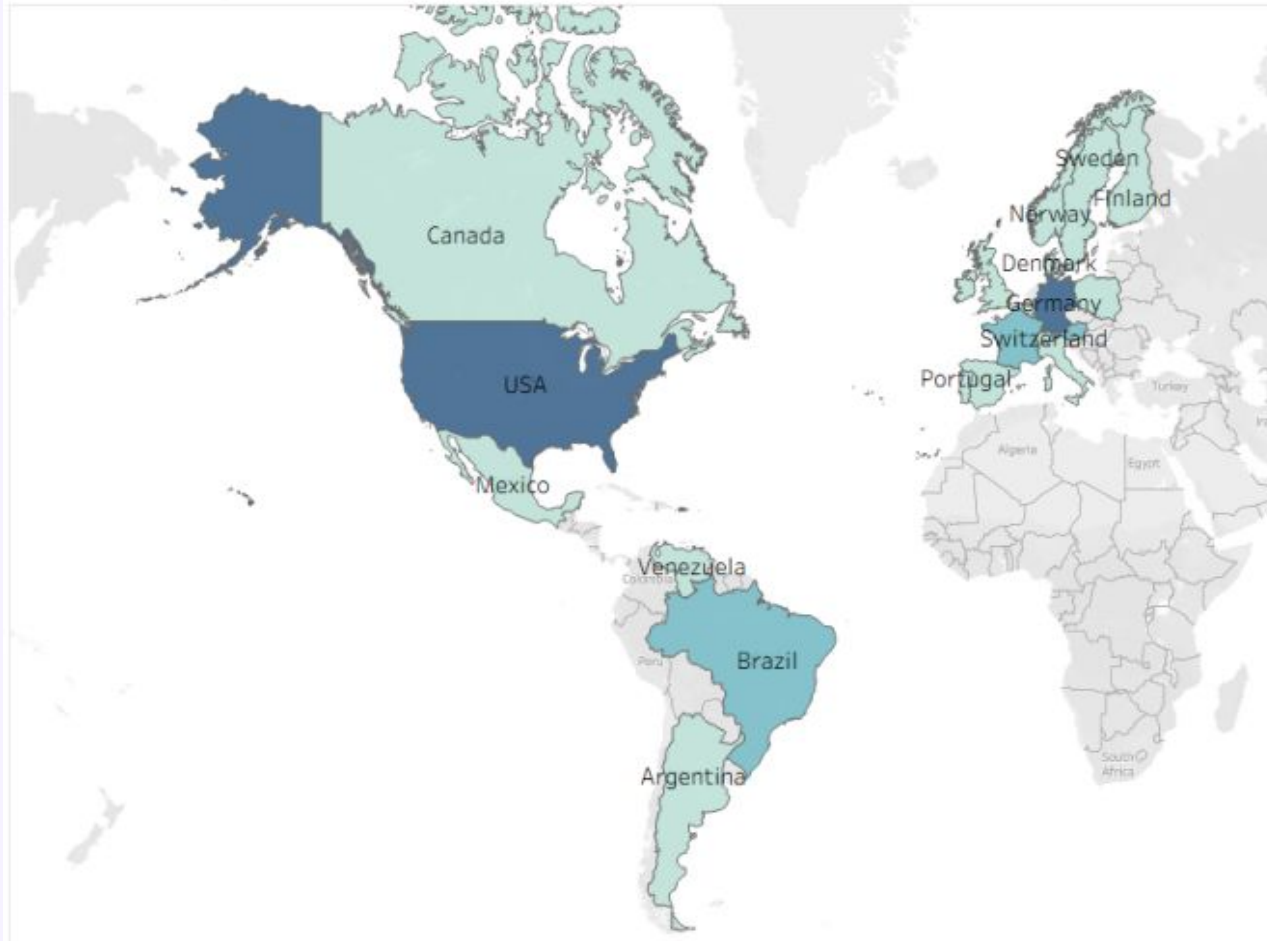
02

Customer Segmentation And revenue growth

Total Profit per Company



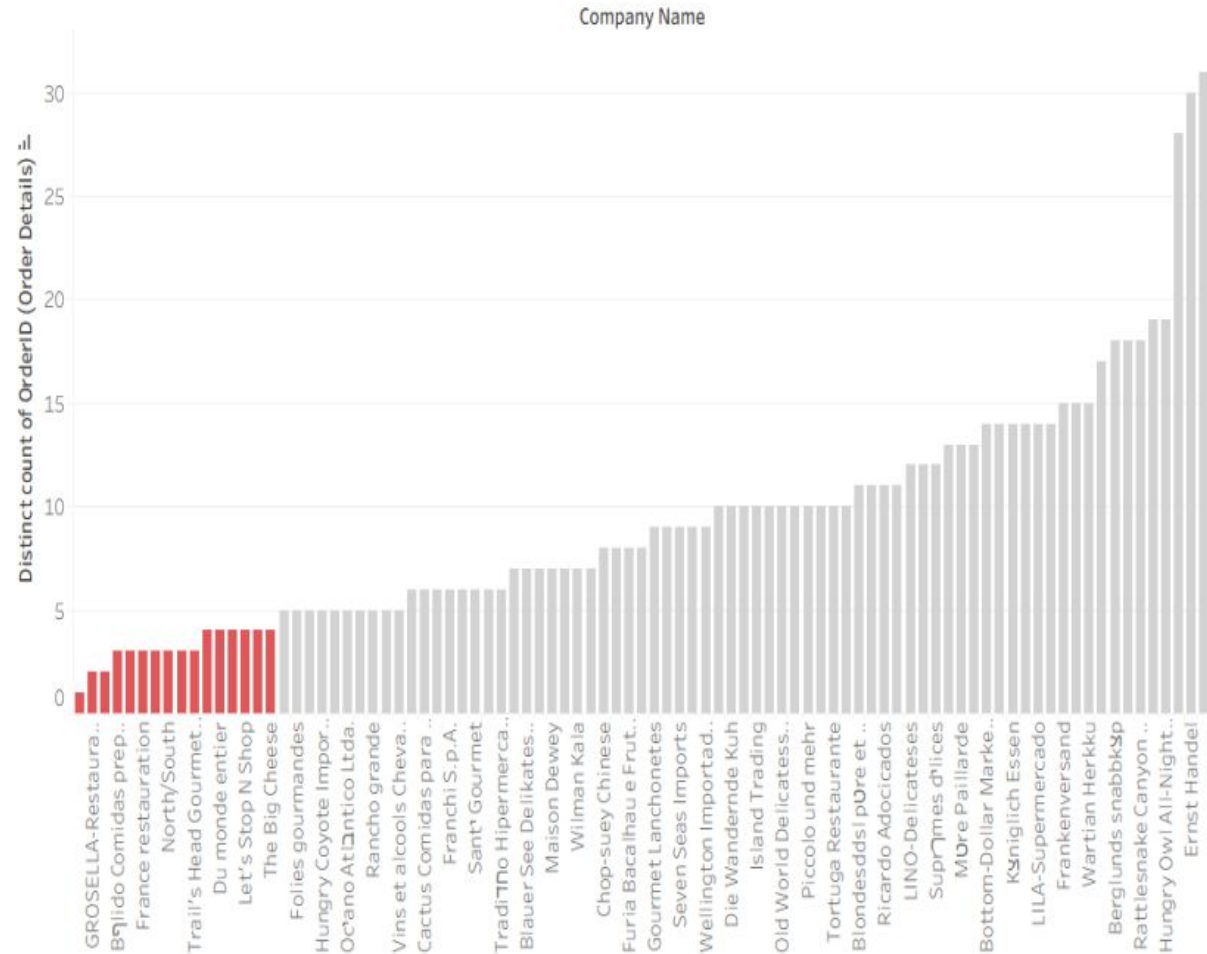
Total Profit per State



Heavy profit Concentration
Both in clients and countries

A few customers contribute
almost half of revenue -both an
opportunity (expand with them)
and a risk (churn of one hurts
revenue).

of Orders per Company



Many Low freq. customers

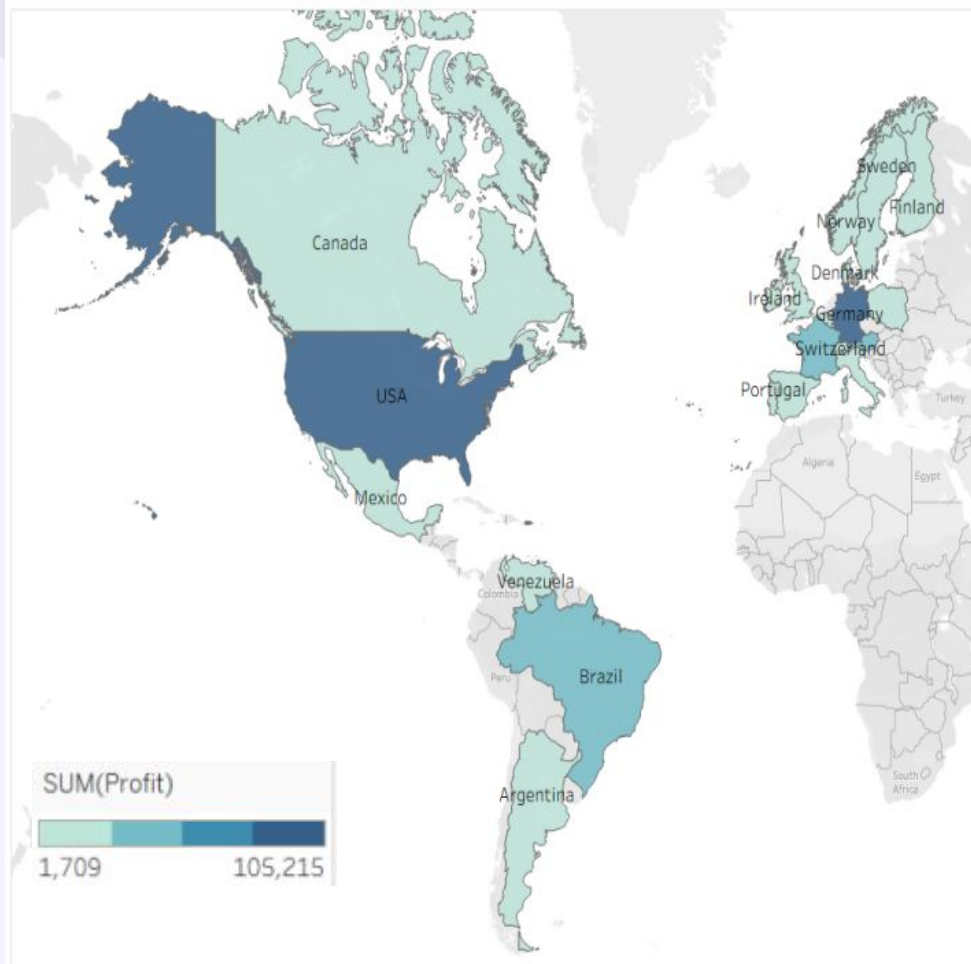
Many customers have lower frequency- opportunity to increase repeat purchase and CLTV.



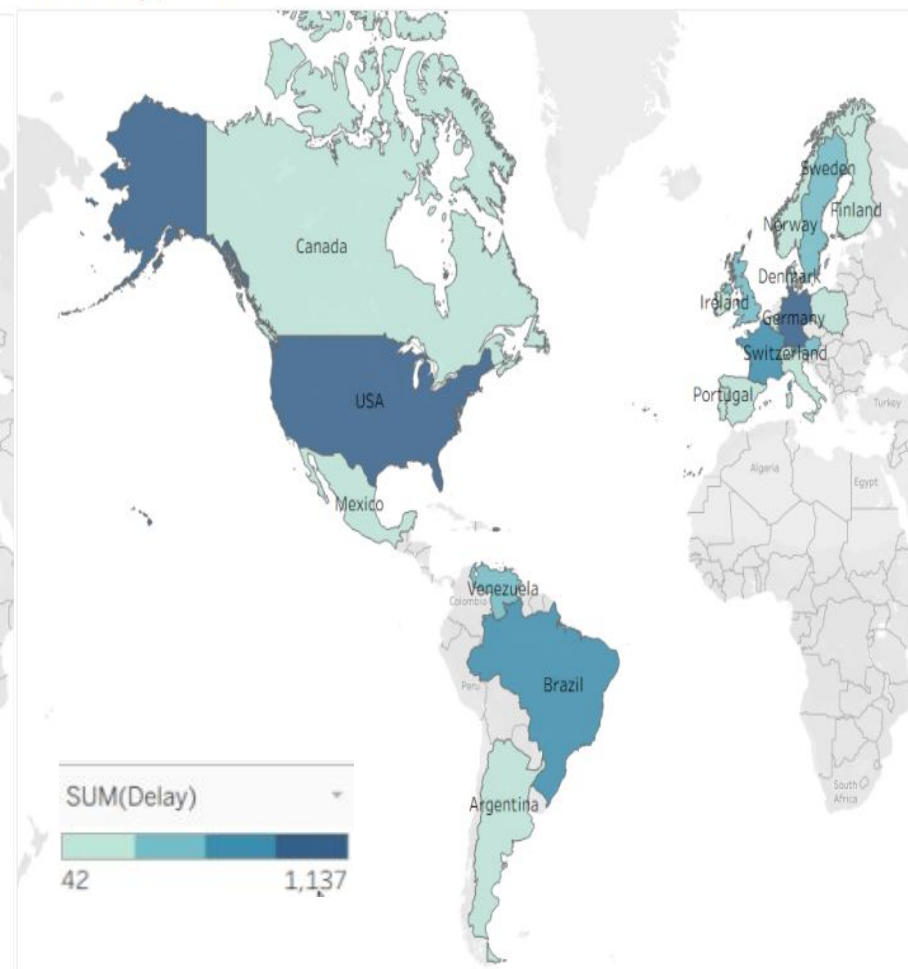
03

Operations And Inventory

Total Profit per State



Total Delay per State



37 DAYS

Was the longest fulfillment time

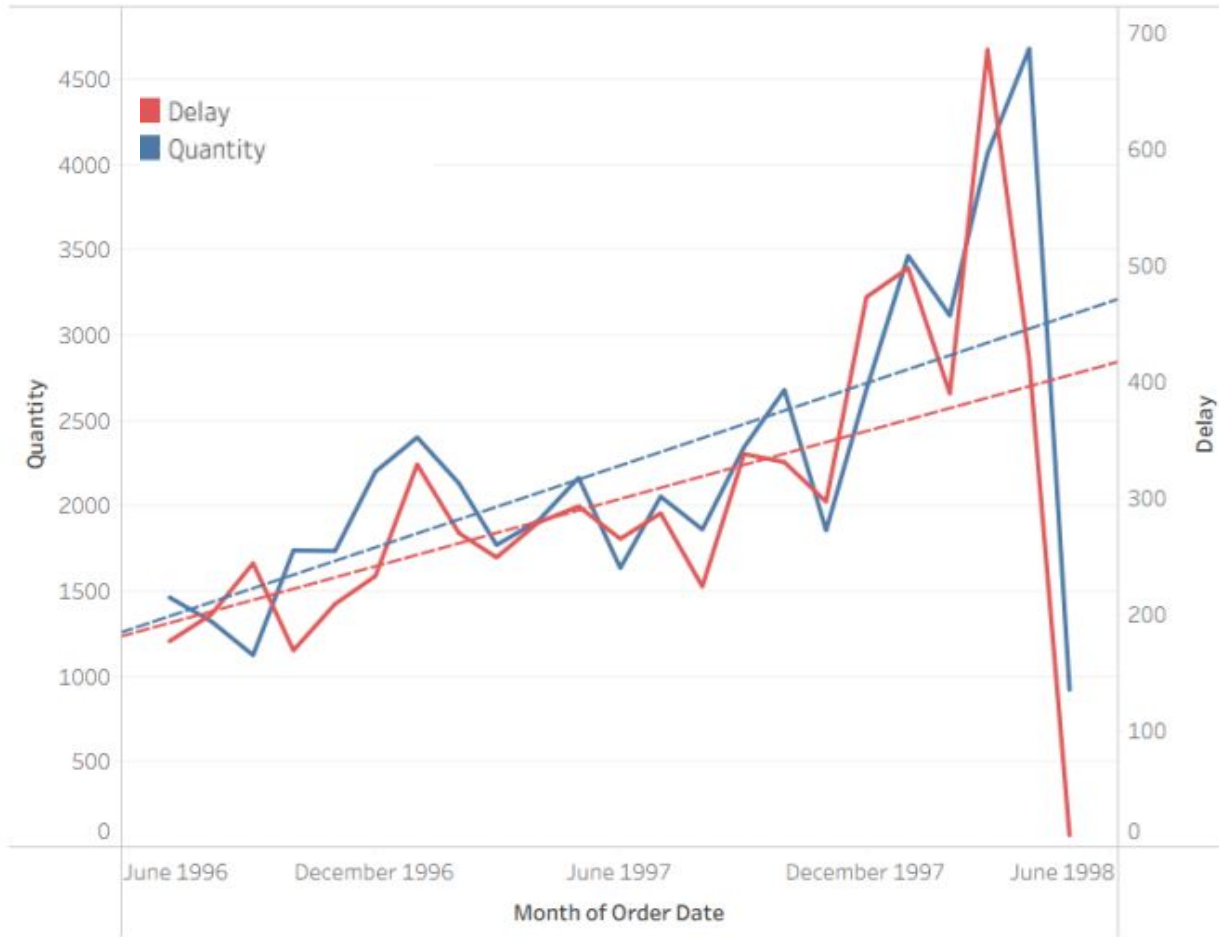
8.5 DAYS

Is the absolute average across all distributors for
each order

11 DAYS

Being the average delay for Ireland, followed by
Sweden with 10.2 days

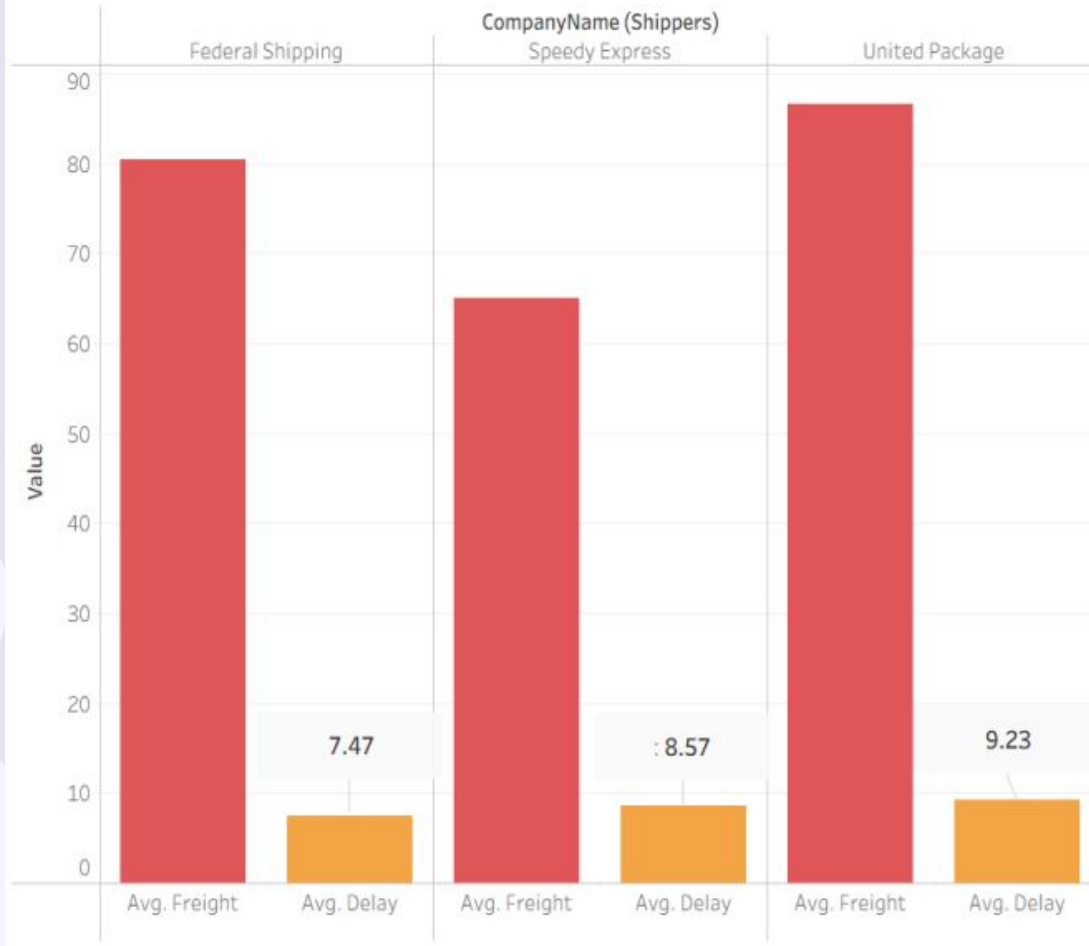
Quantity of products in orders and delay over time



High correlation between
Quantity and Delay

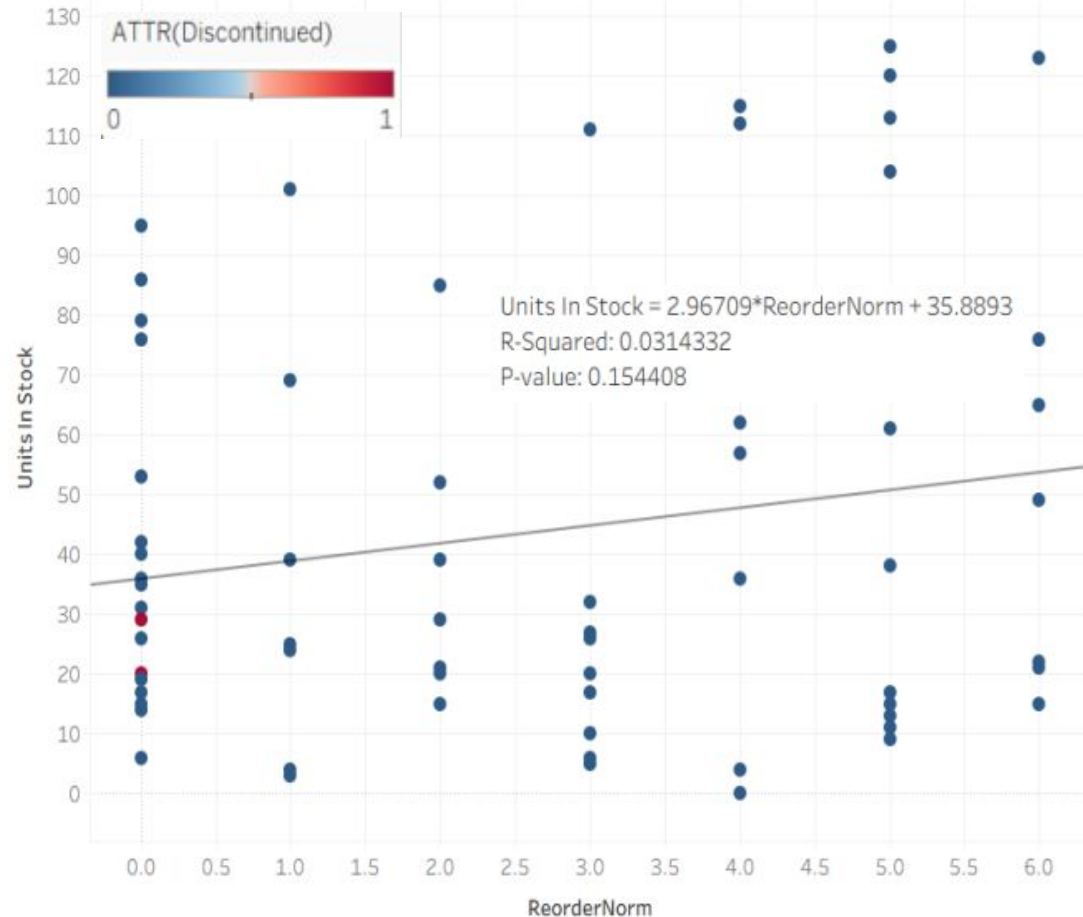
Pearson corr = 0.893

Average Delay and Freight cost per Company



- **United Package** exhibits the highest Freight and Delay of all shipping companies making it the least desirable supplier.
- While **Federal shipping** exhibits the lowest delay, **Speedy express** presents the significantly more economic option while being late in just a day on average.

Reorder Level vs. SKU per product



2 **Discontinued Items** with more than 0 SKU's

The trend line is approximated with a strong bias, indicating a number of SKU's being held with disregard to the reorder levels.

WHAT SHOULD BE DONE



OUR SOLUTIONS

Bundle & cross-sell high-margin complements

Create 2–3 bundles pairing high-turn items with underperformers that have good margin. Promote to customers who bought the top item.



PRODUCT ASSORTMENTS

Rationalize SKUs with low revenue & low velocity

Identify bottom 15% by revenue and evaluate removal/seasonal delist or promotion. Consider clearance pricing or B2B bulk-only offers.



KPI's TO FOLLOW

- Attach rate, Bundle conversion
- SKUs delisted, Inventory carrying cost reduction



OUR SOLUTIONS

Priority account expansion program

Assign strategic account managers to top customers (by profit). Run quarterly business reviews, propose volume discounts or catalog customization.



CUSTOMERS and REVENUE

Introduce subscription / recurring ordering

Offer scheduled replenishment (weekly / bi-weekly) with a small discount or free delivery tier.



KPI's TO FOLLOW

- Upsell revenue, Churn among top accounts
- Subscription uptake, Recurring revenue share



OUR SOLUTIONS

OPERATIONS and INVENTORY

Reduce fulfillment lead time

Analyze processes for orders with >5-day delays and classify causes (stockouts, picking delays, carrier issues). Run a "fast ship" pilot by reserving inventory for top SKUs and commit to 48–72h ship window for top customers or maybe Offer scheduled replenishment

Adjust reorder policy using demand signals

Move from static reorder points to demand-aware reorder: use 6–12 week historical demand, lead time variability and safety stock per SKU to calculate reorder points. Start with top 30 SKUs (by revenue).

Carrier and route optimization

optimize carrier mix by prioritizing cost-efficient, reliable shippers. Consolidate shipments for large customers and negotiate volume-based discounts with preferred carriers.

KPI's TO FOLLOW

- % on-time delivery rate
- Shipping cost per order
- Fulfillment cost as % of revenue.



OUR TEAM



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THANKS



Do you have any questions?

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