

NorthWind DB External Sales Analysis

Team 3

Daniel Furniss Ghazal Alassil Su Mine Caniklioğlu Yüceltan Ebiri

Resources



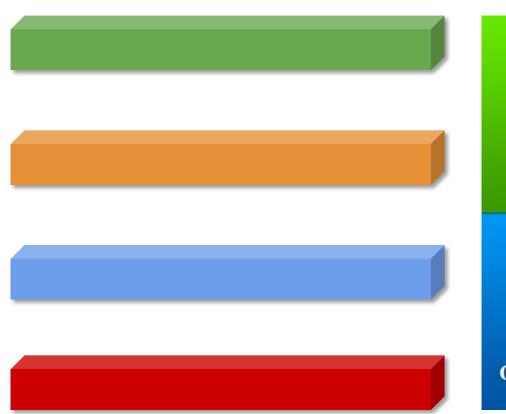






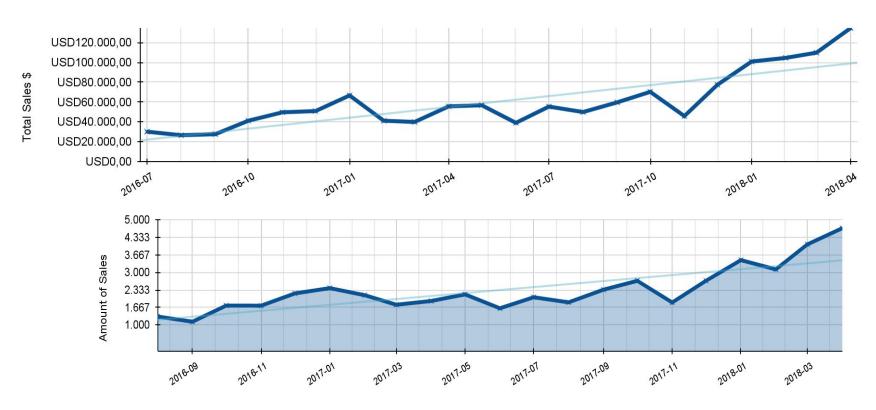






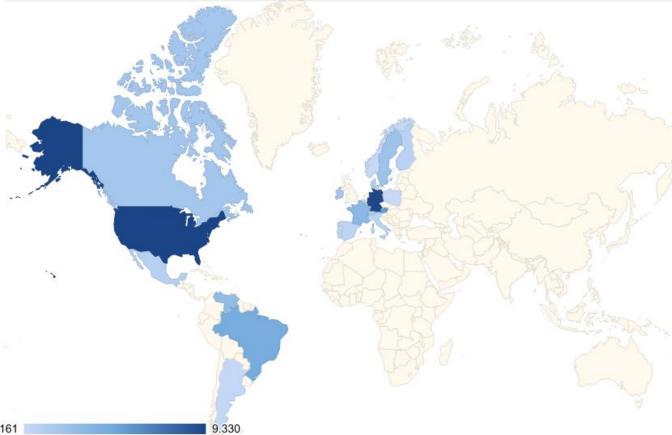


Unit sales and revenue for each month in 2016, 2017 and 2018



Visualisation 1 and 2: Actual sales and revenues for each month.

Sales around the world

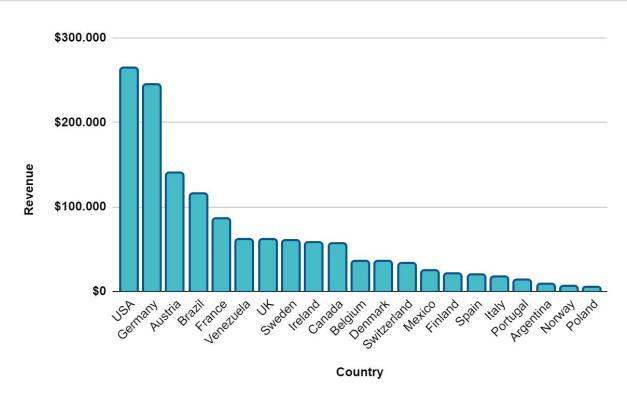


Country =	Subtotal =				
USA	9.330				
Germany	9.213				
Austria	5.167				
Brazil	4.247				
France	3.254				
Venezuela	2.936				
UK	2.742				
Sweden	2.235				
Canada	1.984				
Ireland	1.684				
Belgium	1.392				
Switzerland	1.275				
Denmark	1.170				
Mexico	1.025				
Finland	885				
Italy	822				
Spain	718				
Portugal	533				
Argentina	339				
Poland	205				
Norway	161				

Visualisation 3: Total sales of the countries.

Total Revenue from each country

Sales	Country
\$263.567	USA
\$244.641	Germany
\$139.497	Austria
\$114.968	Brazil
\$85.499	France
\$60.815	Venezuela
\$60.617	UK
\$59.524	Sweden
\$57.317	Ireland
\$55.334	Canada
\$35.135	Belgium
\$34.782	Denmark
\$32.920	Switzerland
\$24.073	Mexico
\$19.778	Finland
\$19.432	Spain
\$16.705	Italy
\$12.469	Portugal
\$8.119	Argentina
\$5.735	Norway
\$3.532	Poland



Visualisation 4: Sales revenue for each market

The Most Loyal Customers to Our Company (Top Ten)

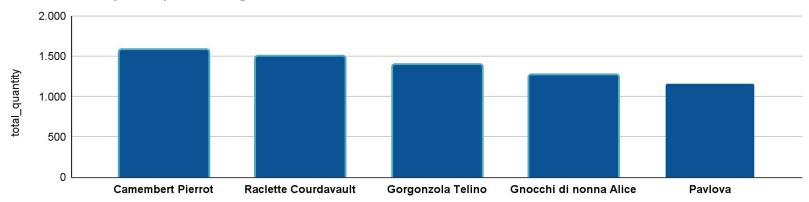
Company	Company Name	Country	Total quantity	Average discount	Total payment
SAVEA	Save-a-lot Markets	USA	4.958	0.08	115.673,39
ERNSH	Ernst Handel	Austria	4.543	0.07	113.236,68
QUICK	QUICK-Stop	Germany	3.961	0.07	117.483,39
HUNGO	Hungry Owl All-Night Grocers	Ireland	1.684	0.11	57.317,39
FRANK	Frankenversand	Germany	1.525	0.07	28.722,71
RATTC	Rattlesnake Canyon Grocery	USA	1.383	0.04	52.245,90
FOLKO	Folk och fä HB	Sweden	1.234	0.09	32.555,55
HILAA	HILARION-Abastos	Venezuela	1.096	0.03	23.611,58
SUPRD	Suprêmes délices	Belgium	1.072	0.03	24.704,40
WHITC	White Clover Markets	USA	1.063	0.07	29.073,45

How can we expand our partnership?

The 5 Top Selling Products at our Company

ProductName	total_quantity	% of discounted	Product Category
Camembert Pierrot	1.577	7%	Dairy Products
Raclette Courdavault	1.496	7%	Dairy Products
Gorgonzola Telino	1.397	8%	Dairy Products
Gnocchi di nonna Alice	1.263	6%	Grains/Cereals
Pavlova	1.158	8%	Confections

Total Quantity of top 5 Selling Products

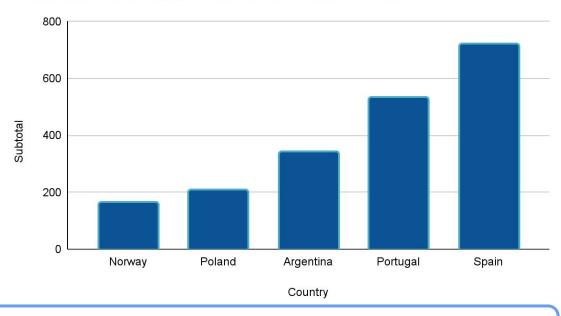


Visualisation 5. Best selling 5 products, bar chart

Countries with The Lowest Unit Orders

Country	Subtotal
Norway	161
Poland	205
Argentina	339
Portugal	533
Spain	718

Total sales of countries with all time lowest sale

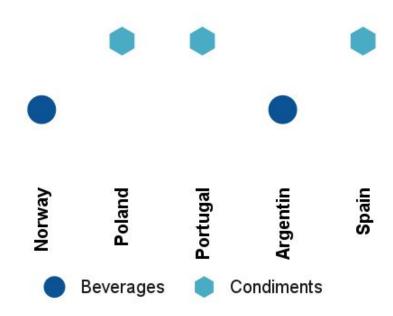


So why our marketing is limited there?

Visualisation 6: All time lowest unit orders by countries.

Best selling categories for countries with the lowest unit orders

ShipCountry	Category	Discounted Sales	Total Sales	% of discounted sales
Norway	Beverages	0	137	0%
Poland	Condiments	0	352	0%
Portugal	Condiments	246	412	60%
Argentina	Beverages	0	505	0%
Spain	Condiments	283	738	38%



Visualisation 7: Best selling categories in lowest sales countries .

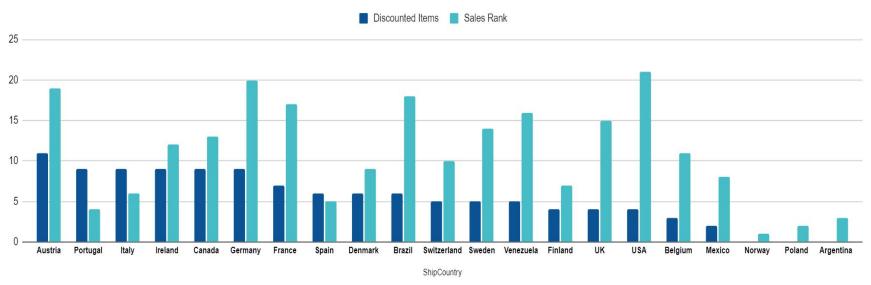
15 Top Selling Products of Each Country and How Many of Them are Discounted.

Ship Country	Austria	Germany	Portugal	Ireland	Canada	Italy	France	Brazil	Denmark	Spain	Venezuela
Discounted Items	11	9	9	9	9	9	7	6	6	6	5
% of discounted Item	73%	60%	60%	60%	60%	60%	47%	40%	40%	40%	33%
Sales Rank	3	2	18	10	9	16	5	4	13	17	6

Ship Country	Switzerland	Sweden	USA	UK	Finland	Belgium	Mexico	Norway	Poland	Argentina
Discounted Items	5	5	4	4	4	3	2	0	0	0
% of discounted Item	33%	33%	27%	27%	27%	20%	13%	0%	0%	0%
Sales Rank	12	8	1	7	15	11	14	21	20	19

Are product discounts improving sales?





there is no correlation between discounted item count and sales rank

Visualisation 8: Discounted Item count and sales rank for each country

Late orders by country - Orders delivered after the required date !!

ShipCountry	num_delays	delay_days
Mexico	15	169
Finland	9	146
Italy	15	133
Poland	6	90
Norway	6	73
Brazil	3	47
USA	7	31
Germany	4	31
France	3	26
UK	4	23
Spain	1	17
Ireland	3	15
Venezuela	2	12
Sweden	3	10
Argentina	1	8
Austria	1	7
Portugal	1	1
Belgium	1	1



Delay days and Shippers

So where is the problem ?!

	Shippers	377	
ShipperID	shipping company	num of delays	delay days
3	Federal Shipping	25	325.0
2	United Package	35	299.0
1	Speedy Express	25	216.0

Delay days and Suppliers

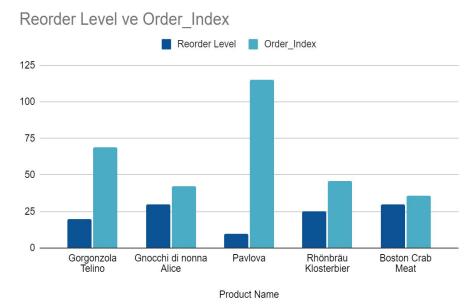
So where is the problem ?!

Supplier Name	How many d	total delay d =
Pavlova, Ltd.	14	155
Plutzer Lebensmittelgroßmärkte AG	18	154
Specialty Biscuits, Ltd.	14	152
Cooperativa de Quesos 'Las Cabras'	8	143
Leka Trading	10	122
Norske Meierier	13	120
G'day, Mate	12	118
Gai pâturage	12	117
Forêts d'érables	6	71
Tokyo Traders	5	66

Top 5 High Reorder Index Products Based on Purchases for the Three Years

ProductID	Total Quantity	Product Name	Reorder Level	Order_Index
31	1397	Gorgonzola Telino	20	69
56	1263	Gnocchi di nonna Alice	30	42
16	1158	Pavlova	10	115
75	1155	Rhönbräu Klosterbier	25	46
40	1103	Boston Crab Meat	30	36

5 best selling products with specified reorder level. The three products from them with the highest reorder indexes are: Pavlova, Gorgonzola and Rhonbrau



Visualisation 10: Top selling products with reorders and reorder index.

Why are we selling our products at cost price?

Product Name	Northwind Price		Supplier Price		Average
	Minimum	Maximum	Minimum	Maximum	Discount
Chai	14,40	18,00	18,00	18,00	0,08
Chang	15,20	19,00	19,00	19,00	0,10
Aniseed Syrup	8,00	10,00	10,00	10,00	0,02
Chef Anton's Cajun Seasoning	17,60	22,00	22,00	22,00	0,08
Chef Anton's Gumbo Mix	17,00	21,35	21,35	21,35	0,08
Grandma's Boysenberry Spread	20,00	25,00	25,00	25,00	0,03
Uncle Bob's Organic Dried Pears	24,00	30,00	30,00	30,00	0,03
Northwoods Cranberry Sauce	32,00	40,00	40,00	40,00	0,07
Mishi Kobe Niku	77,60	97,00	97,00	97,00	0,10

Supplier Price



Northwind Price

What about costs and expenses?



Discount



Shipping

Profit & loss statement

Revenues			
Sales (A)	\$1,265,793.04		
Expenses	0		
Cost of goods sold (B)	\$1,354,458.59		
Net Income (A-B)	-\$88,665.55		

Shipping fees \$64 942.69 - Borne by customer?

Discount on goods sold \$88 665.55

Conclusions:

- Need to track supplier orders in database for complete cost analysis.
- Employee wages, facility costs and administrative costs not available in DB.
- Increase prices or lower costs.
- We are losing money!!!

STRENGTHS (+)

- Variety of region-based distribution, company reached 21 countries.
- Company has a positive trend on sales growth.
- Diversity of products, 77 products in various categories

OPPORTUNITIES (+)

- Discounts can change according to the seasons
- Company has good connections internationally.
- Expand product range this may lead to a wider target audience
- Expand into new markets see map

WEAKNESSES (-)

- Company is running at loss as products are sold at cost price.
- Supplier costs should be recorded in the DB to allow effective profit & loss analysis.
- Missed order deadlines reduce brand reputation.
- Only 3 shipping companies used.
- With current strategy discounts doesn't improve sales.

THREATS (-)

- Fluctuations in prices of supplies may occur.
- Discontinued products may reduce catalogue, reducing sales.
- Inventory reorder delays may contribute to late orders.

