

## Communicating Analysis Results: Tableau Sprint 1: Visualising Data Using Tableau

### Tableau Practical Project

In this project I received the Adventure Works Sales orders dataset, with several sheets where I can find Sales orders, Employees, Territory and Sales Reasons data from which I have to bring insights about how the business performs. For the analysis I am following six steps of data analysis and expanding a bit more what I did in each step.

#### 1. Ask

So first of all I have few key business questions for which I need to provide the answers and bring as much insight as possible.

The main questions I wanted to answer:

- **Business Monthly Trends**
  - How do they performed over the year in revenue and number of sales orders?
- **Business Monthly trends in each channel (Online versus Offline)**
  - What are the trends of the orders received from each channel and which of the channels generates more revenue over the time.

And I have some additional questions from the business which would be nice to overview.

- **The delivery performance trends.**
  - The delivery performance trends. How we are performing delivering products to customers?
- **Salespersons by revenue, by number of orders**
  - Which salespersons performed the best and brought more revenue and had the most sales orders over time?
- **Regional Information**
  - How much revenue and how much sales orders we received from each country and which country performed better?
- **Sales Reasons information**
  - Which sales reason brought more revenue and had the most sales orders from online channel?

Here are the few questions I will answer in my analysis using Tableau.

#### 2. Prepare

In the second part as I went through the data, to check, what kind of data is provided in each sheet and what kind of data I need to have in **Sales order Data** and what additional information I need from other tables in order to answer the questions received from the business.

Link to Google Sheet: <https://docs.google.com/spreadsheets/d/1VklHh2S9gEd8ApYmtlCpBmjVLPGLpE0CTi9FpvEfTW4/edit?usp=sharing>

### 3. Process

In the third step I once again checked the information I have and if there is any necessary data needed to bring the insights for the business. And prepared tableau public for platform where I share my results with final users.

### 4. Analyse

From received data and ready with tableau public now I can deliver the answers to the questions and bring insights

For the main analysis I created a Tableau Dashboard where user can easily interact with it, filter period of time or change the measures for the analysis, where he can see dashboard by revenue or by number of sales orders.

Link to Tableau Public dashboard: [https://public.tableau.com/views/TC-GradedTask1/OverviewDashboard?:language=en-GB&:display\\_count=n&:origin=viz\\_share\\_link](https://public.tableau.com/views/TC-GradedTask1/OverviewDashboard?:language=en-GB&:display_count=n&:origin=viz_share_link)

#### • Main information

First off all I created few number just to easily see the main information about the business to bring attention. How many orders they received, how many revenue they gather, average order value and average shipping time and Due time.

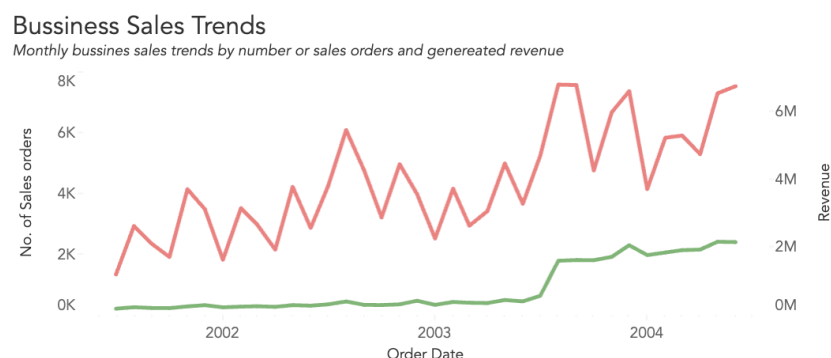
Secondly I started to answer business questions and bring insights

Number of Orders	Total Due	Average order value (AOV)	Average Shipping Time	Average Due Time
30 489	\$ 140 635 654	\$ 4,613	7 Days	12 Days

#### • Business Monthly Trends

- How do they performed over the year in revenue and number of sales orders? Business would like to see the monthly sales trends

- In here I created a chart where we can see revenue and received number of sales orders by each month, from the analysis we can see that in 2003 July the orders received from customers nearly tripled compared to others previous periods which show us a significant increase in revenue too.

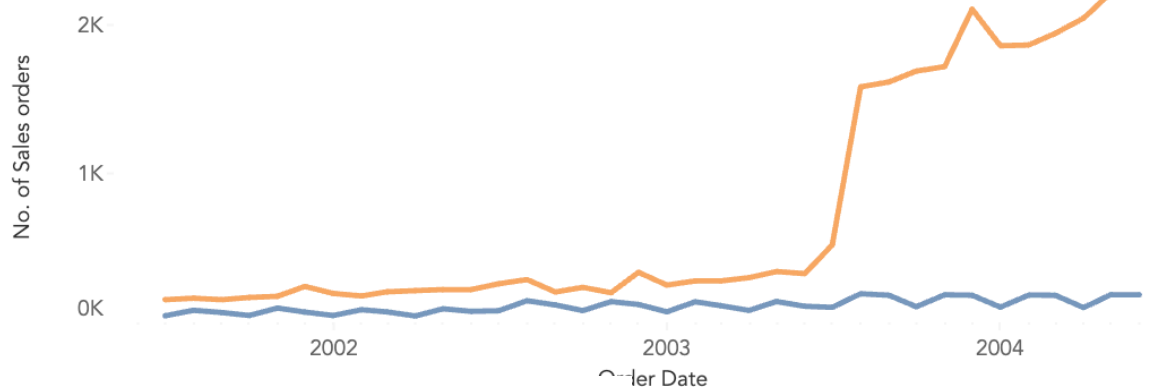


From the data I have that online orders increased from the 2003 July nearly increased 3 times as the sales orders of offline remained steady.

As I check the data the main reasons why online reasons increased this much from the data from 2003 July there are a new sales reasons why people are choosing to buy online, which is Price. As the price reason has 63 % of all the sales from online orders, customer are placing more orders but with smaller average amount of orders

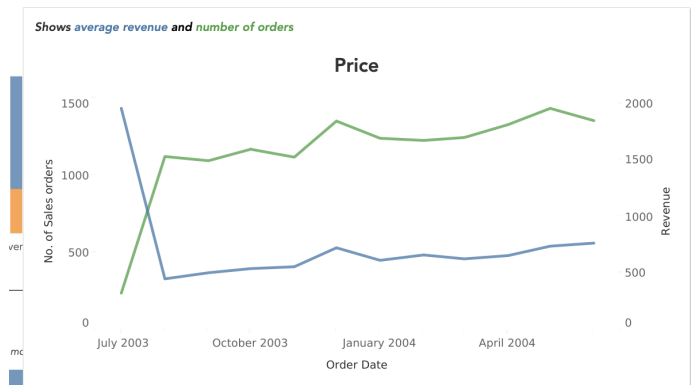
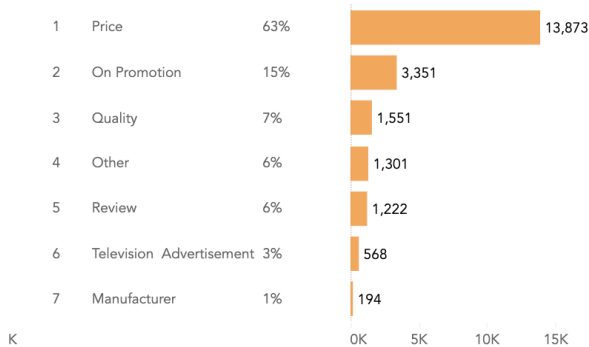
## Monthly Sales

Monthly sales by channels



## Sales Reasons

Shows Online sales by reasons



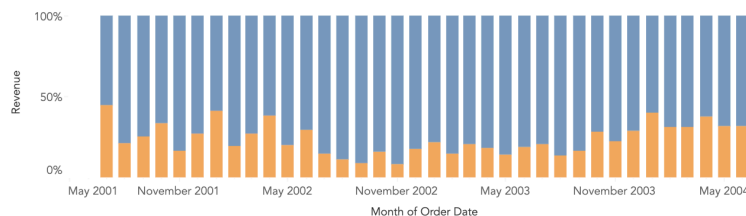
## - Business Monthly trends in each channel (Online versus Offline)

- What are the trends of the orders received from each channel and which of the channels generates more revenue over the time.

From the analysis we can clearly see that the Offline channel generated more revenue (77%) than online (23%)

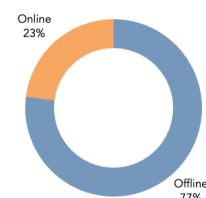
## Online vs Offline Percentage of Revenue

Monthly Revenue distribution of online and offline sales orders



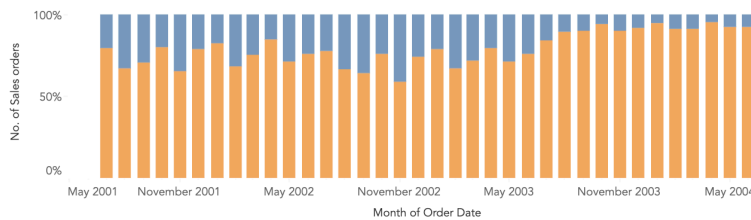
## Online vs Offline

Comparison of sales channels by Revenue

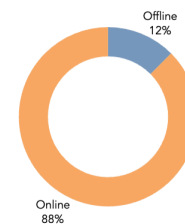


But if we check the analysis from number of sales orders we can see that Online receives more sales orders (88%) than offline (12%)

**Online vs Offline Percentage of No. of Sales orders**  
Monthly No. of Sales orders distribution of online and offline sales orders



**Online vs Offline**  
Comparison of sales channels by No. of Sales orders



This analysis indicates that we receiving more revenue for offline channel, which for the data I checked are more selling for vendor, but we receiving a lots of sales orders for online customers which buying directly from the companies warehouses.

### • Delivery performance trends

From Shipping trends we can see that the average time of shipping time from the received order date to shipping date is 7 days and average time did not change over the time from the checked data.

Average Shipping Time

**7 Days**

Average Due Time

**12 Days**

### - Salespersons by revenue, by number of orders

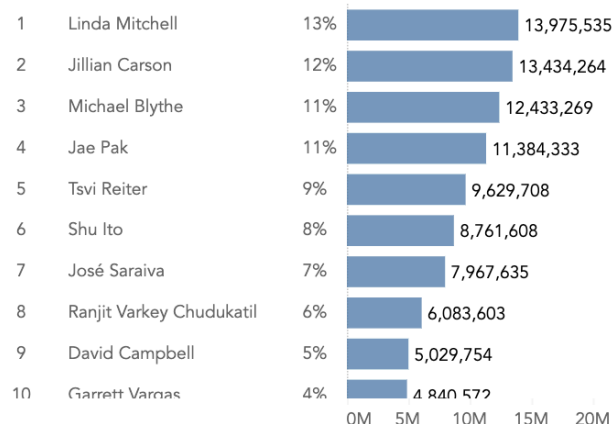
- Which salespersons performed the best and brought more revenue and had the most sales orders over time?

*Note: First of all, from the data I saw that the online sales do not have assigned salesperson. The chart shows only a offline sales orders data with assigned salespersons.*

From the data bellow we can see that the top sales person is Jillian Carson which ranked 1 buy Offline sales. She generates nearly 14 million in revenue (13%).

### Salespersons

Showing all salespersons with Offline sales

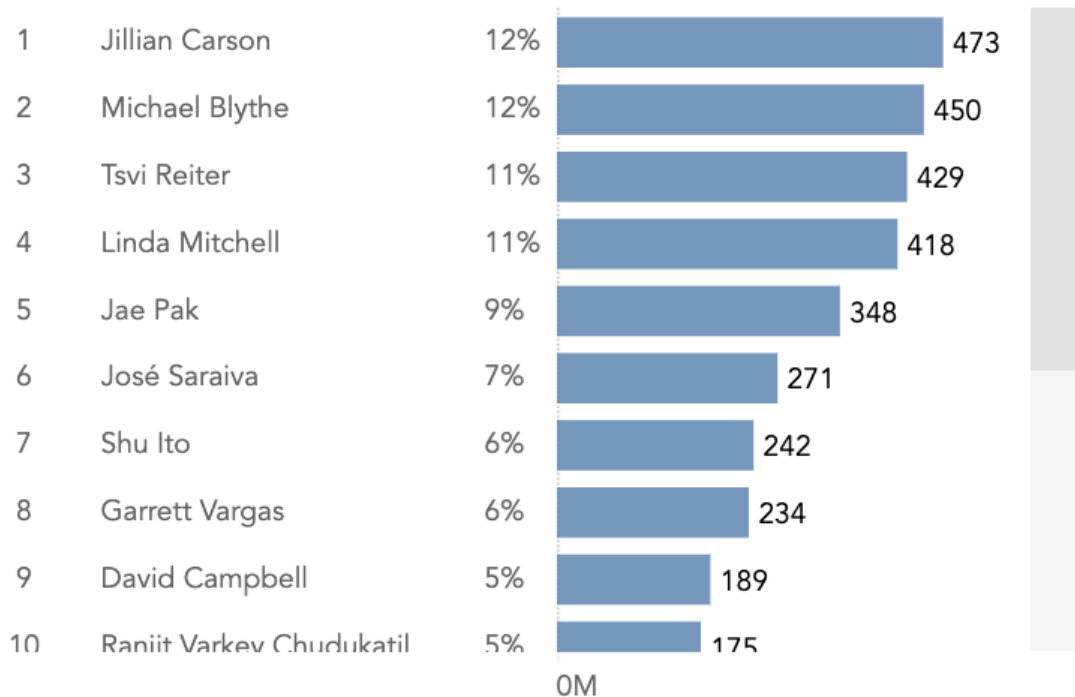


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But if we change the measure type to number of orders received we can clearly see that Jillian received more sales orders 473 (12%) although she ranked number 2 of revenue generated.

## Salespersons

Showing all salespersons with Offline sales



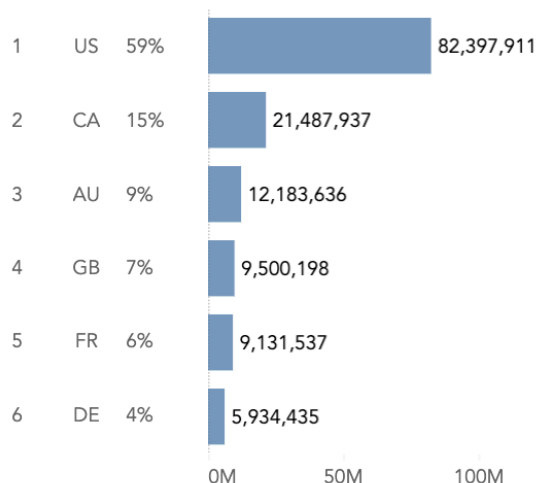
### - Regional Information

- How much revenue and how much sales orders we received from each country and which country performed better?

From the data below we can see that the majority of sales comes from US (80 mln) which generates 59% of the revenue and received 38% of all orders, compared to the other countries which generates substantially less compared to US.

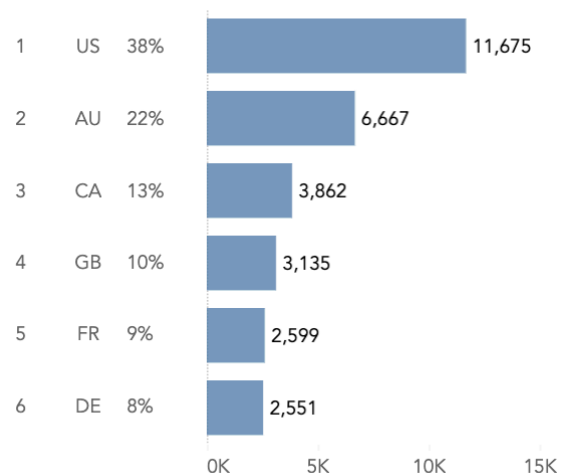
### Location

Which country generates the most in Revenue



### Location

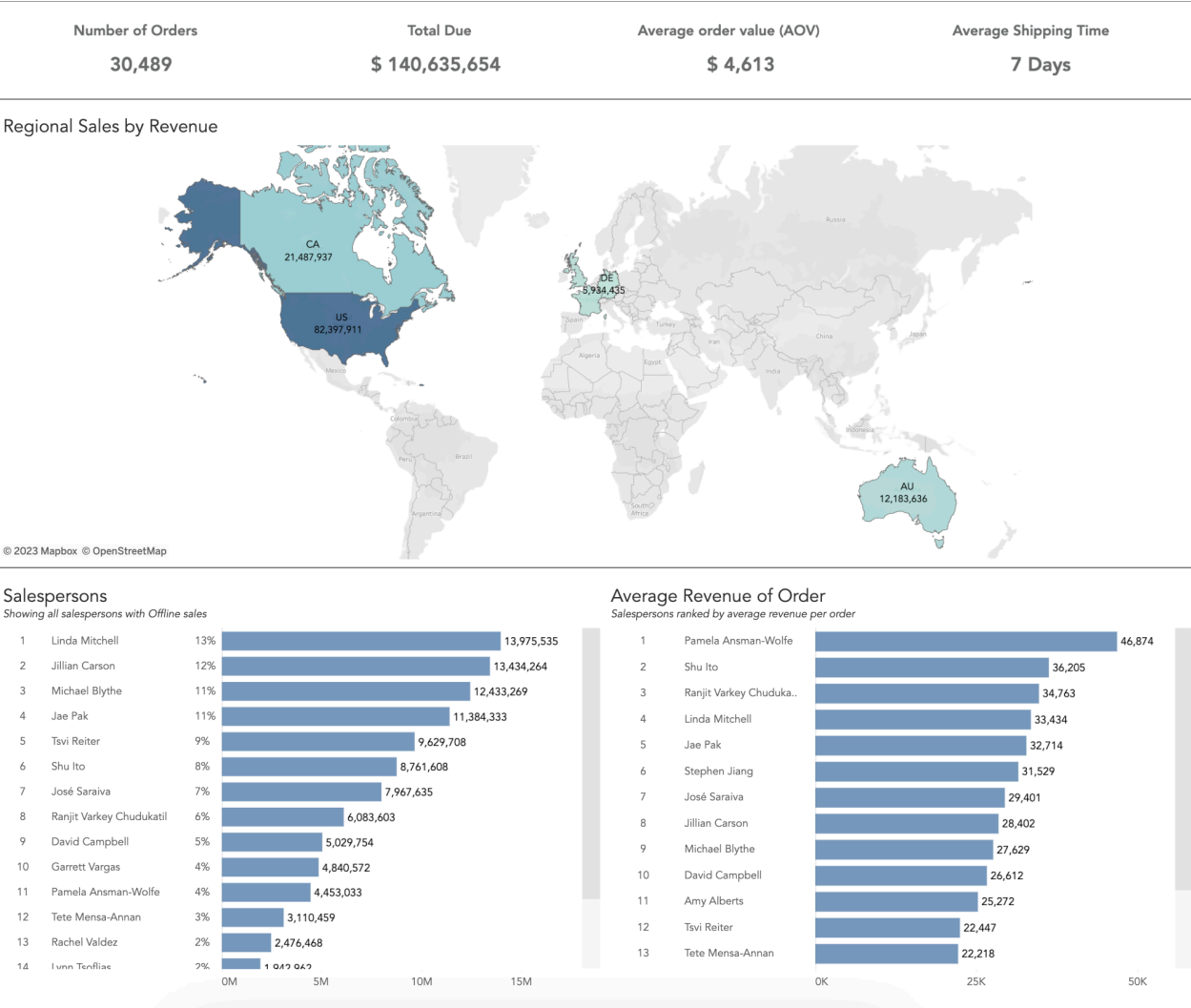
Which country generates the most in No. of Sales orders



For better visualisation I created additional dashboard 'Sales Dashboard | Overview'. You can go to the sheet by clicking the Globe icon in navigation.

In here we can clearly see all the countries on the map with generated revenue per country, which salesperson generated the most revenue and average revenue generated per each person.

The user can easily select the country on the map and see top performers by revenue or if user change measure type to No. Of sales orders, the sales orders.



## - Sales Reasons information

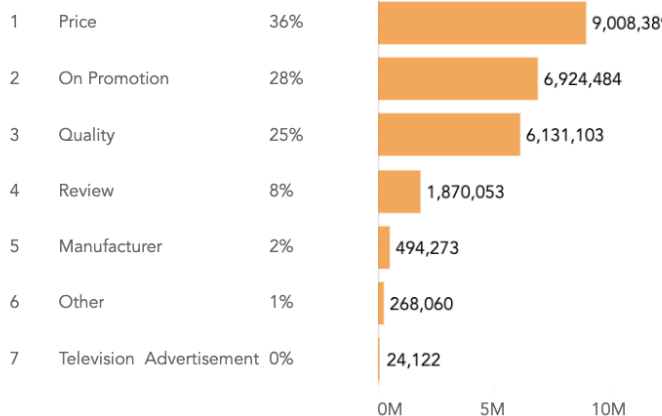
- Which sales reason brought more revenue and had the most sales orders from online channel?

*Note: only Online channel have the sales reasons, for that reason in here shows only online sales orders*

In the business the main sales reason is Price with more than 9 mln in revenue (36%) and nearly 14 thousands of online orders (63%).

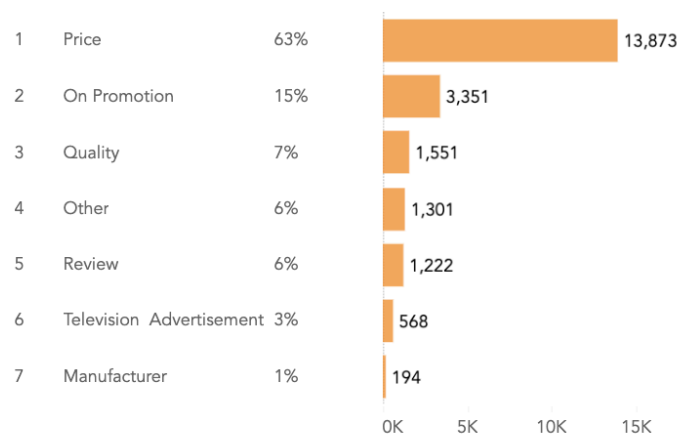
### Sales Reasons

Shows Online sales by reasons



### Sales Reasons

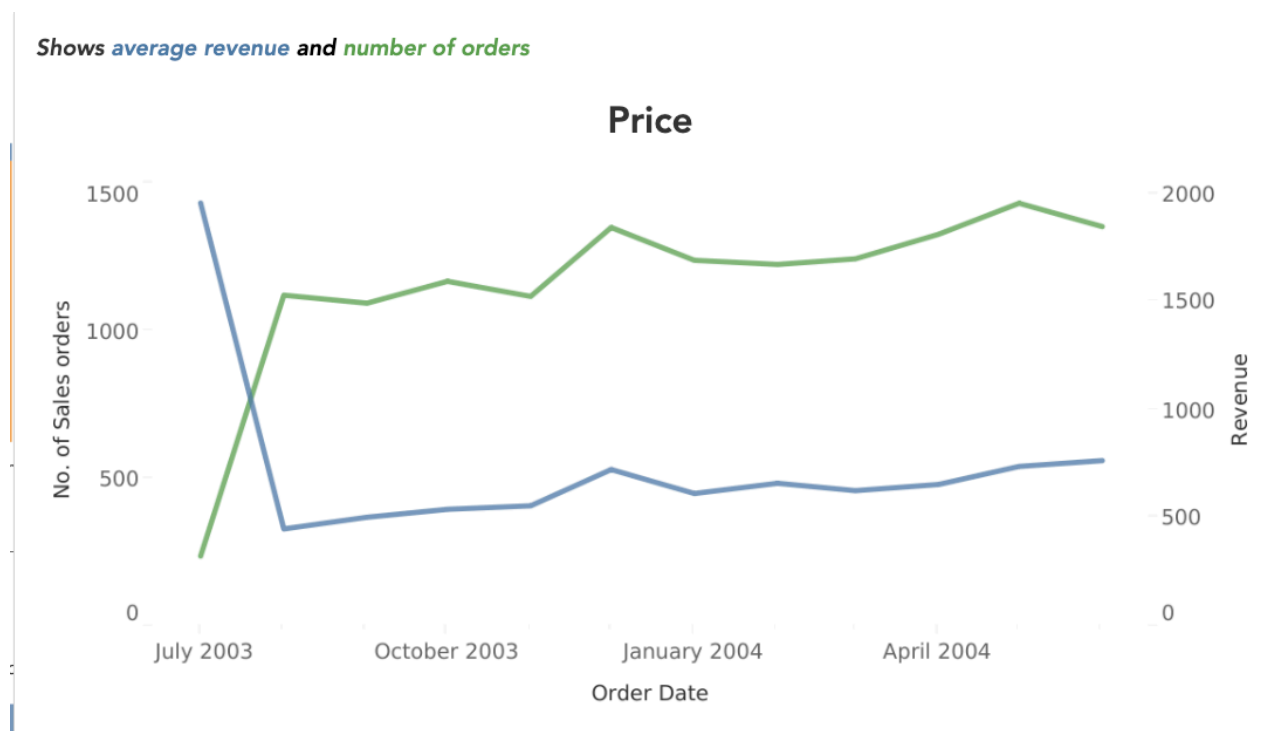
Shows Online sales by reasons



If you hover on the one of the bar you can easily see, average revenue and number of sales orders generated over the period of time.

From the data check, we saw that the main increase of the sales orders in 2003 July comes from online sales which Price reasons. This indicates, that the business reduced the prices for theirs online customers, which we can see that there average order price got smaller over the time and for that reason they received more orders.

Shows **average revenue** and **number of orders**



## 5. Share

From the data received from the business and the analyses made, now I can easily answer the important business questions:

- **Business Monthly Trends**

- How do they performed over the year in revenue and number of sales orders?

Currently we can see from the data that business is growing and from 2003 July the number of sales orders nearly tripled.

- **Business Monthly trends in each channel (Online versus Offline).**

- What are the trends of the orders received from each channel and which of the channels generates more revenue over the time.

Currently as we can see business received more orders online than offline, but the the majority of the revenue are still generated by offline sales channel. The main reason why business received more online sales orders are for the price reason as the business might adjusted their prices for online customers..

- **The delivery performance trends.**

- The delivery performance trends. How we are performing delivering products to customers?

From Shipping trends we can see that the average time of shipping time from the received order date to shipping date is 7 days which is steady over the time and the from the data check average order due time from received order to due date is 12 days. This show that we keep our commitments to our customers to deliver products on-time.

- **Salespersons by revenue, by number of orders**

- Which salespersons performed the best and brought more revenue and had the most sales orders over time?

From provided data we can see that the top salesperson by revenue is Linda Mitchell which brings 13% in total revenue (*approximately 14 mln*).

About salespersons by number of sales orders, Jillian Carson had the most sales orders from all of salespersons 12% (*with 473 orders*)

- **Regional Information**

- How much revenue and how much sales orders we received from each country and which country performed better?

We can see that the majority of revenue received form United states market (59%) and other countries performed significantly less than United states.



- **Sales Reasons information**

- Which sales reason brought more revenue and had the most sales orders from online channel?

Analysing online sales we can see that the major sales reasons was coming with Price reason which generated more than 9 mln (36%) and received the most sales orders (*approximately 14 thousands*) and television advertisement generated the least revenue and received the least orders.

## **6. Act**

As from the data analysis here are some insights that could increase the performance of the business.

- From provided data it is best to continue to with offline and online sales as to have two revenue streams and in the future increase online sales prices.
- As we can see from the data that from 2003 July the number of sales orders increases, nearly tripled. From deeper analysis we can see that from that period of time, we received more online orders and most of them with Price reason, which caused increase in number of orders.
- As we saw that we had increase the number of sales order the shipping time remain the same, need to continue keep the steady delivery time, because we could loose some customers if the the time increase over the average sales orders due time.
- From the salespersons data we can see that few persons significantly generates more revenue than others. Need to work with other sales persons, maybe provide more internal training in order to increase they revenue and received more sales orders.
- As for the country sales we can see that the US market dominates over the other markets. We need to check more how we can increase the sales in other markets too, check the competitors what they are offering and prices, maybe they offering the same products but with smaller price, need to have a deeper analysis with assigned salespersons.
- From online sales reasons analysis it clearly sees that the price are the major reason why people are buying companies product and increased companies number of received orders. From the television advertisement we received the least orders compared to other reasons, maybe the commercial we translated did not bring the message about our product or we need to cancel our advertisements via television and use the budget to attract more customer via Promotions as we can see this is the second highest reasons which generates around 7 mln.