



ADVENTURE HARDWARE AND GROUP DATA VISUALISATION & FORECAST

PRESENTED BY MEGHA BARGAJE

ADVENTURE HARDWARE GROUP



About AHG...

- ❖ Adventure Hardware Group (AHG) was established in 2011 and is a global manufacturing organization with operations in America, Europe . AHG operates in 6 Regions and the main products are Bikes, Accessories, Clothing and Components. These products are sold using online Channel using web and Reseller Channel delivering services through stores.
- ❖ Coming Fiscal Years ,AHG is looking to broaden his market share towards by targeting their sales to their best customers, extending their product availability through an external Web site, and reducing their cost of sales through lower production costs.
- ❖ AHG need Kernel to develop a Business Intelligence and Insight Visualisation capability to better understand and monitor key trends over time.

AHG started in 2011

Operates in 6 Regions

19K
Customers

266
Products

3 Types of
Bikes Sold

Sales Channel
Online
Reseller

AHG INSIGHTS

- ❖ Across the 6 Regions, AGH sales have grown 100 % since the end of 2011 to 2014 (26% Online and 74% Reseller).
- ❖ The Total Sales of AHG for both Sales Channel(Online and Reseller):
Bikes : 86.21%
Accessories: 1.15%
Clothing: 0.94%
Components: 10.70%
- ❖ The above indicates the majority of AHG revenue is covered by Bikes (86%).
- ❖ There has been sharp increase in online transactions from **May 2013 till July 2013** and exponentially increased to **5.86% from 0.28%** .
- ❖ The increase is due to introduction of product "**Accessories and Clothing**" online from **May 2013**.
- ❖ Moreover, there is an increase in online from 2013 and has surpassed the sales of Reseller in 2014 by 2.6% which represents customer are buying **MORE** products online.
- ❖ Region with Highest Total Sales from 2011.
United States is the region with the **highest online sales** of 40.48% .
Australia is the region with the **highest online sales** of 39.10%.

AHG INSIGHTS

According to Market Basket Analysis:

The top 5 products that can be sold together online are:

- ❖ Road Tire Tube with HL ,ML ,LL Tire Tube
- ❖ Touring Tire Tube with Touring Tire Tube
- ❖ Road Water Bottle -750 Road Bottle Cage
- ❖ Water Bottle –with Road Bottle Cage, Mountain Bottle Cage, Hydration Pack.
- ❖ Sports 100 cap with ML Touring Tire Tube, Touring Bike 1000,2000,3000,Half Finger Gloves, Road Tire Tubes.

5 year Forecasts predict:

- ❖ **Online :** Australia, France, Germany, UK and US show promising rise in sales until start of 2021.
Canada declining in sales by 2021
- ❖ **Reseller:** Australia, Canada, France, US show promising rise in sales until start of 2021.
Germany declining in sales,
UK & US- Southwest bearing scratching surface to stay over zero.

FINANCE AND DEMOGRAPHICS



Summary of Finance Information/AHG Dashboard

Is there a shift towards Digital Era

Is the Business making Profit

Customer Demographics

Areas where AHG can improve

Summary of Finance Information(May 2011-June 2014)/AHG Dashboard

Product Sales,Cost and Profit by Sales Channel

Product Name	Sales_Channel	Total Sales	Profit	%ProfitMargin
Accessories	Online	£700,760	£438,674.57	62.60%
Bikes	Online	£28,318,145	£11,112,855.74	39.24%
Clothing	Online	£339,773	£136,412.58	40.15%
Total		£29,358,677	£11,687,942.88	39.81%
Components	Reseller	£11,807,808	£495,447.92	4.20%
Accessories	Reseller	£578,001	£204,407.72	35.36%
Clothing	Reseller	£1,801,734	£193,434.09	10.74%
Bikes	Reseller	£66,827,669	-£2,681,821.07	-4.01%
Total		£81,015,212	-£1,788,531.34	-2.21%

Speculation:

- ❖ The **Reseller Sales** covers 74% of Total Sales for AHG, however the profit is negative by -2.21 %.
- ❖ The **Online Sales** represent only 26% of Total Sales for AHG, the profit is positive by 40%.
- ❖ The **US** region is the region with highest Profit Margin of 40.48% for online sales while it generates negative profit of -2.08% for Reseller Sales.
- ❖ **Australia** is the second largest Region with online sales of 39.10% with negative reseller profit of -4.94%.
- ❖ The **Bikes** represent 86.21% of sales , however only one Sales Channel – Online generates positive profit of 39.24%

Total Sales,Cost and Profit By Sales Channel

Sales_Channel	TotalCost	Total Sales	Total Profit	%ProfitMargin
Online	£17,670,734	£29,358,677	£11,687,942.88	39.81%
Reseller	£82,803,743	£81,015,212	-£1,788,531.34	-2.21%
Total	£100,474,478	£110,373,889	£9,899,411.54	8.97%

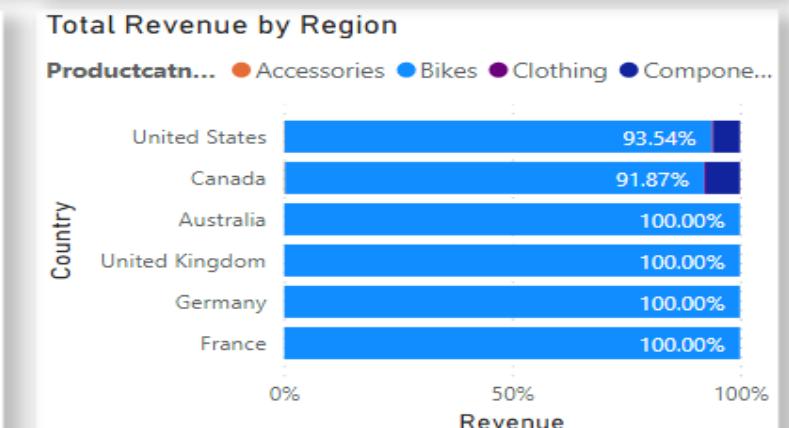
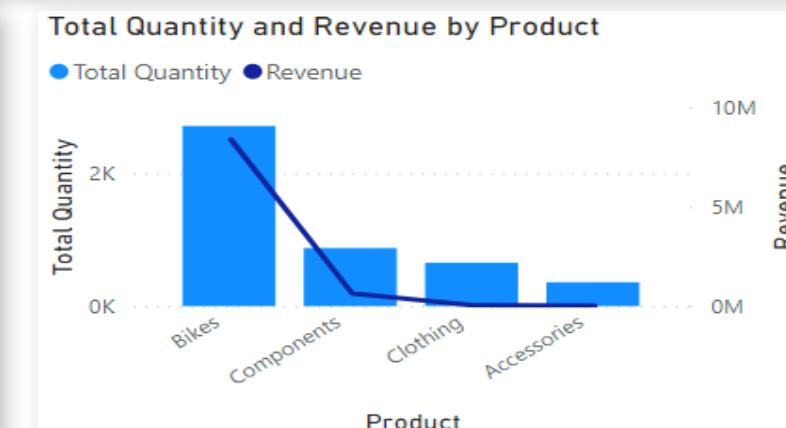
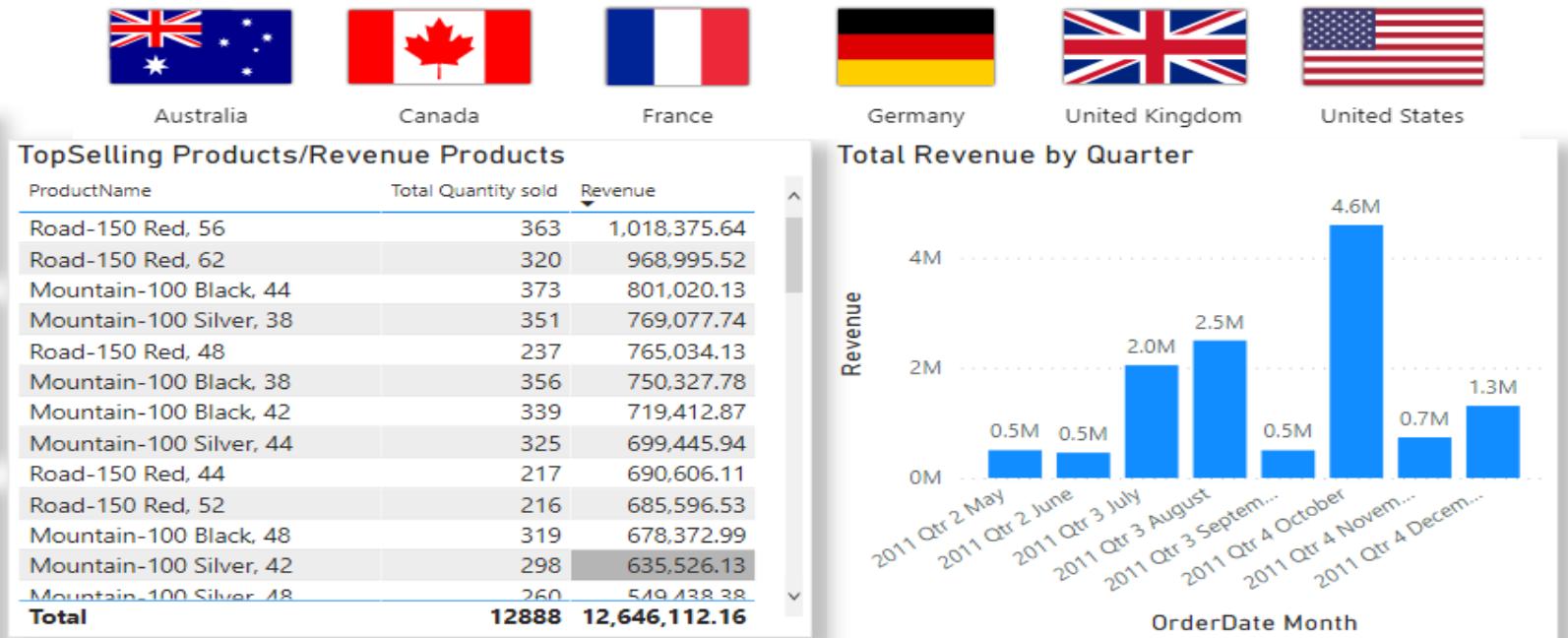
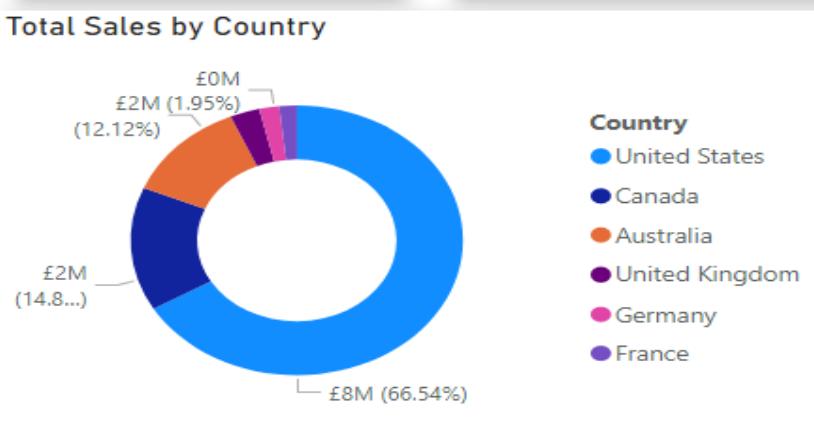
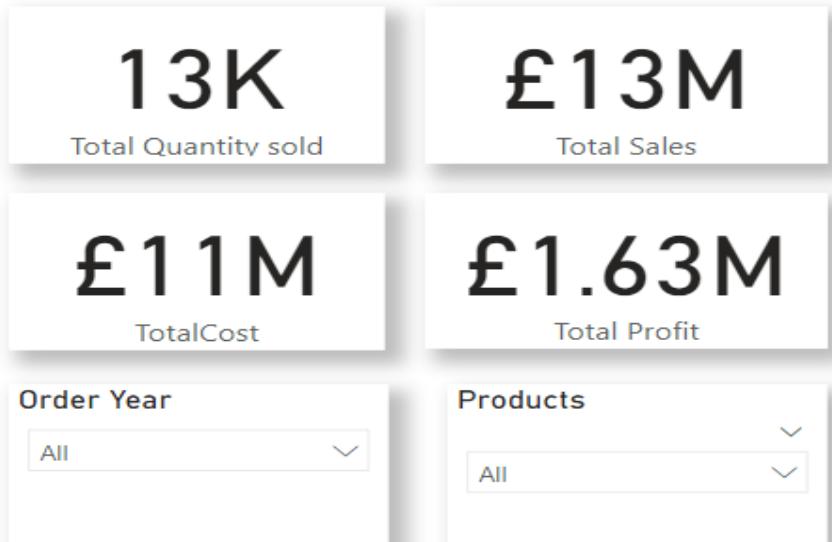
Region Sales,Cost and Profit By Sales Channel

Country	Sales_Channel	TotalCost	Total Sales	Total Profit	%ProfitMargin
Canada	Online	£1,166,195	£1,977,845	£811,649.48	41.04%
United States	Online	£5,589,173	£9,389,790	£3,800,616.33	40.48%
Germany	Online	£1,746,456	£2,894,312	£1,147,856.02	39.66%
United Kingdom	Online	£2,048,959	£3,391,712	£1,342,753.04	39.59%
France	Online	£1,601,926	£2,644,018	£1,042,091.74	39.41%
Australia	Online	£5,518,024	£9,061,001	£3,542,976.26	39.10%
Total		£17,670,734	£29,358,677	£11,687,942.88	39.81%

Country	Sales_Channel	TotalCost	Total Sales	Total Profit	%ProfitMargin
Australia	Reseller	£1,703,056	£1,622,869	-£80,186.84	-4.94%
Canada	Reseller	£14,785,259	£14,463,280	-£321,978.52	-2.23%
France	Reseller	£4,756,535	£4,647,454	-£109,080.79	-2.35%
Germany	Reseller	£2,125,935	£2,051,548	-£74,386.85	-3.63%
United Kingdom	Reseller	£4,389,853	£4,311,127	-£78,725.86	-1.83%
United States	Reseller	£55,043,106	£53,918,934	-£1,124,172.48	-2.08%
Total		£82,803,743	£81,015,212	-£1,788,531.34	-2.21%

AHG Dashboard

AHG DASHBOARD

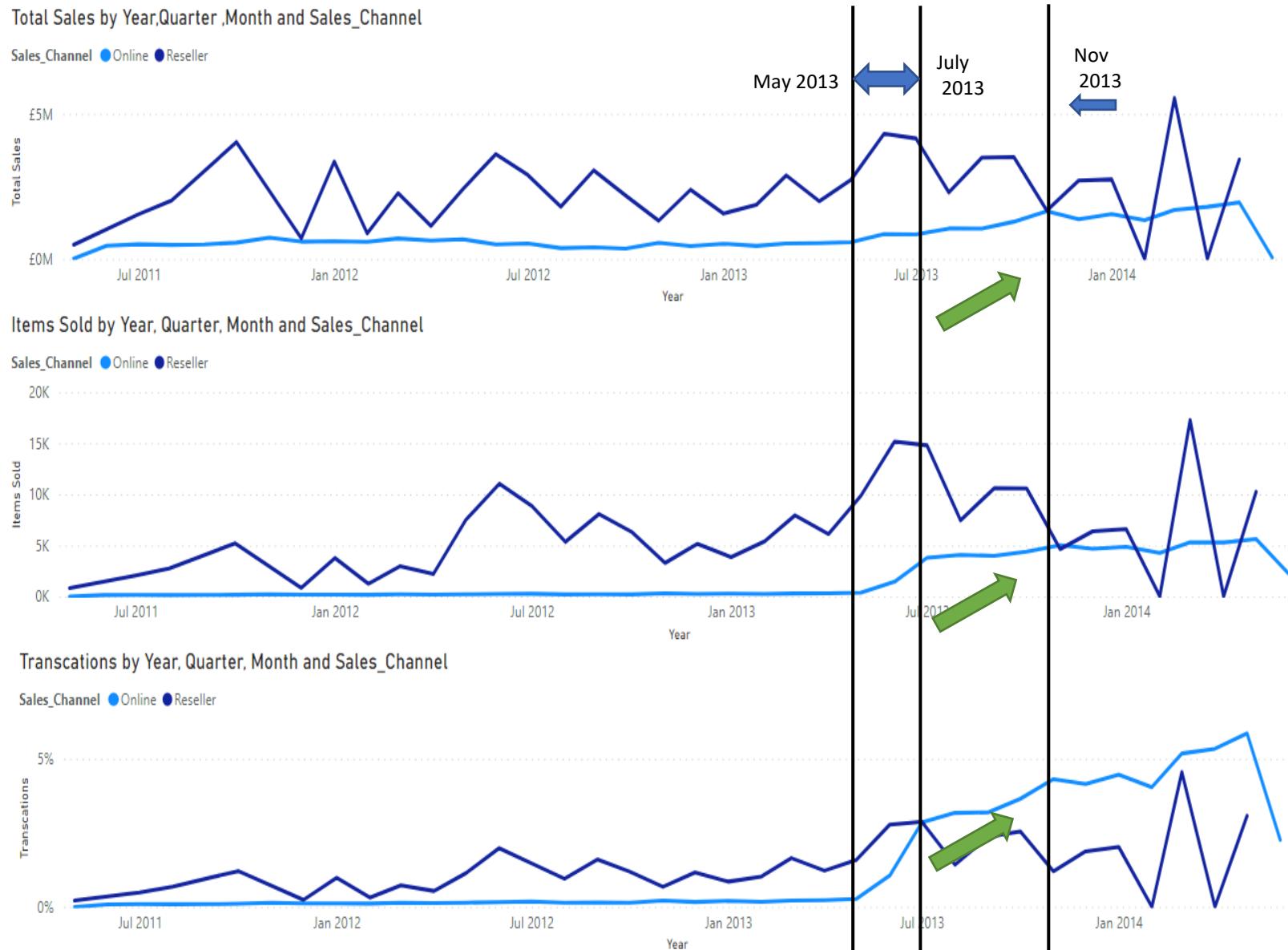


Is there a shift towards Digital Era

YES



Is there a Shift towards Digital Era - Volume of Sales, Transactions and Quantity Sold by YQM



Online Sales Reseller Sales

- ❖ There has been sharp increase in online transactions from May 2013 till July 2013 and exponentially increased to 5.86% from 0.28% .
- ❖ In November 2013, the online sales has almost been equal to Reseller Sales.
- ❖ The quantity of items sold online has drastically risen from May 2013 to July 2013 with an increase of 28%.

Is there a Shift towards Digital Era - % of Sales by Channel

%GT Total Sales by Year, Quarter and Sales_Channel

Sales_Channel • Online



Online Sales Reseller Sales

- The % sales of Online Sales increased to 15.54% by Quarter 1 of 2014 compared to Reseller Sales which is 10.24% in Q1 of 2014.

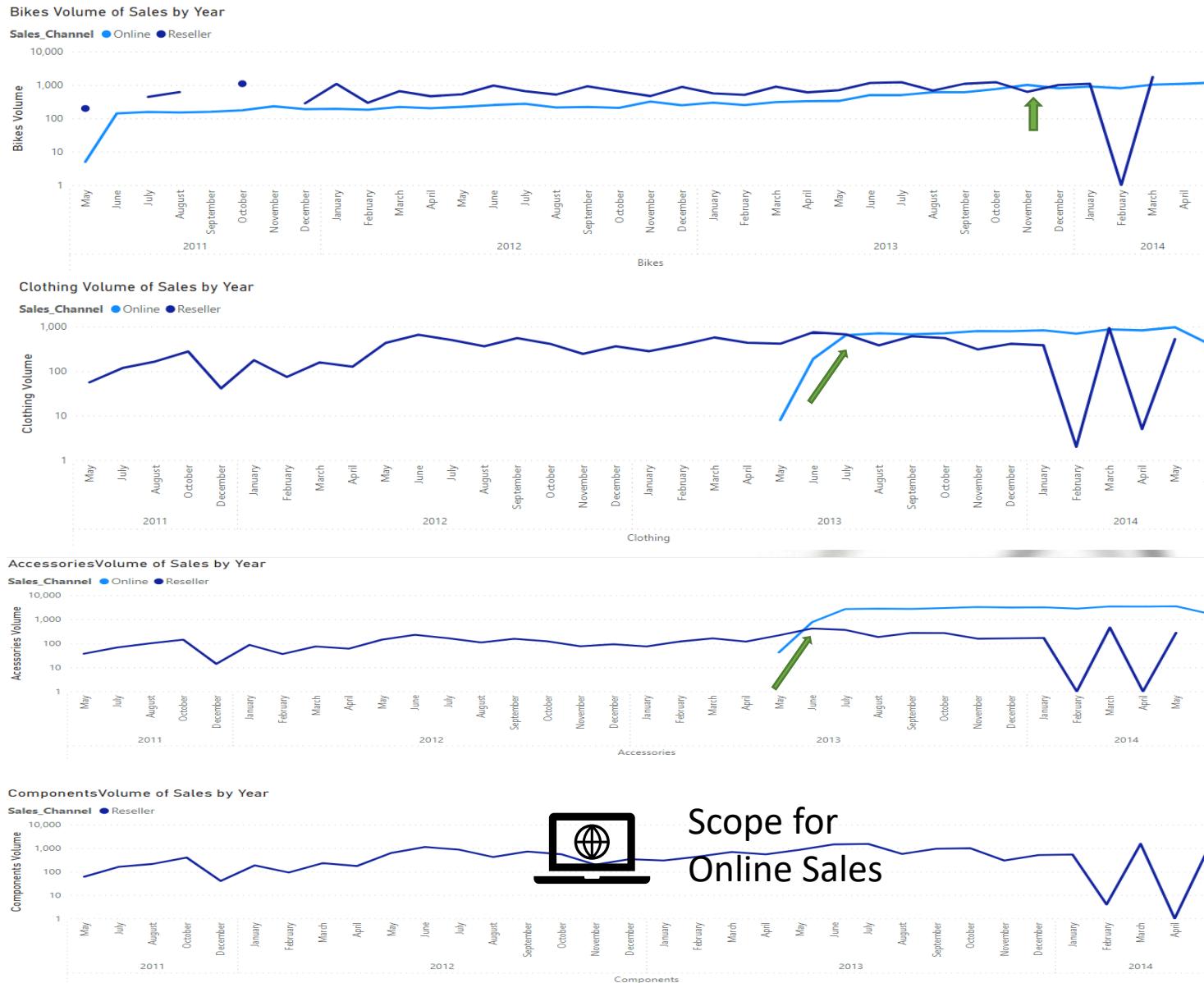
Sales_Channel • Reseller



- The Online Sales chart steady rise in revenue from 2011 to 2014.

- The chart also suggests the overall sales/revenue is generated from Reseller sales although the sales has declined from Q3 of 2013(9.74 %) to 4.23 % of Q2 of 2014.

Is there a Shift towards Digital Era – By Products



Online Sales Reseller Sales

- ❖ In May 2013, Accessories and Clothing product was introduced online and has been contributing factor in online sales.
- ❖ Also from Nov 2013, the online sales of Bikes has surpassed Bikes Reseller Sales
- ❖ There is scope to introduce components for online sales in future.

Is there a Shift towards Digital Era – By Region

Online Sales Reseller Sales



- ❖ Online and Reseller Total Sales for United States is highest.
- ❖ The online Sales for 2013 for all regions shows growth.
- ❖ The Reseller Sales Channel was introduced to Australia and Germany in 2013.
- ❖ From the chart, Reseller Sales provides is decreasing compared to online sales.

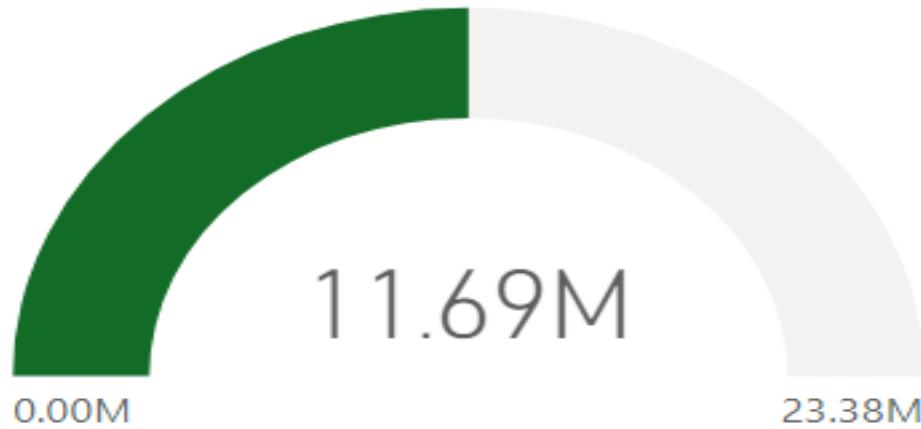
Is the Business Making Profit

Partly

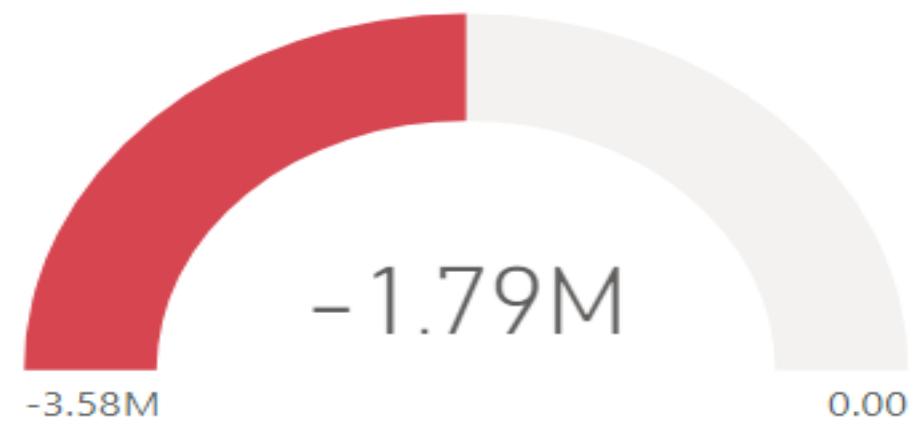


Is the Business Making Profit – By Sales Channel

Profit By Online Sales



Profit By Reseller Sales



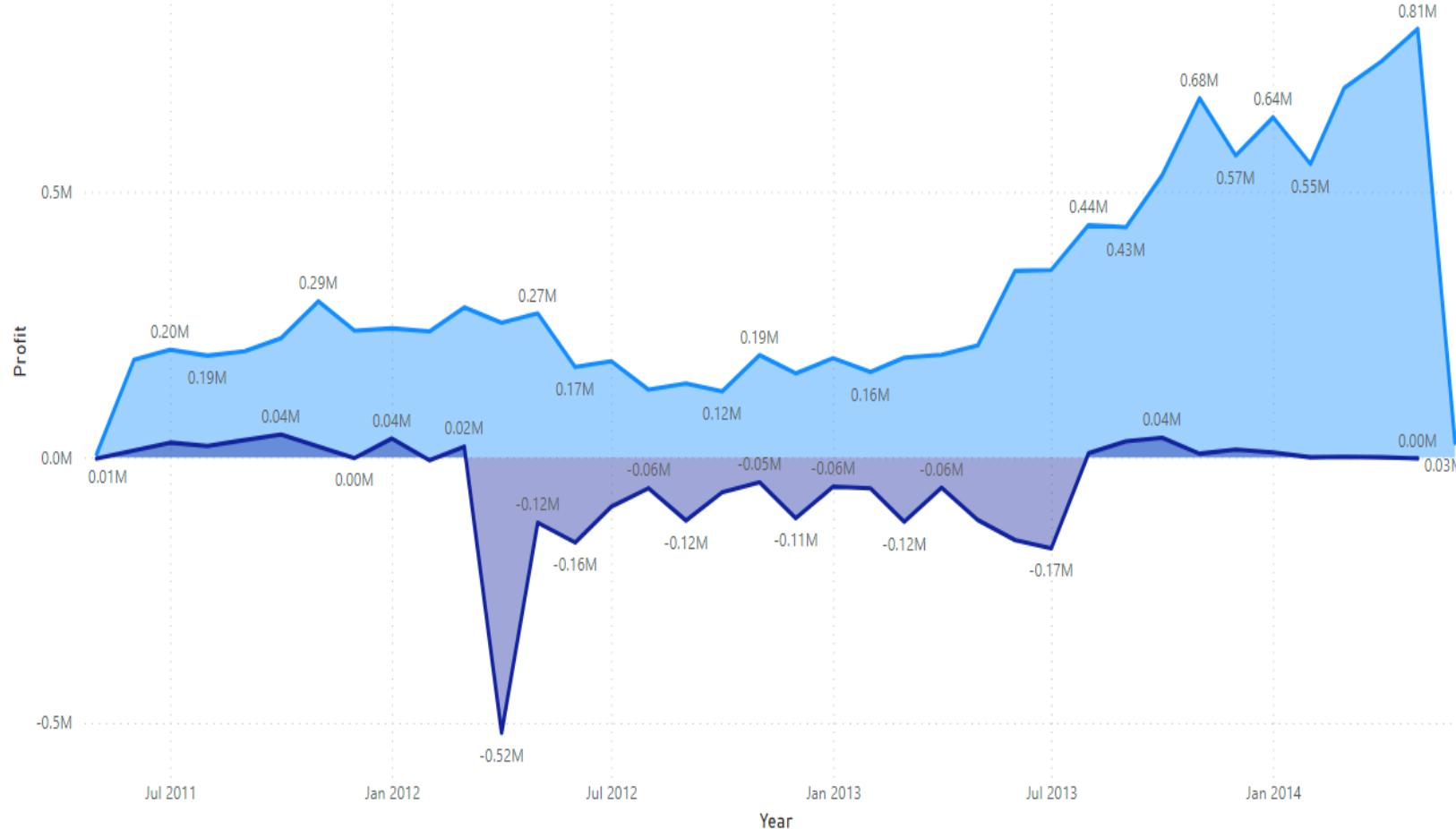
The Above Gauge Chart indicates Business is making profit from online Sales and is positive whereas profit of Reseller Sales is negative.

Is the Business Making Profit –By Month and Year

Profit by Year and Sales Channel

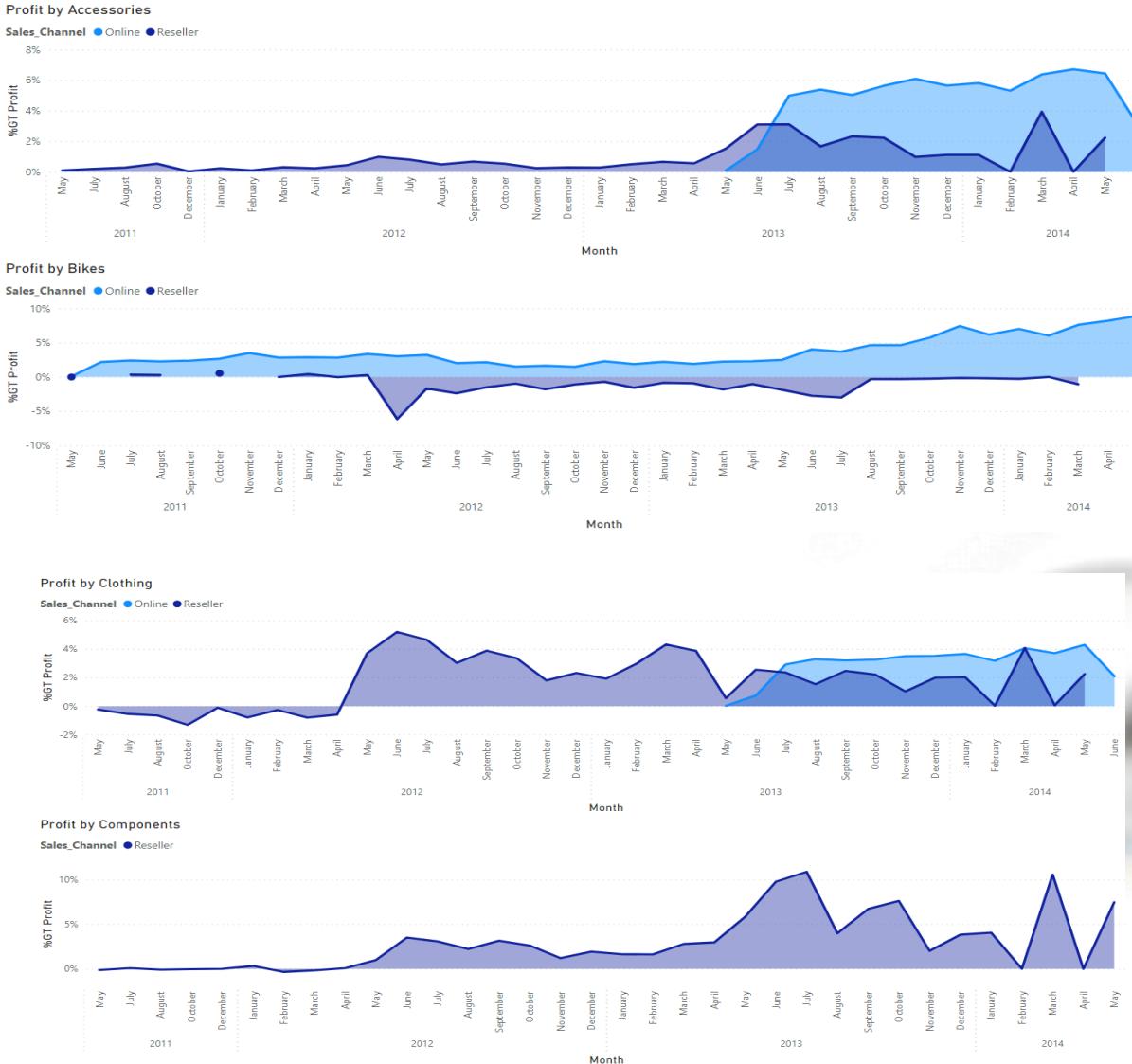
Sales_Channel ● Online ● Reseller

1.0M



- ❖ Monthly Profit for online sales has always been positive since July 2011 exponentially rising up to 0.81M
- ❖ Monthly Reseller was positive from July 2011 until March 2012.
- ❖ From April 2013 till July 2013, the reseller profit drastically dropped and took downfall towards negative side.
- ❖ From August 2013, the reseller increased to break even with online profit.

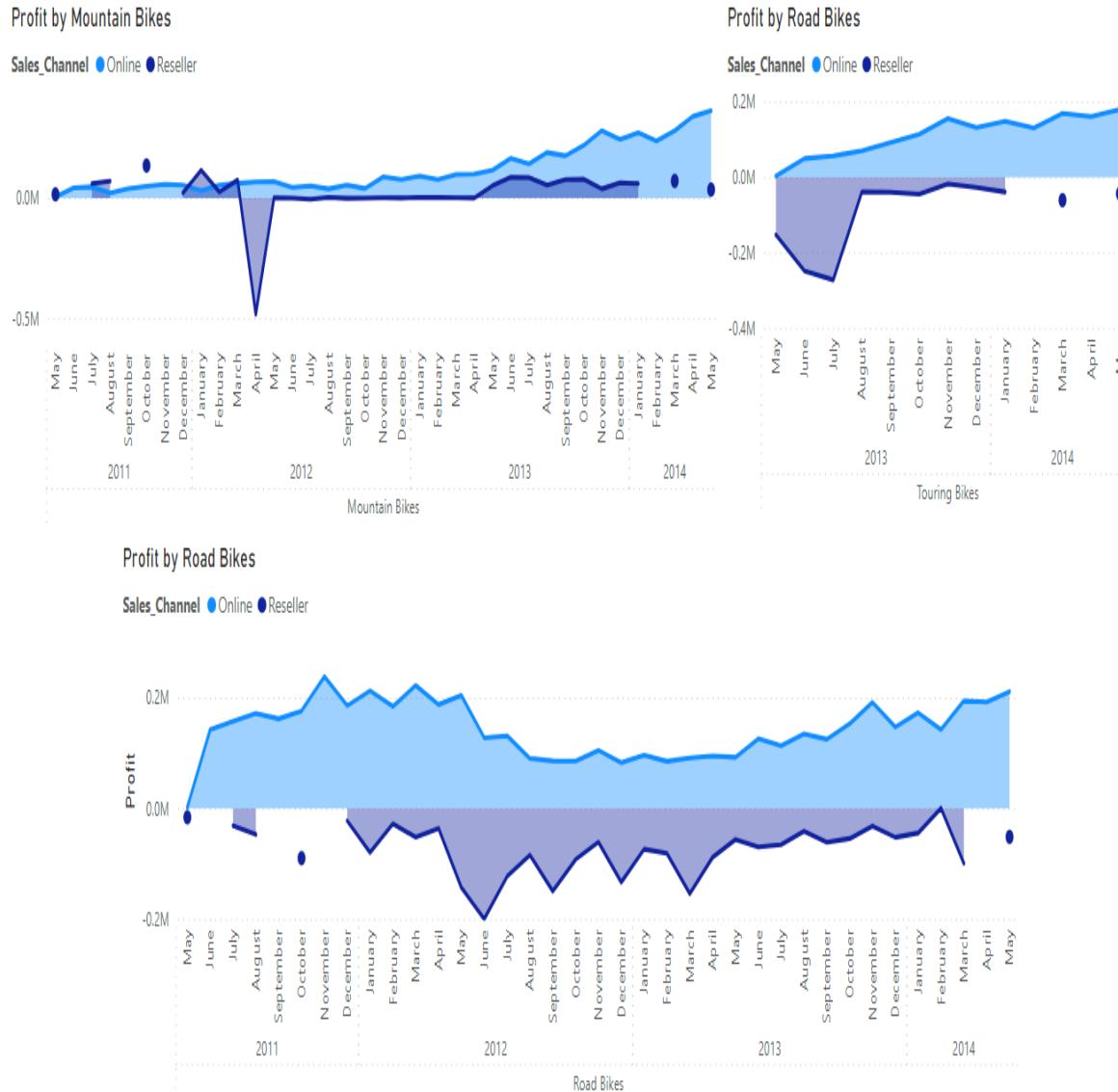
Is the Business Making Profit –By Product



- ❖ Although AHG Reseller captures 74% of sales, the online profit exceeds the reseller profit for :
- Accessories** to 5.89% since its introduction to online sales in May 2013.
- Clothing** to 4.29% since its introduction to online sales in May 2013.



Is the Business Making Profit –By Bikes



Although AHG Reseller captures 74% of sales, the online profit exceeds the reseller profit for :

Mountain Bikes :

2011 – 3.62%, 2012-7.92%, 2013 -22.42%, 2014-17.64%

Road Bikes :

2011 – 14.61%, 2012-20.33%, 2013 -17.44%, 2014-10.80%

Touring Bikes:

2013 – 7.94%, 2014-9.32%.



Is the Business Making Profit –By Bikes sold as Reseller

ProductSubcatname	Sales_Channel	Profit Without Discount	Profit with Discount	Diff in Profit
Mountain Bikes	Reseller	£729,234.04	-23,206,834.79	-23,936,068.83
Touring Bikes	Reseller	-£988,812.60	-10,136,345.44	-9,147,532.84
Road Bikes	Reseller	-£2,422,242.51	-30,961,767.56	-28,539,525.05
Total		-£2,681,821.07	-49,698,862.81	-47,017,041.74

ProductSubcatname	Profit	Sales_Channel	%ProfitMargin
Mountain Bikes	729,234.04	Reseller	2.73%
Touring Bikes	-988,812.60	Reseller	-9.24%
Road Bikes	-2,422,242.51	Reseller	-8.22%
Total	-2,681,821.07		-4.01%

TOP 15 profit for Reseller - Touring and Road Bikes with Negative Profit

ProductName	Profit	Sales_Channel	ProductSubcatname
Touring-2000 Blue, 46	-11,839.46	Reseller	Touring Bikes
Road-750 Black, 58	-10,967.82	Reseller	Road Bikes
Touring-3000 Blue, 62	-9,603.94	Reseller	Touring Bikes
Road-150 Red, 56	-8,978.58	Reseller	Road Bikes
Road-450 Red, 52	-7,039.15	Reseller	Road Bikes
Road-450 Red, 58	-6,499.12	Reseller	Road Bikes
Road-150 Red, 62	-6,423.70	Reseller	Road Bikes
Road-750 Black, 44	-5,818.06	Reseller	Road Bikes
Touring-2000 Blue, 50	-5,668.01	Reseller	Touring Bikes
Road-150 Red, 52	-3,795.82	Reseller	Road Bikes
Road-150 Red, 44	-3,795.82	Reseller	Road Bikes
Road-150 Red, 48	-3,795.82	Reseller	Road Bikes
Road-450 Red, 60	-3,470.01	Reseller	Road Bikes
Road-450 Red, 44	-3,430.35	Reseller	Road Bikes
Road-450 Red, 48	-1,546.63	Reseller	Road Bikes
Total	-92,672.30		



This is the microscopic view of Reseller Bikes:

- ❖ Mountain Bikes generated Positive profit without Discount.
- ❖ Touring and Road Bikes generates Negative Profit irrespective of Discount.
- ❖ The %profit Margin for TB and RB is -19% .
60% of the Reseller Bikes are sold with negative profit

The Touring sold with negative profit is “Touring-2000 Blue 46” with negative profit of -11,839.

Is the Business Making Profit –By Bikes (Prices sold below List Price)

ProductName	Avg List Price	Avg Unit Price	Avg Standard Cost	Avg Unit Profit	Sales_Channel
Road-250 Black, 44	2,443.35	£1,387	1,554.95	-557.40	Reseller
Road-250 Black, 48	2,443.35	£1,386	1,554.95	-504.58	Reseller
Road-250 Black, 52	2,443.35	£1,385	1,554.95	-465.04	Reseller
Road-250 Black, 58	2,443.35	£1,388	1,554.95	-512.95	Reseller
Road-250 Red, 58	2,443.35	£1,386	1,554.95	-503.62	Reseller
Road-350-W Yellow, 40	1,700.99	£1,018	1,082.51	-267.57	Reseller
Road-350-W Yellow, 48	1,700.99	£1,016	1,082.51	-332.28	Reseller
Road-550-W Yellow, 38	1,120.49	£637	713.08	-256.31	Reseller
Road-550-W Yellow, 44	1,120.49	£635	713.08	-244.62	Reseller
Road-550-W Yellow, 48	1,120.49	£639	713.08	-258.88	Reseller
Road-650 Red, 44	782.99	£425	486.71	-240.75	Reseller
Touring-1000 Yellow, 46	2,384.07	£1,305	1,481.94	-624.95	Reseller
Touring-1000 Yellow, 50	2,384.07	£1,303	1,481.94	-492.06	Reseller
Touring-1000 Yellow, 54	2,384.07	£1,266	1,481.94	-433.82	Reseller
Touring-1000 Yellow, 60	2,384.07	£1,313	1,481.94	-677.53	Reseller
Total	1,819.95	£1,029	1,150.53	-403.55	

ProductName	Avg List Price	Avg Unit Price	Avg Standard Cost	Avg Unit Profit	Sales_Channel
Touring-1000 Yellow, 46	2,384.07	£2,384	1,481.94	902.13	Online
Touring-1000 Blue, 54	2,384.07	£2,384	1,481.94	902.13	Online
Touring-1000 Yellow, 54	2,384.07	£2,384	1,481.94	902.13	Online
Touring-1000 Yellow, 50	2,384.07	£2,384	1,481.94	902.13	Online
Touring-1000 Blue, 50	2,384.07	£2,384	1,481.94	902.13	Online
Touring-1000 Blue, 60	2,384.07	£2,384	1,481.94	902.13	Online
Touring-1000 Yellow, 60	2,384.07	£2,384	1,481.94	902.13	Online
Road-250 Red, 44	2,443.35	£2,443	1,518.79	924.56	Online
Road-250 Red, 48	2,443.35	£2,443	1,518.79	924.56	Online
Road-250 Red, 52	2,443.35	£2,443	1,518.79	924.56	Online
Road-150 Red, 44	3,578.27	£3,578	2,171.29	1,406.98	Online
Road-150 Red, 48	3,578.27	£3,578	2,171.29	1,406.98	Online
Road-150 Red, 52	3,578.27	£3,578	2,171.29	1,406.98	Online
Road-150 Red, 56	3,578.27	£3,578	2,171.29	1,406.98	Online
Road-150 Red, 62	3,578.27	£3,578	2,171.29	1,406.98	Online
Total	2,996.27	£2,996	1,835.71	1,160.56	

Microscopic view for Road and Touring Bikes sold under Listed Price:

❖ Online Market :

List Price = Unit Price. This is the reason why online sales are highly profitable.

From Chart, you can see no Bikes were sold below list price.

❖ Reseller Market :

All TB and RB are sold with 60 % negative profit.

List Price is greater Unit price. The avg.unit profit for Road and Touring Bike is -403.55.

If the Bikes were sold with Unit Price greater than Avg .cost probably by 2-3%, then it would have made profit.



Is the Business Making Profit –By Bikes (Discount)

ProductName	Total Unit Price with Discount	Total Sales with Discount	Profit with Discount	Product Subcatname
Touring-3000 Yellow, 62	10.41	8,786.04	-£380,673	Touring Bikes
Touring-3000 Blue, 50	10.17	8,552.97	-£379,522	Touring Bikes
Touring-3000 Blue, 54	8.70	5,968.20	-£310,583	Touring Bikes
Touring-3000 Yellow, 50	8.70	5,968.20	-£310,583	Touring Bikes
Touring-3000 Blue, 58	6.75	3,253.50	-£219,163	Touring Bikes
Touring-3000 Yellow, 54	6.75	3,057.75	-£205,977	Touring Bikes
Touring-3000 Yellow, 58	5.70	1,670.10	-£133,533	Touring Bikes
Touring-3000 Blue, 44	4.95	1,445.40	-£133,296	Touring Bikes
Touring-3000 Blue, 62	3.45	969.45	-£128,697	Touring Bikes
Total	65.58	318,587.64	-£1,923,111	

ProductName	Total Unit Price with Discount	Total Sales with Discount	Profit with Discount	Product Subcatname
Mountain-500 Silver, 52	15.20	7,828.00	-£150,904	Mountain Bikes
Mountain-500 Silver, 42	14.80	6,734.00	-£133,505	Mountain Bikes
Mountain-500 Silver, 48	14.40	6,580.80	-£134,275	Mountain Bikes
Mountain-500 Silver, 40	12.40	5,580.00	-£133,118	Mountain Bikes
Mountain-500 Silver, 44	10.80	4,114.80	-£113,316	Mountain Bikes
Total	67.60	152,640.80	-£543,315	

ProductName	Total Unit Price with Discount	Total Sales with Discount	Profit with Discount	Product Subcatname
Road-750 Black, 52	0.12	160.56	-£459,643	Road Bikes
Road-450 Red, 58	0.04	23.28	-£514,877	Road Bikes
Total	0.16	307.20	-£974,396	

Microscopic view for Road and Touring Bikes sold under Listed Price:

❖ Reseller Market :

Following from previous slide, mountain bikes generated positive profit ,it did generate negative profit with discount. This is because the all 3 types were sold with highest discount.
It also suggests the there is policy on giving discount.

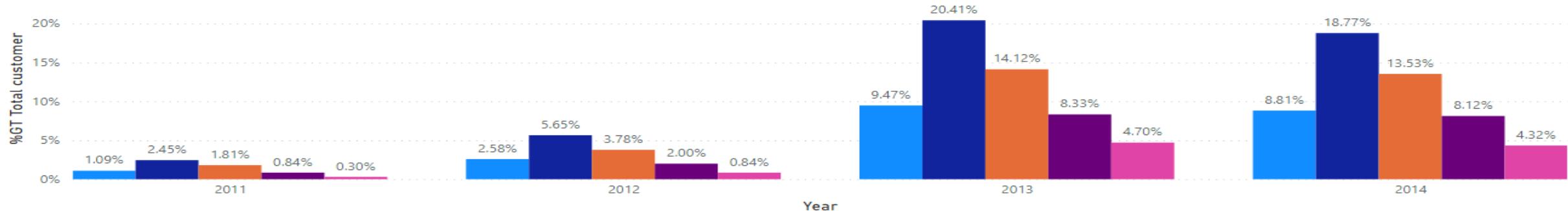
The above RB,MB and TB with highest discount have generated high sales leading to negative profit.



Customer Demographics - Online Sales Channel By Age

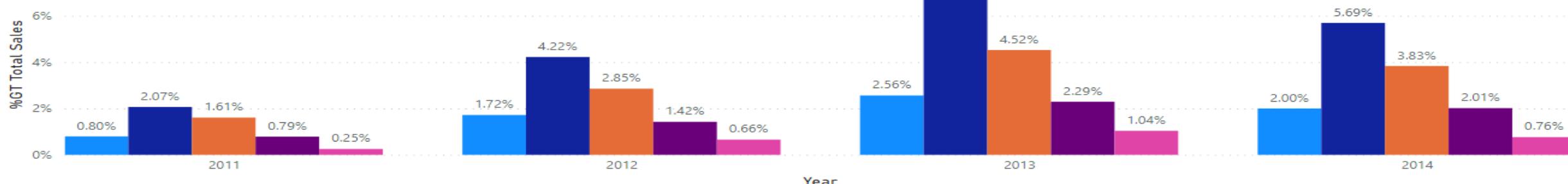
Total customer by Year and Age bracket

Age bracket ● 30's ● 40's ● 50's ● 60's ● 70's plus



Total Sales by Year and Age bracket

Age bracket ● 30's ● 40's ● 50's ● 60's ● 70's plus



- ❖ The Customers in age bracket of 40s ,50s have increased from 2011 -2014 .This has also increased the sales.
- ❖ The increase in sales of customers from 40s to 50s,60s and 70s explains the decrease in sales for customer in age bracket of 30s.
- ❖ This also means the customer have become more health conscious.

Customer Demographics - Online Sales Channel By Gender and Marital Status.

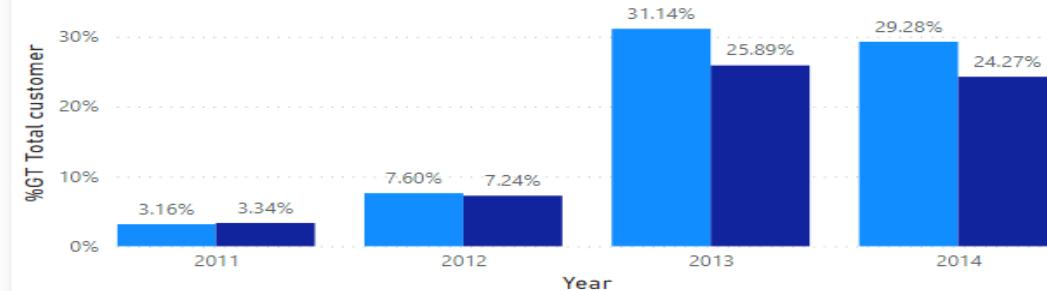
Total customer by Year and Gender

Gender ● F ● M



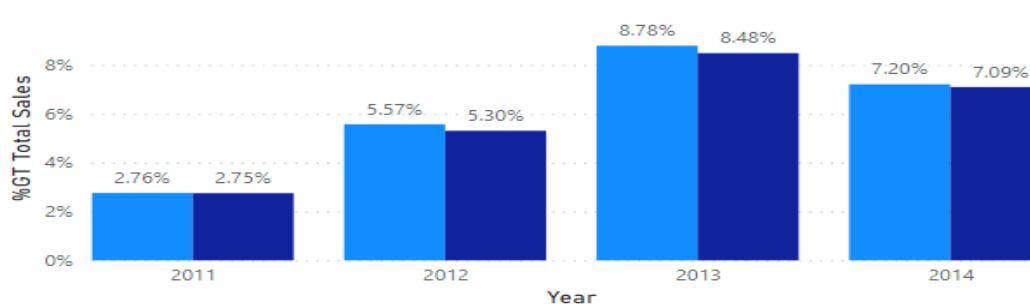
Total customer by Year and MaritalStatus

MaritalStatus ● M ● S



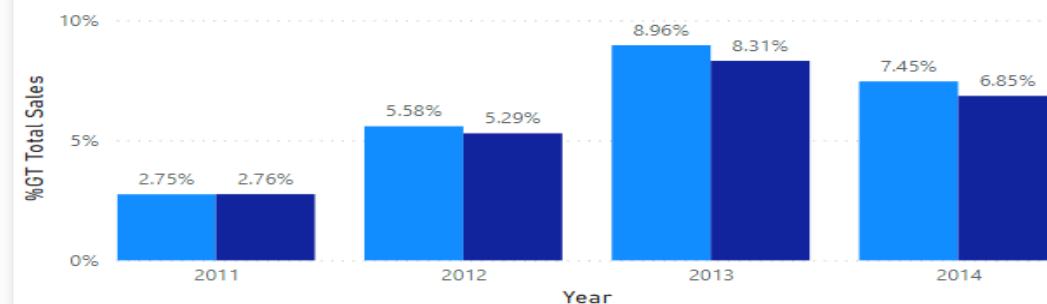
%GT Total Sales by Year and Gender

Gender ● F ● M



Total Sales by Year and MaritalStatus

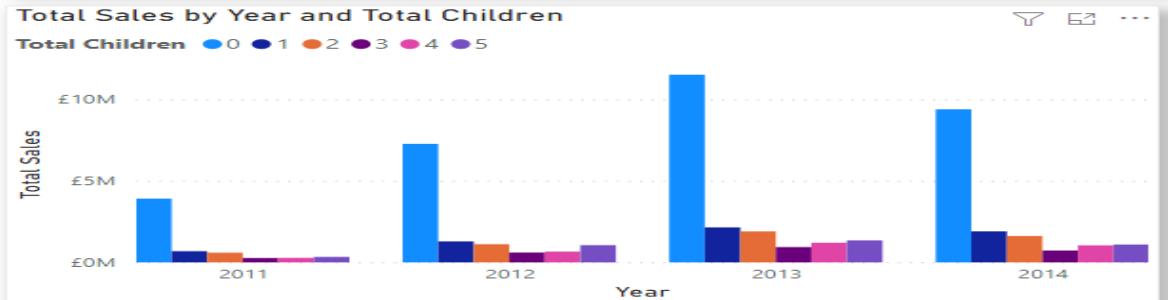
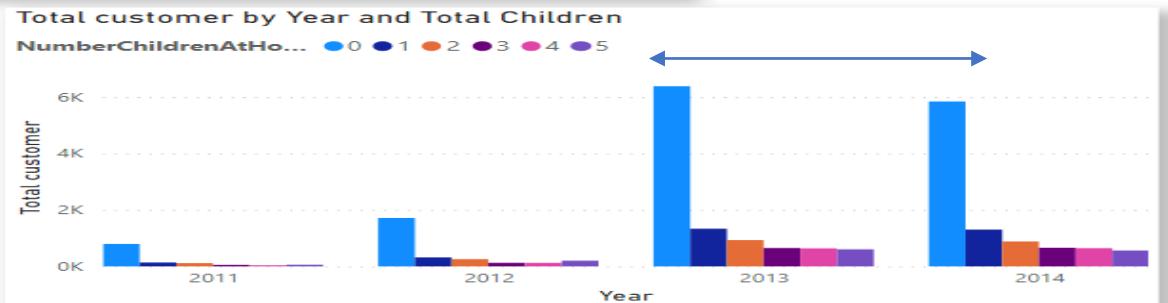
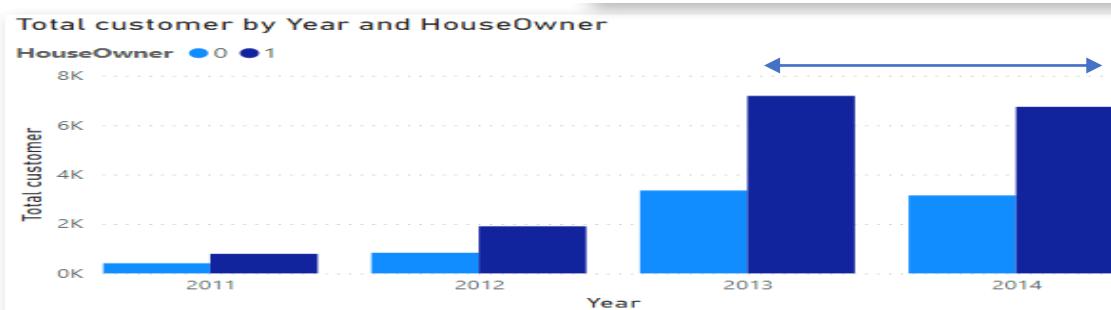
MaritalStatus ● M ● S



The Chart indicates:

- ❖ The Female and Male are equal in ratio for online sales.
- ❖ The Married and Single also in equal ratio.
- ❖ The sales for Married have gradually increased compared to Singles.

Customer Demographics - Online Sales Channel By House Owned & Children's

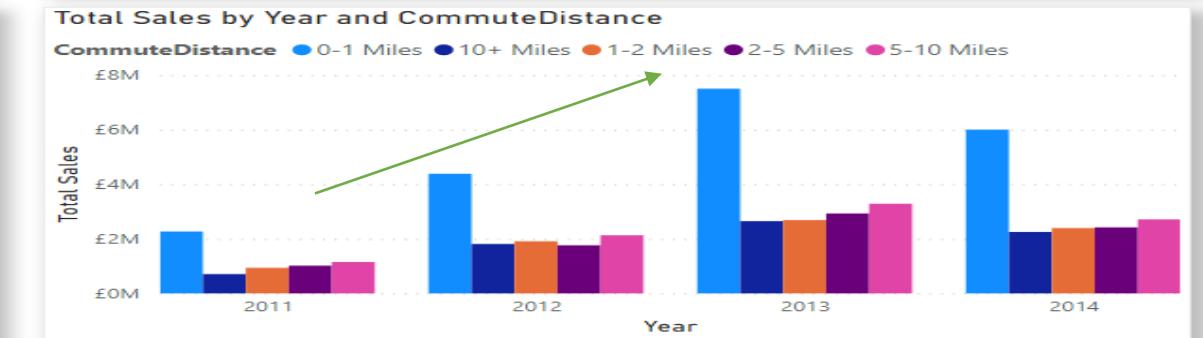
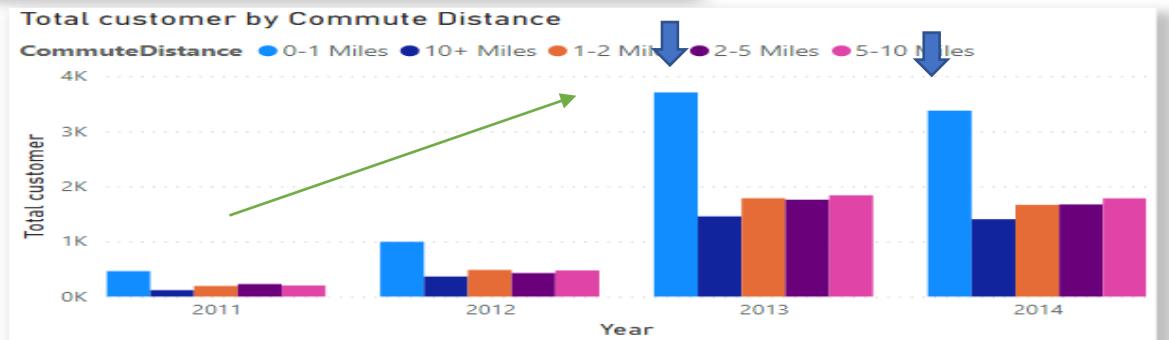
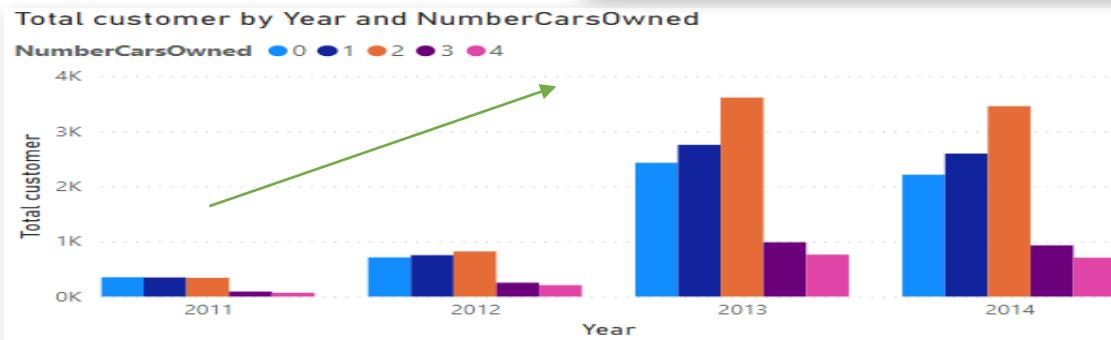


0: Not a House Owner 1: House Owner

The Chart indicates:

- ❖ The customer who are not house owner jumped to 18.15% in 2013 compared to 2012. Since then, there seems no change. Same is the case with House owner.
- ❖ The customer and sales for no children's has increased gradually till 2013 and has been no change in 2014.
- ❖ It also means that there has been no predominant change in customers data across House Owner and no.of Children.

Customer Demographics - Online Sales Channel By Car Owners and Commute Distance



The Chart indicates:

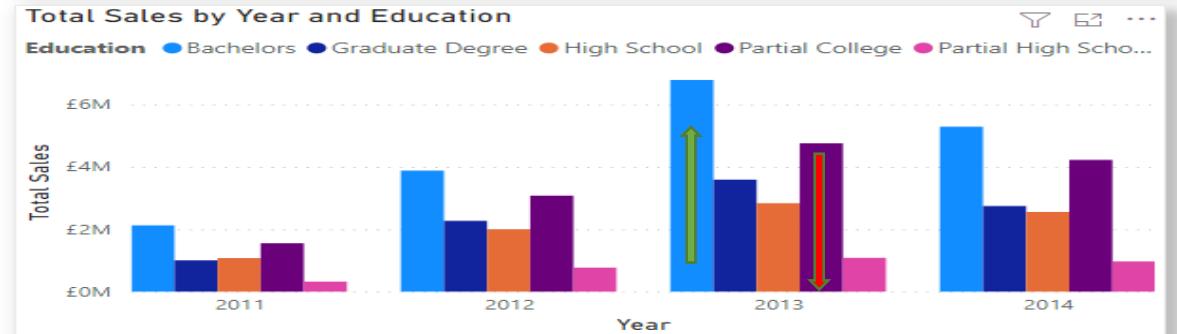
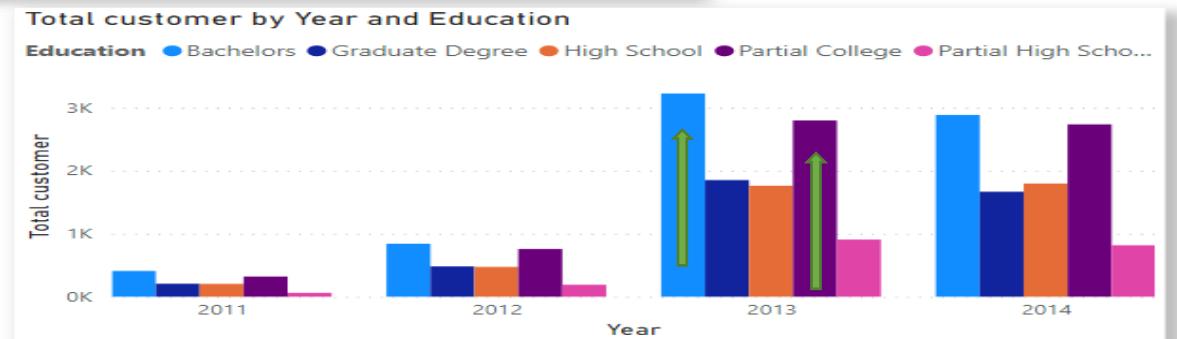
Cars Owned:

- ❖ There is an increase in numbers of customers who possess no cars(0), 1 car and 2 cars .
- ❖ The sales with 0,1,2 cars has increased exponential and are almost in equal ratio.

Commute Distance:

- ❖ There has been increase in customer with commute distance from '0-1 Miles'. Rest of the customers with commute distance '1-2 miles','2-5 miles' , '5-10 miles' and '10+ miles' has been constant.
- ❖ The sale has increased for customers commute distance '0-1 miles'.

Customer Demographics - Online Sales Channel By Education and Occupation



The Chart indicates:

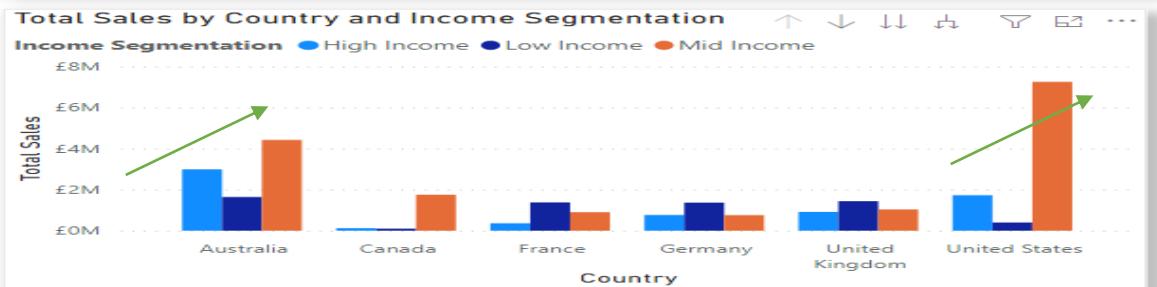
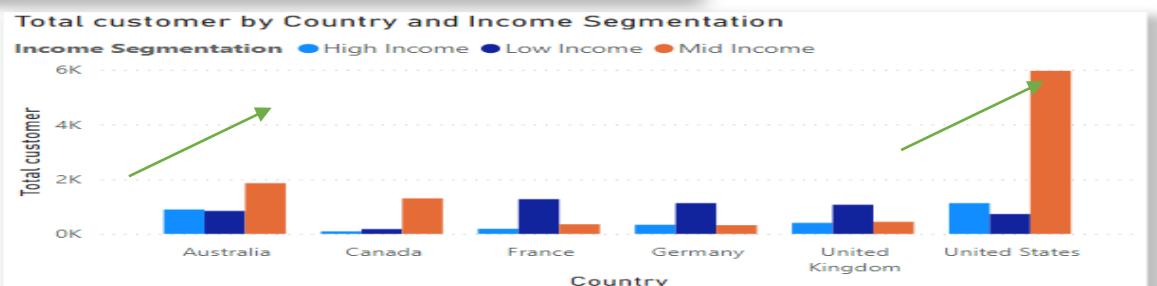
Occupation:

- ❖ The customers with Occupation as “Professional”, “Management” and “Skilled Manual” has increased which has also increased sales.
- ❖ The customers with Occupation as “Manual” has increased in small ratio but the sales have decreased.

Education:

- ❖ The customers with Education “Bachelor’s” and “Partial College” increased from 2013-2014. The customers with Education “High School” and “Graduate Degree” has been constant over the years.
- ❖ The sales for “Bachelor’s” have increased however the it has decreased for “Partial College”.

Customer Demographics - Online Sales Channel By Income Group and Region



The Chart indicates:

Income :

- ❖ Mid Income (Salary btw 30,000 – 80,000):The customers with this Income group are highest Buyers and subsequently increase in sales in 2013.There is slight decrease in sales in 2014.
- ❖ High Income (Salary greater than 80,000): The customer with this group have increased gradually in smaller proportion and subsequently increase in sales.
- ❖ Low Income (Salary less than 30,000): The customer with this group have increased gradually in smaller proportion but there is decrease in sales from 2013-2014.

Country :

- ❖ The country with “Mid Income” group are the highest buyers Is United States. Australia is another region which has consistent with all income group with increase in customer as well as the sales.

Areas where AHG can improve - Manufacturing



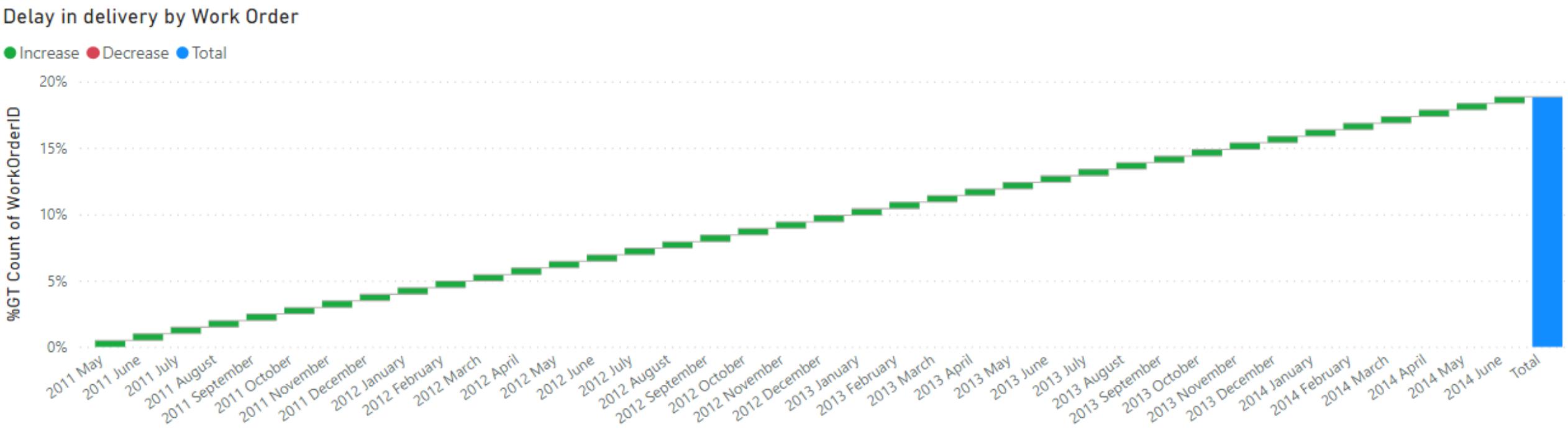
Delays in Delivery – Average delay is 15 days as increase from 2011 to 2014 with 18.84 % Work Order delivered late

The average of scrap is from 2 % minimum with maximum of 10%. This needs to be reduced to 2-3%.

The top 4 Scrap Reason and Top 10 % Scrap by Product should be investigated.

Actual Cost remains the same from 2011-2014. This should be investigated on why it has not increased.

Areas where AHG can improve – Manufacturing - Delays in Delivery



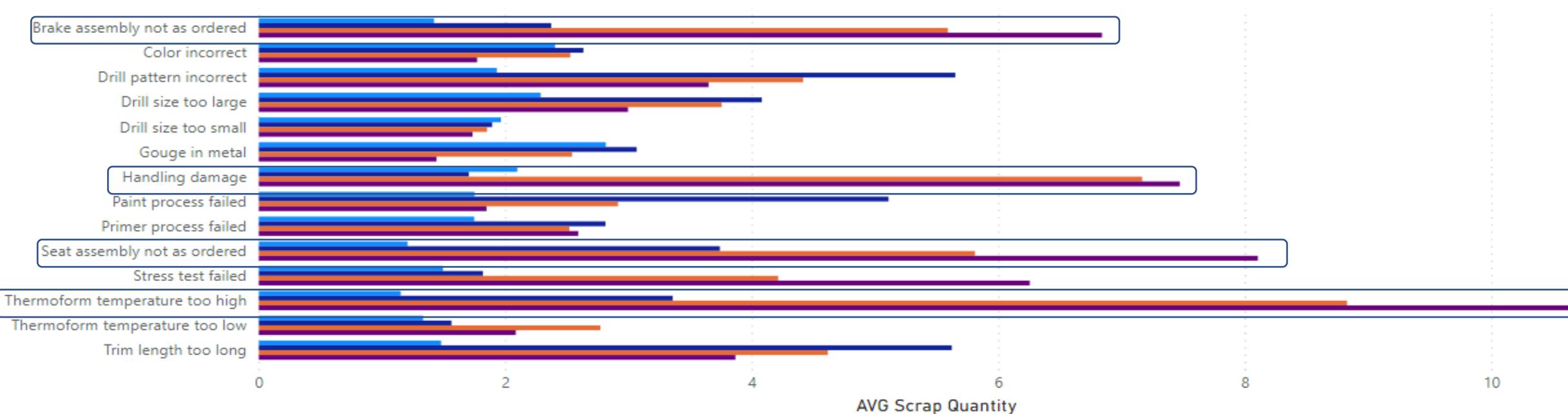
- ❖ The average delay is 18.84 % start from 2011-2014 for the workorder placed.
- ❖ 2011 – The delay was increased to 3%
- ❖ 2012 – It increased to 6%
- ❖ 2013 – By 12%
- ❖ 2014 – By 24%

The delay can be due to transport issue, product manufacture.

Areas where AHG can improve – Manufacturing – Scrap Reason

Scrap Reason by Year

Year ● 2011 ● 2012 ● 2013 ● 2014



The Chart indicates,

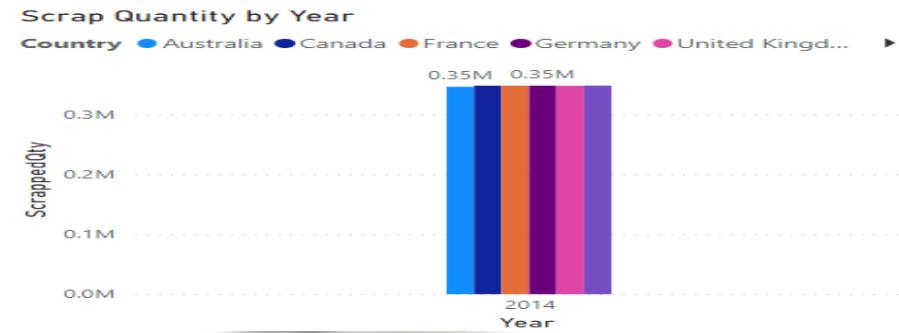
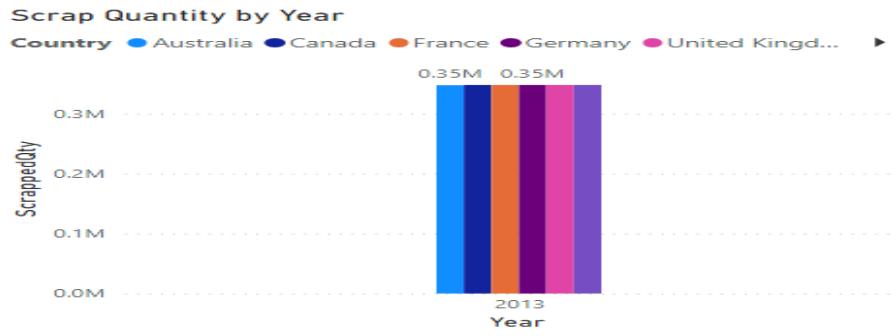
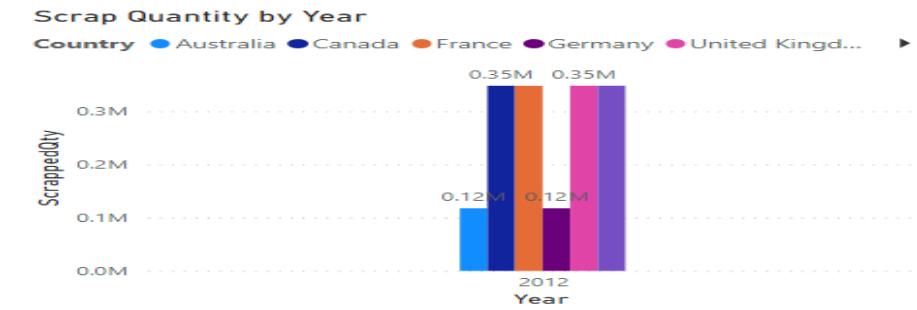
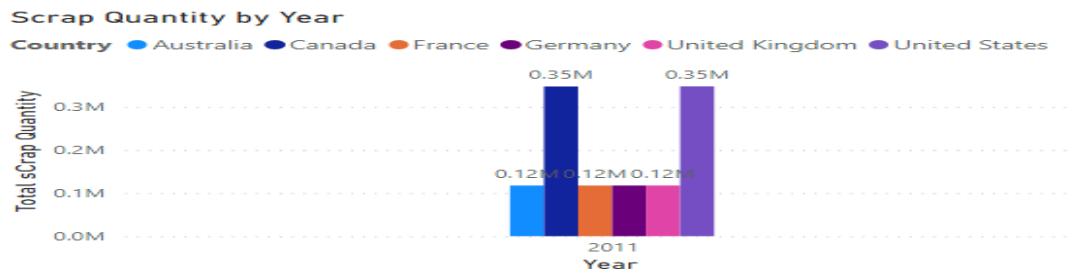
The Scrap Reason greater than 6% are

"Brake Assembly not as ordered ", "Handling damage", "Seat assembly not as ordered", "Thermoform temp not too high". Should be reviewed.

Why the Brake and seat assembly specification not checked before order?

Handling damage – Are staff trained to handle the damage.

Areas where AHG can improve – Manufacturing – Scrap Quantity by Country



The Chart indicates:

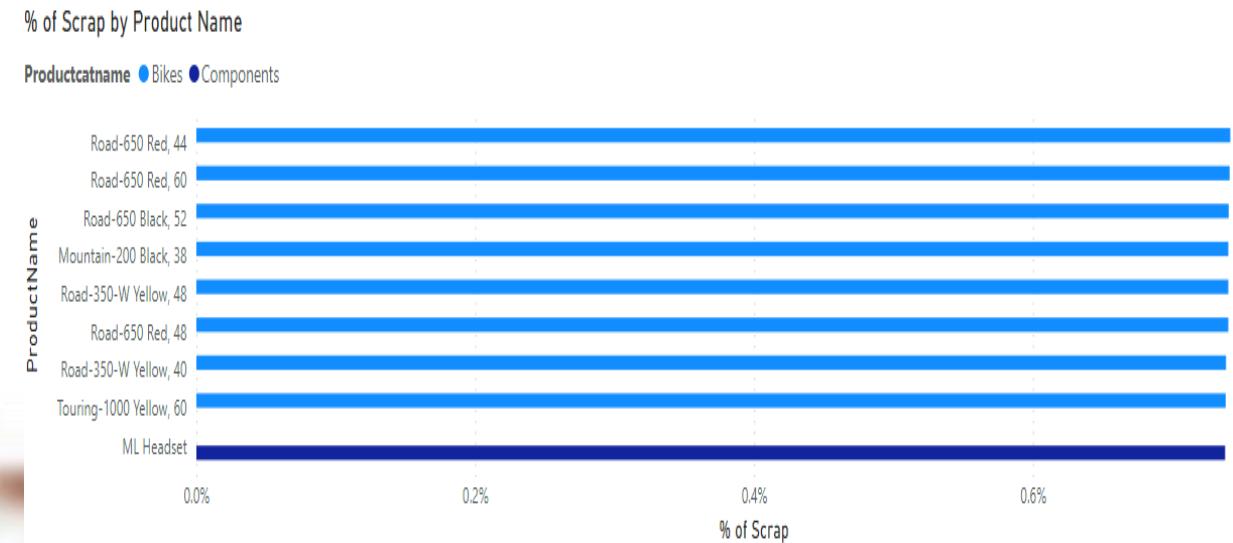
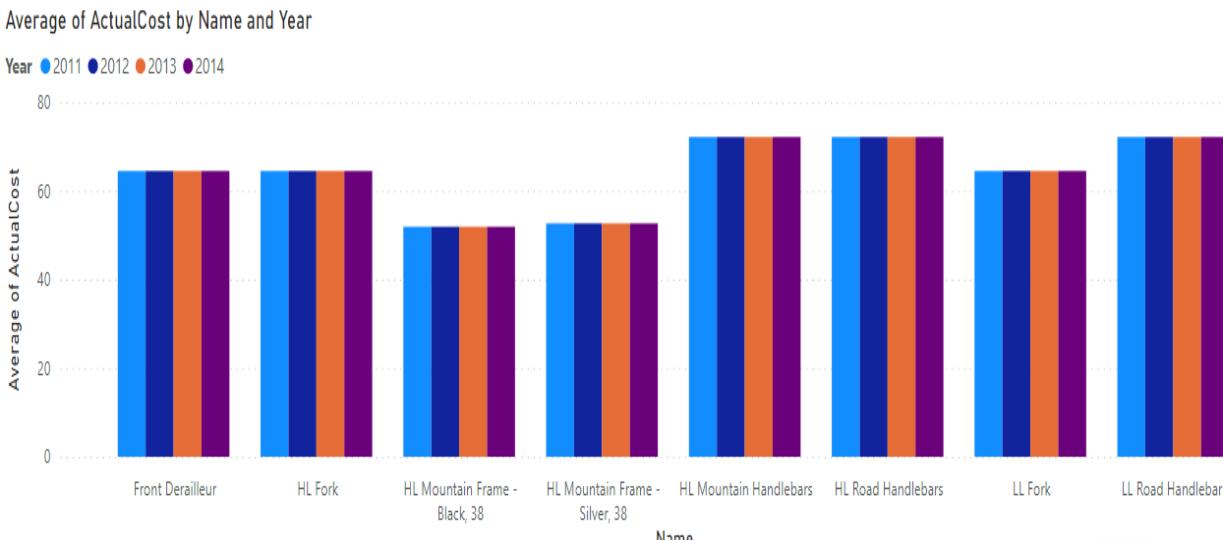
2011 -The country with higher scrap quantity are Canada and US.

2012 - In addition to Canada and US, France and UK has higher quantity.

2013 – All regions had reported equal ratio of scrapped quantity.

2014- The same followed.

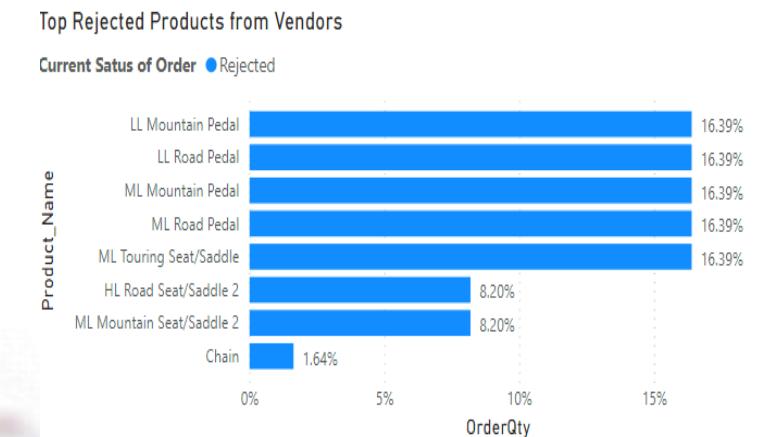
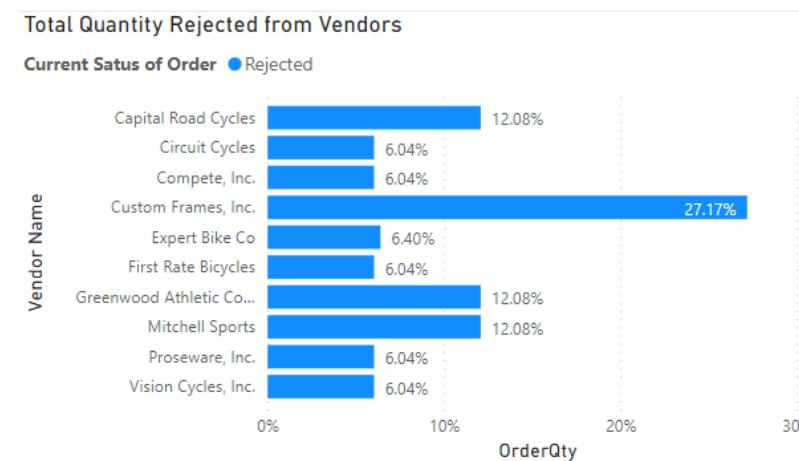
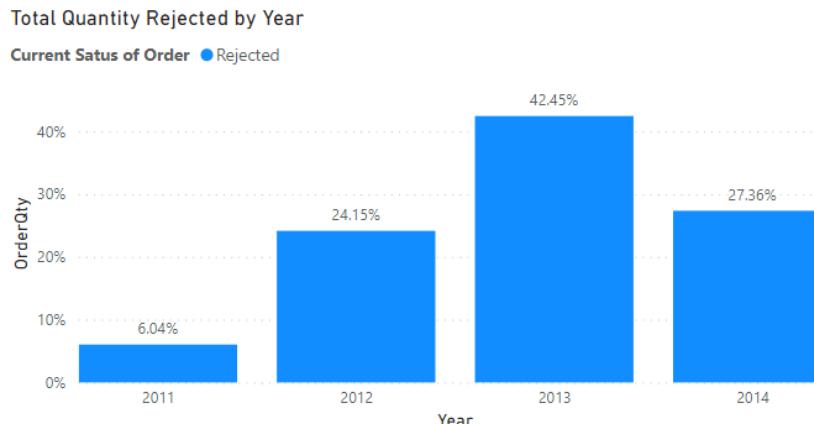
Areas where AHG can improve – Manufacturing – Avg. Cost and Top 10 Scrapped Product



The Avg.Actual Cost has been same for the all years. AHG should review the manufacturing processes on basis “how the manufacturing of each products could be same for all years”. Is there a loophole to look into , is it a possible Risk of Fraud. There are no improvements in efficiency and cadence compared to the estimate, which are not reliable data.

The average of scrap per products range form 0.2-0.6% which is quite high. The further investigation should be made to reduce it.

Areas where AHG can improve - Manufacturing - Supply Chain - Vendor



The chart indicates:

- ❖ Vendors quantity are rejected in high number which might of reason for negative profit for reseller sales.
- ❖ It also suggests the rejected quantity rise from 2011 -2013 and top rejected products are pedals and seat/saddles for all three of types of 3 bikes. It means the defect in manufacturing and quality checking which lead to rejection and subsequently affected reseller sales.
- ❖ Need to investigate why the vendors order rejected. Were there any preference given to particular vendor. Need to update Preferred vendor. Can we have more than 1 preferred vendor.

Market Niche and Competitors

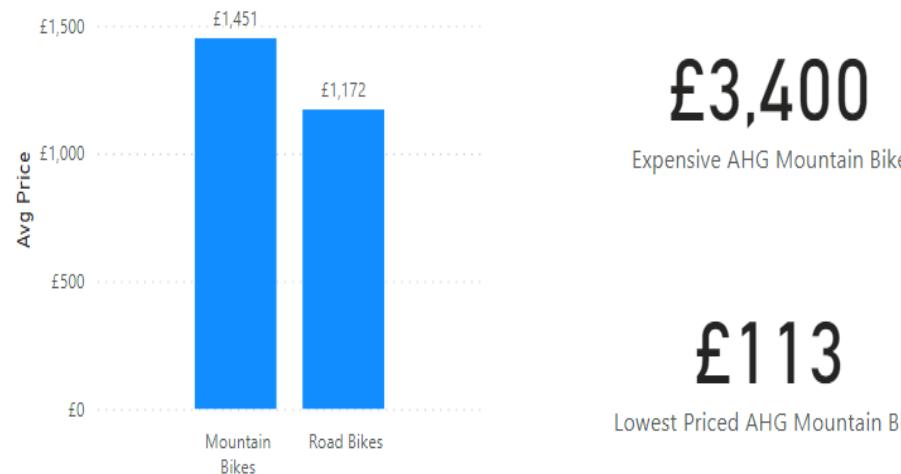


The main competitors for AHG in UK is



Market Niche and Competitors – Price Comparison

Avg.Price of AHG Bikes



£3,400

Expensive AHG Mountain Bike

£113

Lowest Priced AHG Mountain Bike

£3,578

Expensive AHG Road Bike

£235

Lowest Priced AHG Mountain Bike

Avg Price of Halfords Bikes

● Avg Halford Mountain Bike Price ● AVG RoadBikes Pricehalfords



£3,500

Expensive Halford Mountain Bike

£150

Lowest Halford Mountain Bike

£3,500

Expensive Halford Road Bike

£230

Lowest Priced Halford ROad Bike

- ❖ Avg. Price for AHG -MTB is £1,451 compared to Halford's MTB - £704. This indicates the AHG MTB are sold at Higher(double) Unit Price compared to Halfords'.
- ❖ AVG. Price for AHG RTB is £1,172 and Halfords RTB is £1007. This indicates the AHG RTB and Halfords are sold at more or less at equal Unit price.
- ❖ Difference between Expensive AHG Mountain to that of Halford's Bike is only £100- 1%.
- ❖ Also, Expensive Road Bikes is in similar ratio with Expensive Halford RB.
- ❖ Lowest price of AHG MTB is very low compared to Halford Mountain Bike.

Market Niche and Competitors – SWOT Analysis, Competitors USP

AHG Brand Analysis

Company : Founded by Adventure Works

Category : Bicycles, Accessories

Sector : Lifestyle and Retail

USP: one-stop shop for exclusive brands in bikes,
accessories, components and clothing

Halford Brand Analysis

Company : Founded by F W Rush Brooke

Category : Car parts, Camping, Touring & Bicycles

Sector : Lifestyle and Retail

USP: one-stop shop for exclusive brands in bikes,
high quality car parts and accessories

Market Niche and Competitors – By STP

AHG STP

Segment : Buyers of Bikes ,Accessories, Components and Clothing.

Target Group : Bikes, accessories shoppers with online/Reseller Sales Channel in 6 Regions including UK.



Positioning: Not Known

Halford STP

Segment : Buyers of car parts, bikes and accessories.

Target Group : Bikes, car parts & accessories shoppers (online/offline) in mainland UK.

Positioning: Halfords in UK's leading exclusive cycling and motoring retailer

Market Niche and Competitors – SWOT Analysis

AHG SWOT Analysis

Strength:

- ❖ AHG has established in 6 Regions including UK.
- ❖ All products online and Reseller shop except on Components.
- ❖ Price discount offerings
- ❖ Commission offered to Vendors based on sales.

Weakness:

- ❖ To adapt to reposition itself with changing business needs
- ❖ High quality product offerings
- ❖ Only 3 types of Bikes Sold.
- ❖ Delay in Deliveries.
- ❖ Components should be sold online as well. purchase in store.
- ❖ Has only 290 employees.

Halford SWOT Analysis

Strength :

- ❖ It has over 12000+ employees
- ❖ One of UK's biggest retailer of cycling and motor parts
- ❖ Large variety of renowned brands
- ❖ High quality product offerings
- ❖ Online sales services
- ❖ Price discount offerings
- ❖ Free car checks in stores

Weakness:

- ❖ Stiff competition from company owned service centers means low business at times.
- ❖ Failure in expansion outside UK and Ireland.
- ❖ Distribution system limited to mainland UK

Market Niche and Competitors – SWOT Analysis

AHG SWOT Analysis

Opportunities:

- ❖ Improving Manufacturing process.
- ❖ Increasing Staff.
- ❖ Introducing components to online Channel.
- ❖ Availability in more countries via online or reseller.
- ❖ Expanding to diverse market such car repair, car parks, camping.
- ❖ Improving supply chain.
- ❖ Looking more variety of Bikes i.e. electric bike, electric scooter.

Threats:

- ❖ Drastic decline in customer demand for bicycles
- ❖ Stiff competition from Halfords in terms of various category of bikes.
- ❖ Only 3 types of Bikes Sold.
- ❖ Delay in Deliveries.
- ❖ Components should be sold online as well. purchase in store.

Halford SWOT Analysis

Opportunities:

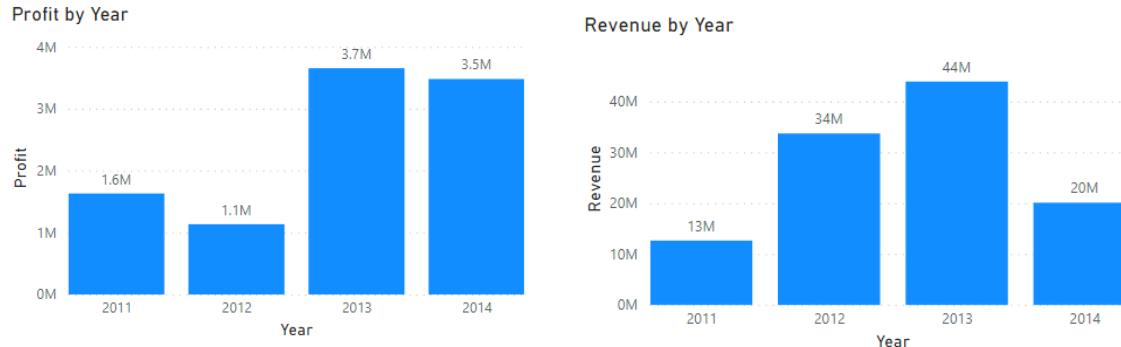
- ❖ Further improving post-sale customer service system
- ❖ Creating an efficient distribution system.
- ❖ Increasing the reachability of online delivery outside UK, and Ireland.
- ❖ Expanding in developing countries where people focus on car repair and maintenance over repurchase

Threats:

- ❖ Drastic decline in customer demand for bicycles
- ❖ Decline in customer income levels and disposable income owing to financial crisis
- ❖ Competitors providing equitable quality proposition at lower prices

Market Niche and Competitors – Revenue

AHG Revenue from 2011- 2014



- ❖ AHG revenue has increased from 2013-2014.
- ❖ The profit was 3.5 M in 2014 however the revenue decrease to 20M.
- ❖ To increase the revenue and Profit, AHG needs to diversify in other fields and increase the category for bikes.

Halford Revenue from 2011-2014



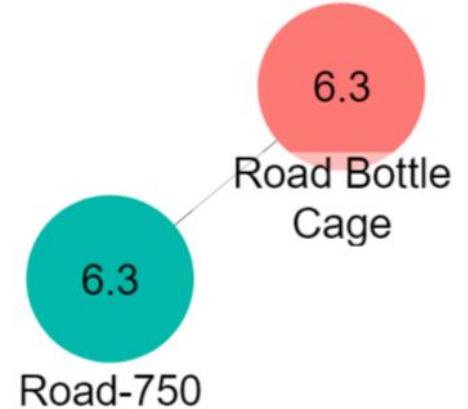
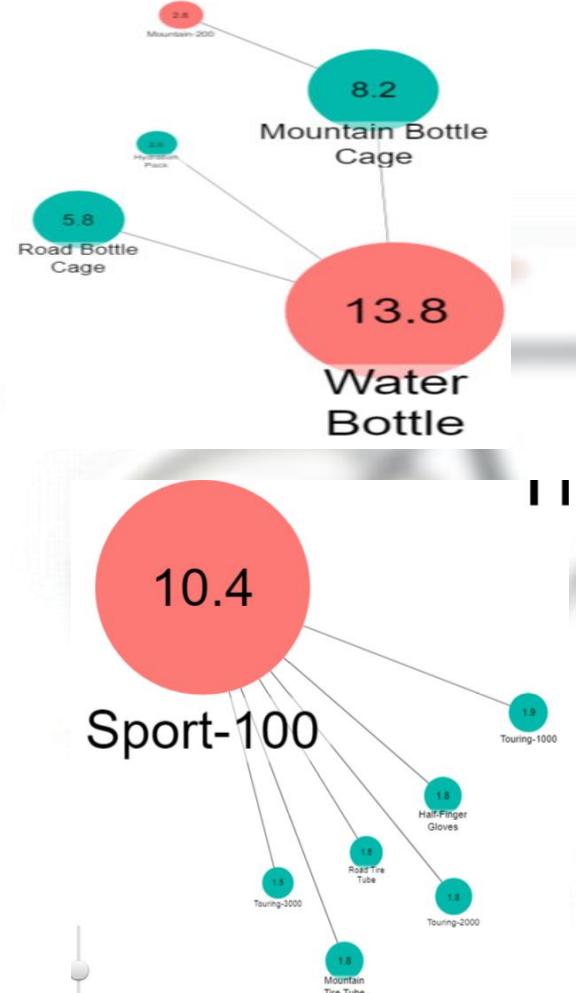
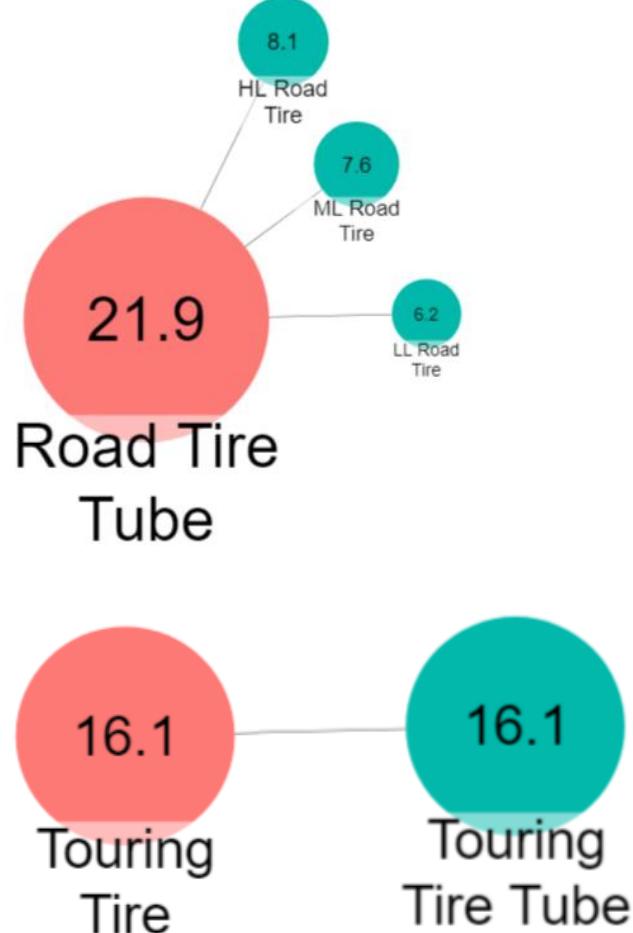
- ❖ Halford has a diversified portfolio not limited to bikes.
- ❖ Hence, the group revenue would be high compared to AHG.
- ❖ It captures only 28% for Bikes . Most Revenue comes from Car Maintenance-27%.
- ❖ The Group Revenue was 939.7M in 2014 and has increased since 2011.
- ❖ However, the profit has decreased from 72M in 2014.

Market Basket Analysis



Market Basket Analysis – For Online Sales

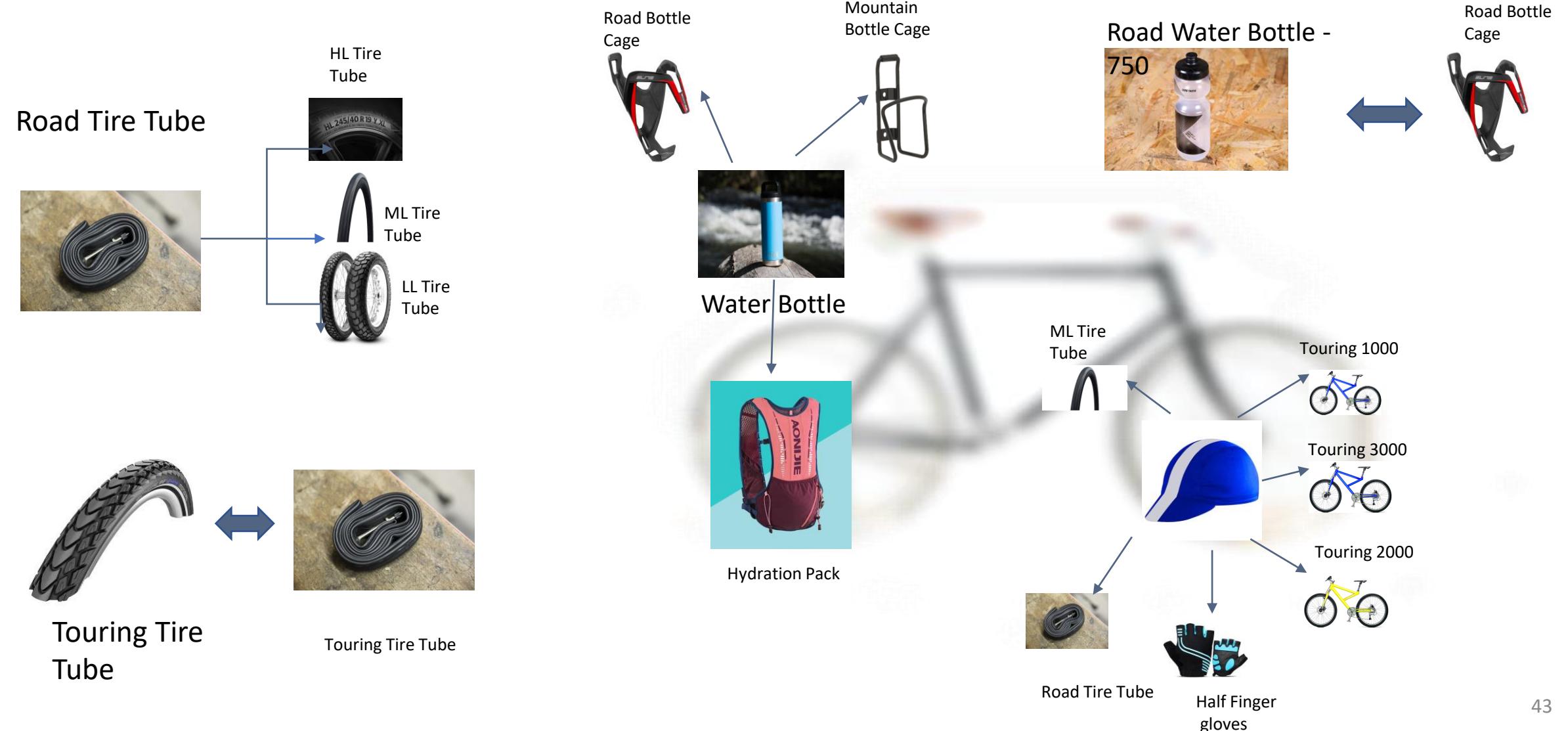
TOP 5 ASSOCIATION OF PRODUCTS BY TOTAL SALES



- ❖ Market Basket Analysis is a powerful tool for translating vast amounts of customer transaction and viewing data into simple rules for product promotion and recommendation.
- ❖ The chart has been produced using Apriori algorithm, association rules, aggregation and visualization using Power BI.

Market Basket Analysis – For Online Sales

Recommended products for higher sales:



5 Year Forecast

Forecasting for 6 Regions



Australia



Canada



France



Germany

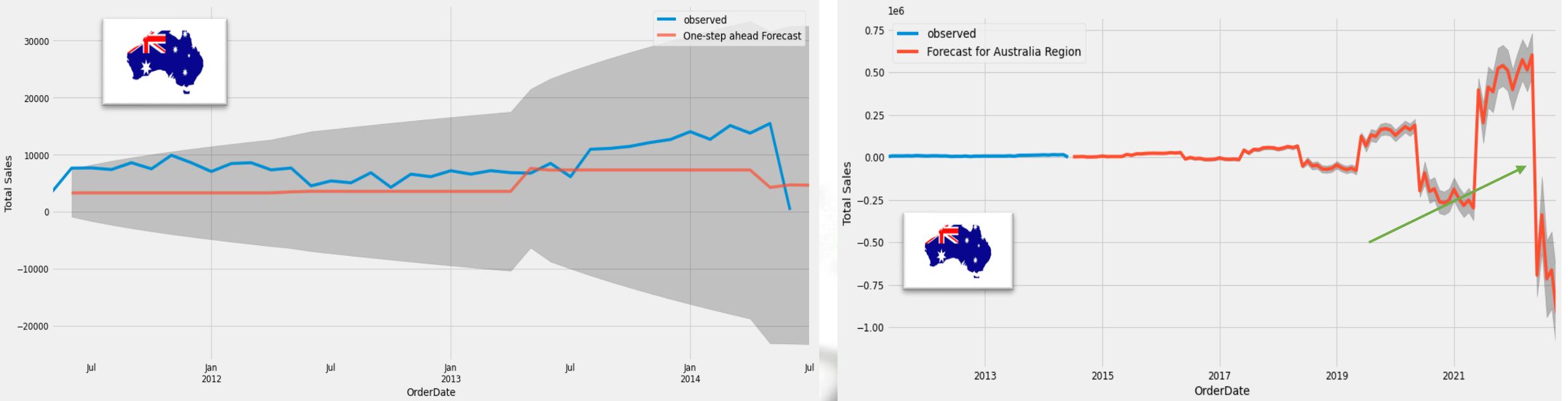


United Kingdom



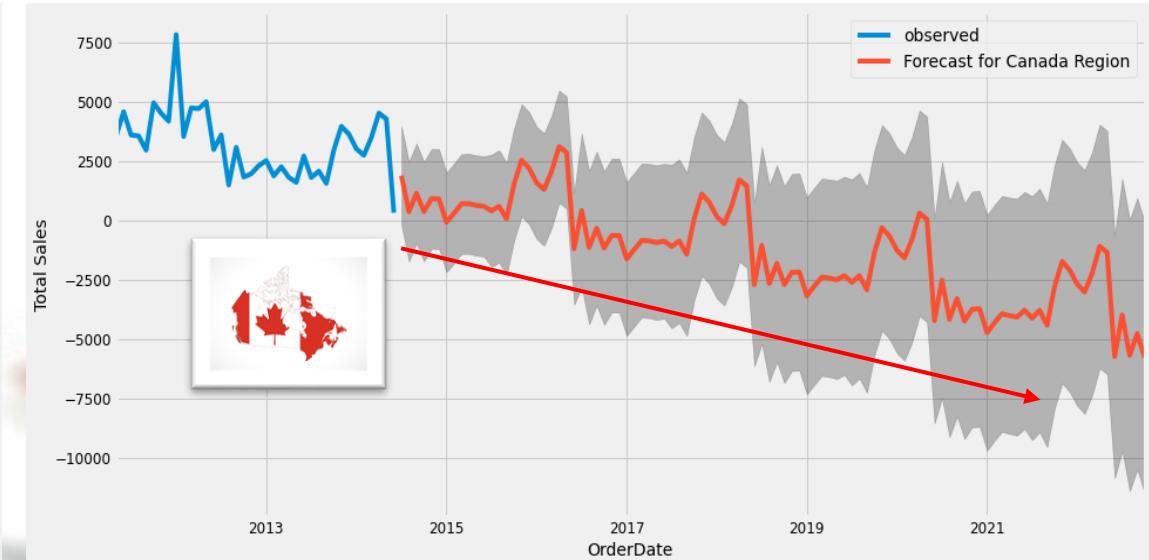
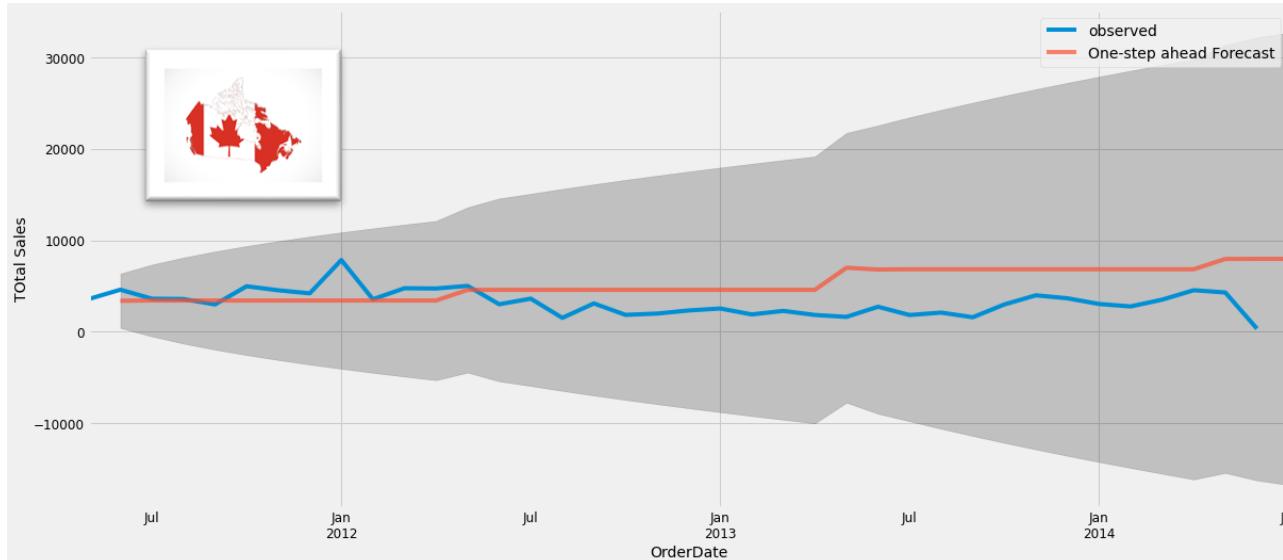
United States

5 Year Forecast – Online(Australia)



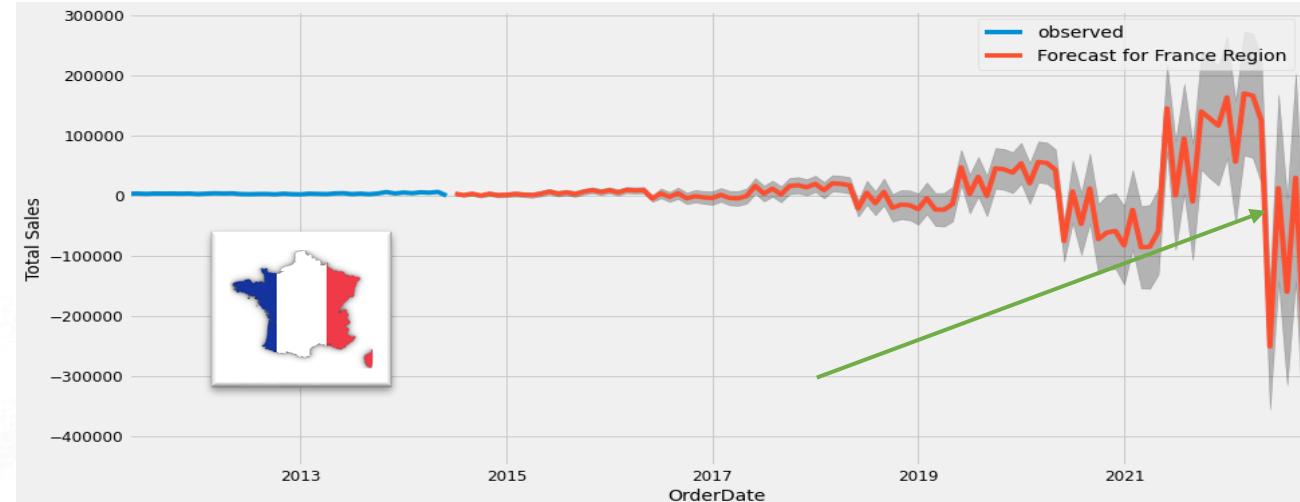
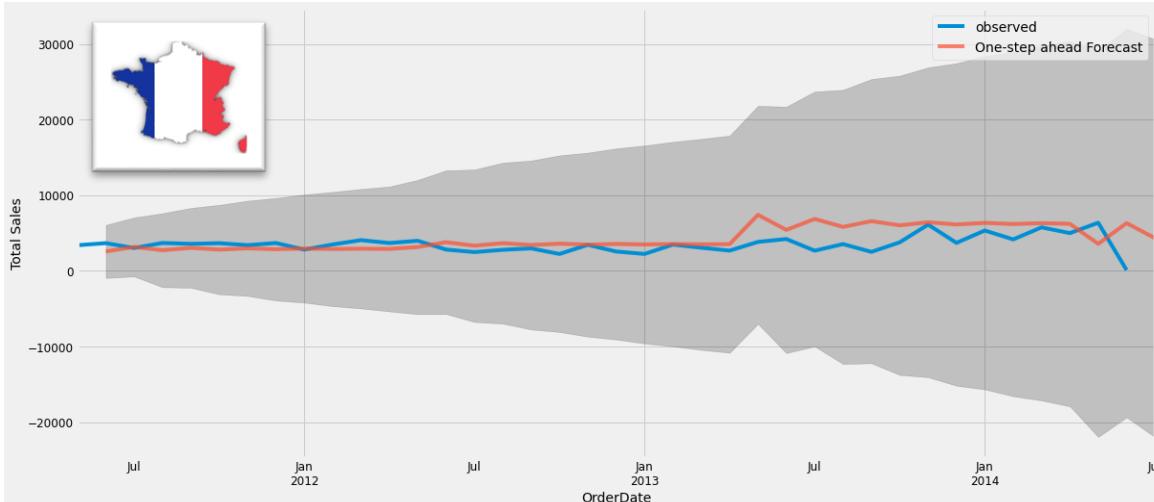
- ❖ The Total Sales for Australia :
 - 2011 : 1.5M
 - 2012: 2.1M
 - 2013 : 3.2 M
 - 2014: 2.2M
- ❖ The highest sales was in 2013 ..
- ❖ 5 Year Forecast suggests the no change in sales until 2017 and then shows increment of more than 50% in 2021 with a downfall in between 2018-2020.

5 Year Forecast – Online(Canada)



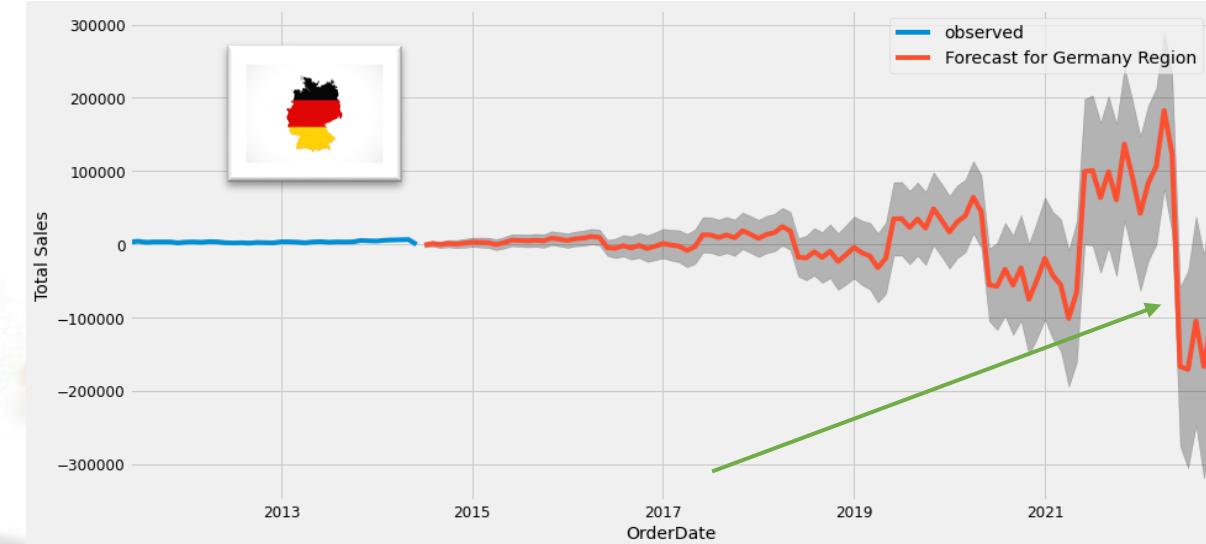
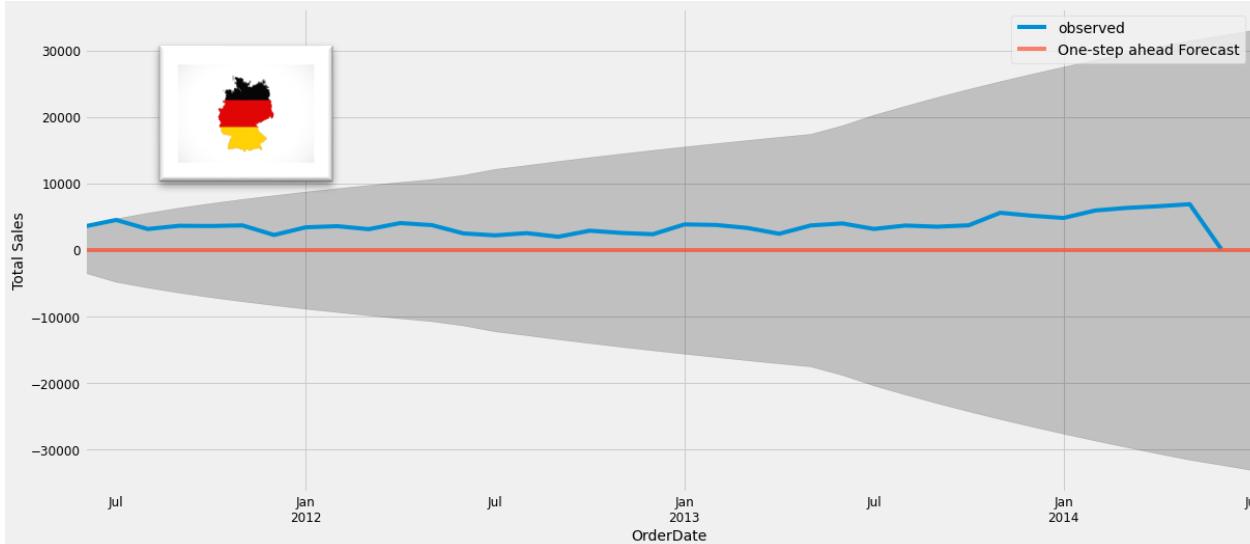
- ❖ The Total Sales for Canada :
 - 2011 : 0.20M
 - 2012: 0.59M
 - 2013 : 0.63 M
 - 2014: 0.50 M
- ❖ The highest sales was in 2013 .
- ❖ 5 Year Forecast suggests the decline in sales from 2015 -2019 by 50% with intermediate increase between in sales in 2016,2018,2020.

5 Year Forecast – Online(France)



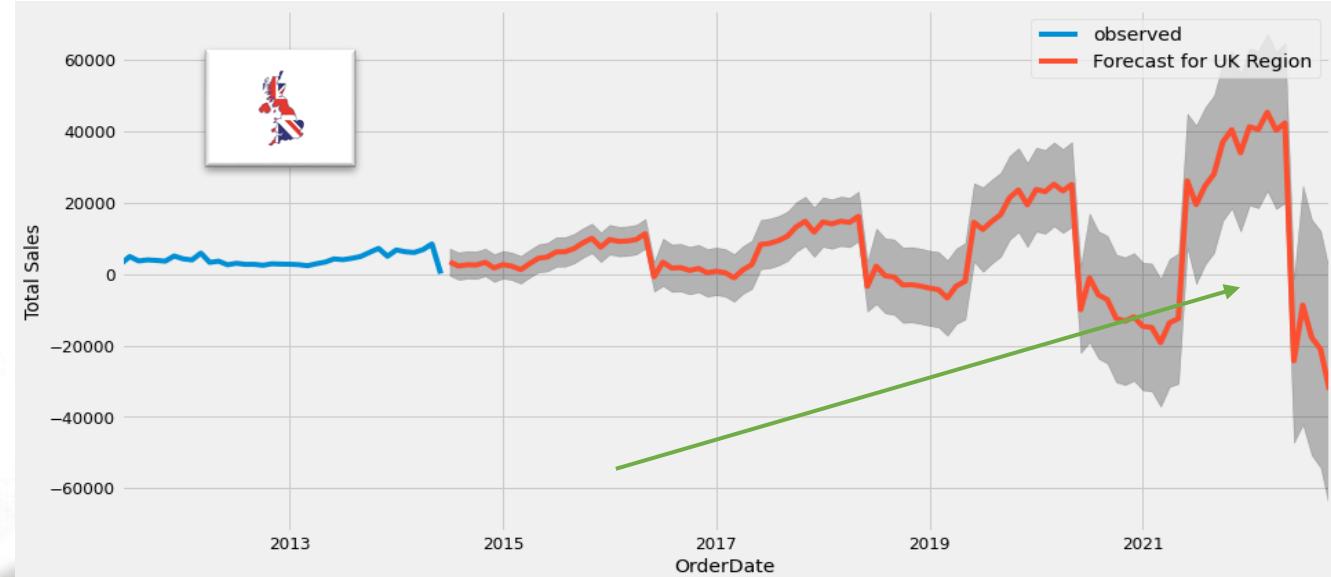
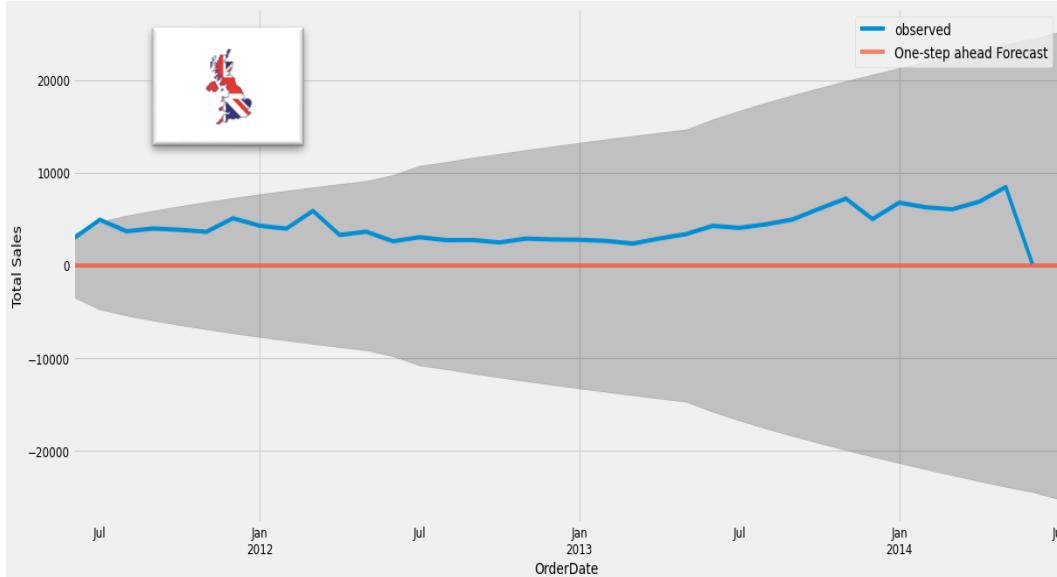
- ❖ The Total Sales for France :
 - 2011 : 0.21M
 - 2012: 0.52M
 - 2013 : 1.10 M
 - 2014: 0.81 M
- ❖ The highest sales was in 2013 .
- ❖ 5 Year Forecast suggests the total sales remain unchanged till 2017.By 2018 , the sales increases to by 18%.

5 Year Forecast – Online(Germany)



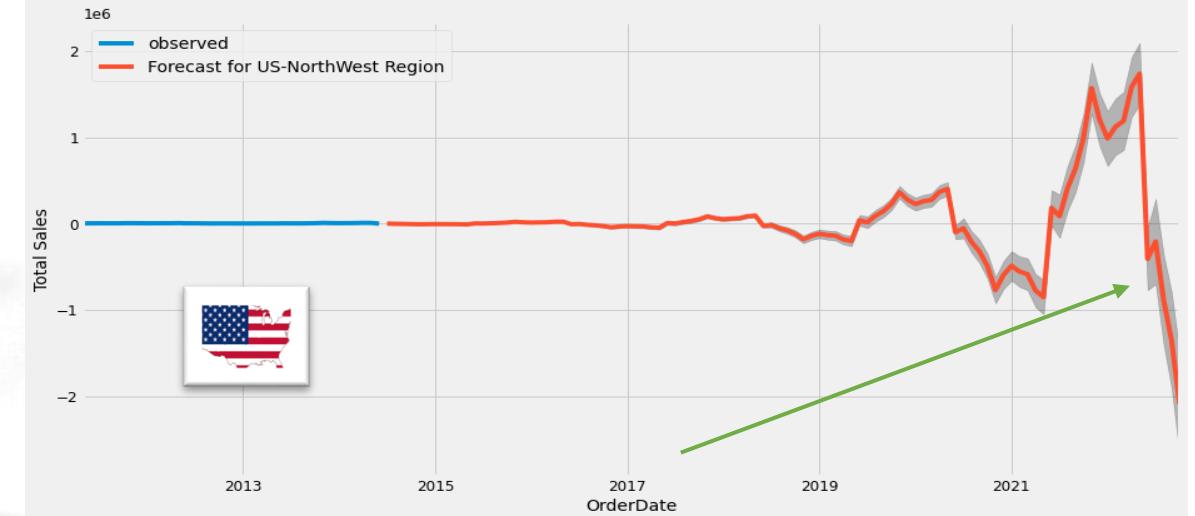
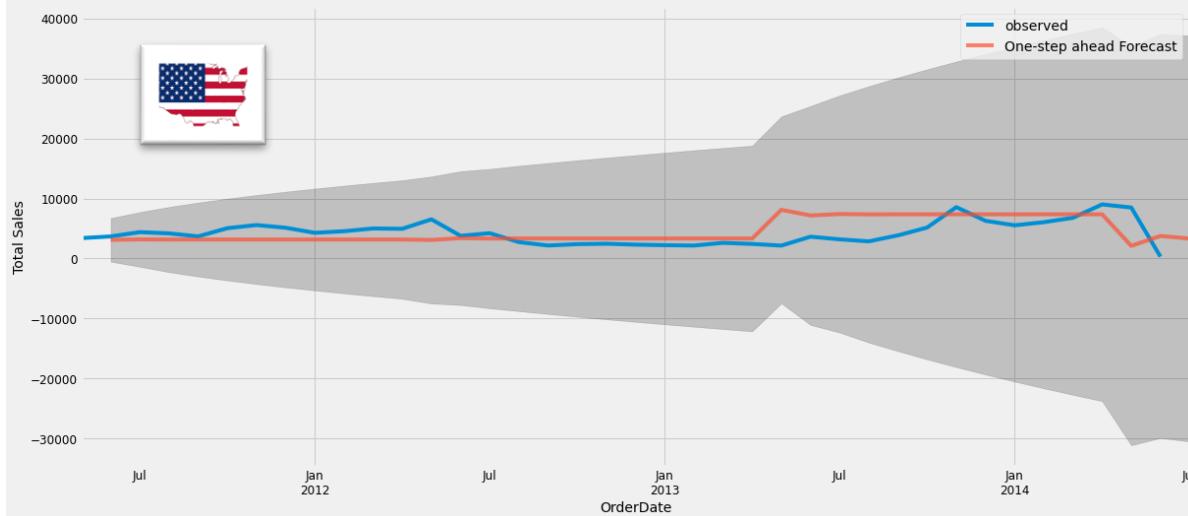
- ❖ The Total Sales for Germany :
 - 2011 : 0.2M
 - 2012: 0.6M
 - 2013 : 1.2M
 - 2014: 0.9M
- ❖ The highest sales was in 2013 .
- ❖ 5 Year Forecast suggests the total sales remain unchanged till 2016.By 2017, the sales increases to by 18% with numerous fluctuations.

5 Year Forecast – Online(United Kingdom)



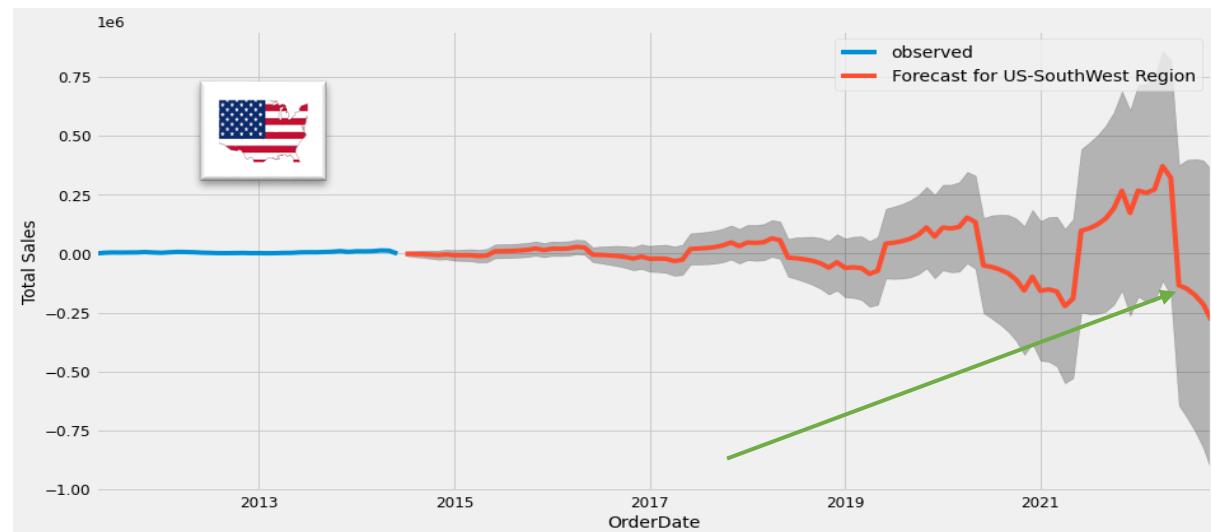
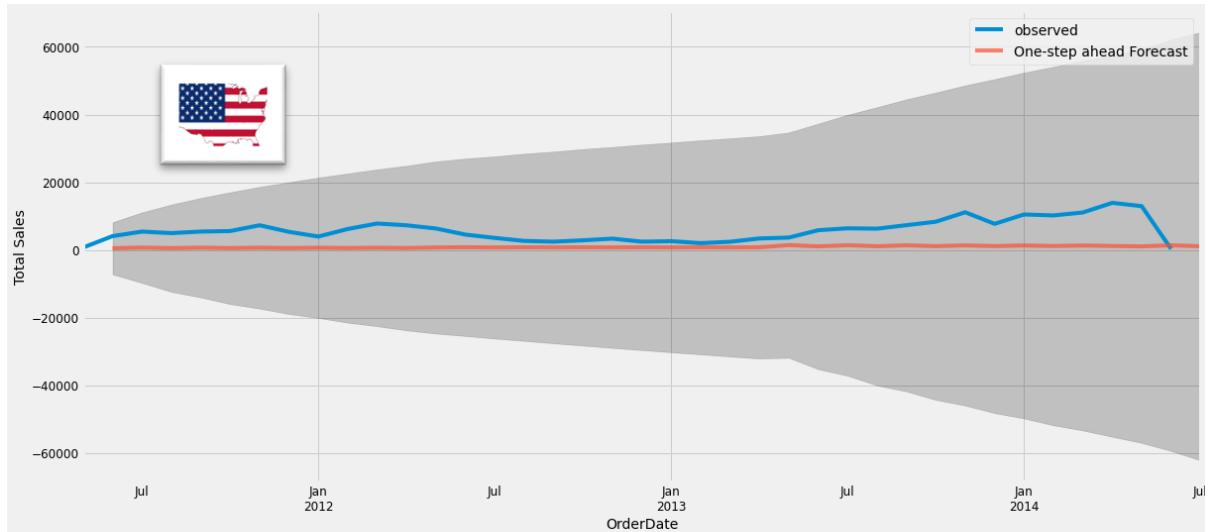
- ❖ The Total Sales for United Kingdom :
 - 2011 : 0.4M
 - 2012: 0.6M
 - 2013 : 1.4M
 - 2014: 1 M
- ❖ The highest sales was in 2013 .
- ❖ 5 Year Forecast suggests the total sales has been increasing 2017 till 2021 reaching approximately 4 M. It also indicates the sales has decreased in mid 2018 , mid 2020.

5 Year Forecast – Online(United States-North West)



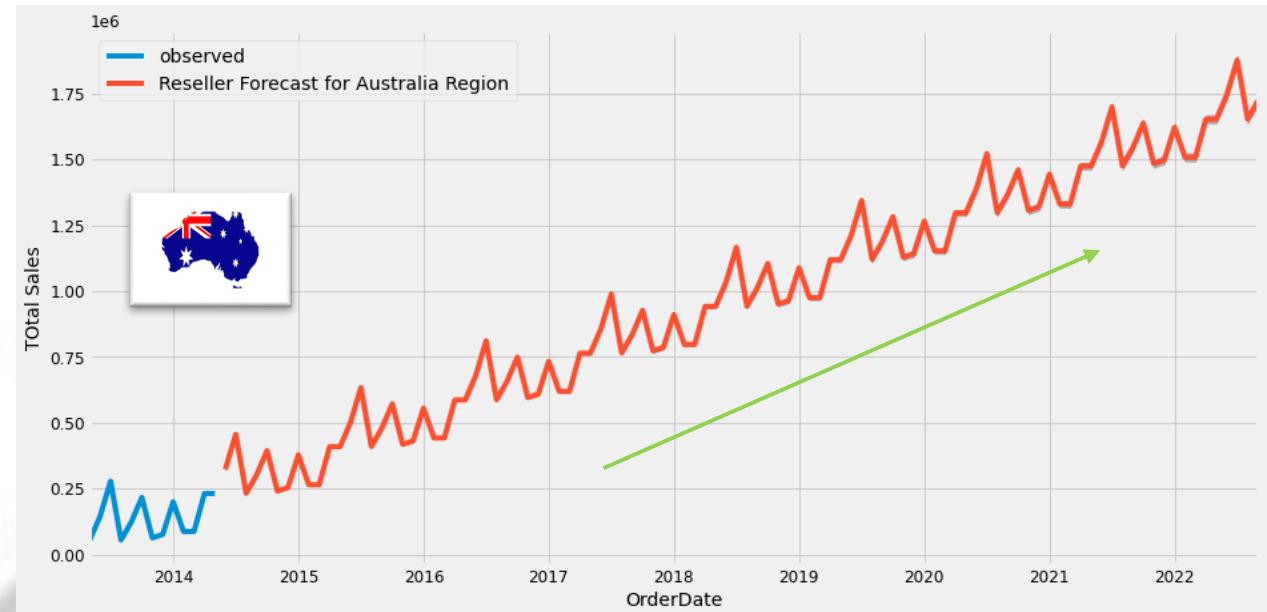
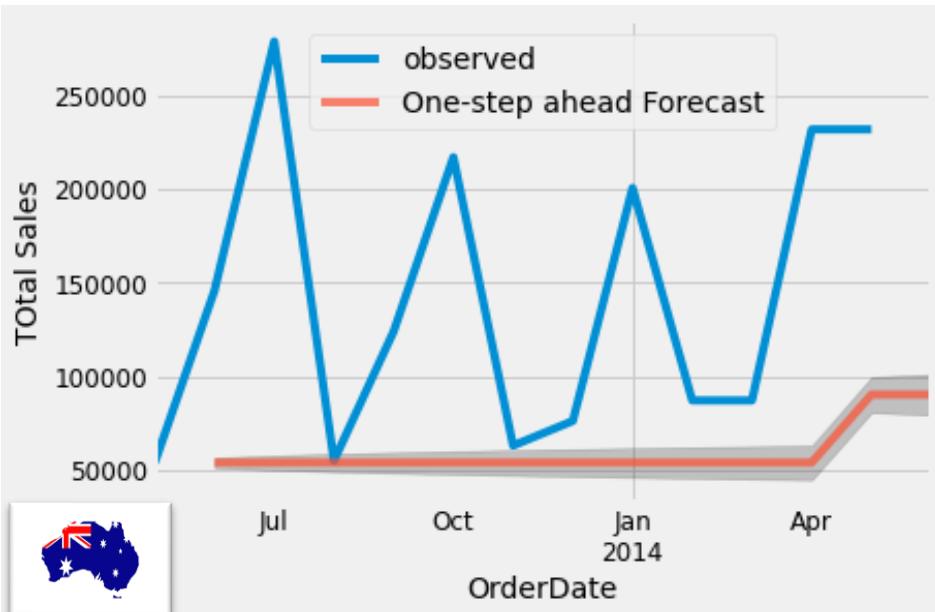
- ❖ The Total Sales for United States :
 - 2011 : 1.3M
 - 2012: 2.0M
 - 2013 : 3.2M
 - 2014: 2.9M
- ❖ 5 Year Forecast for US NW suggests the total sales will remain constant until 2018 .Form 2018 ,sales increases till 2021 with some fluctuation in 2020.

5 Year Forecast – Online(United States-South West)



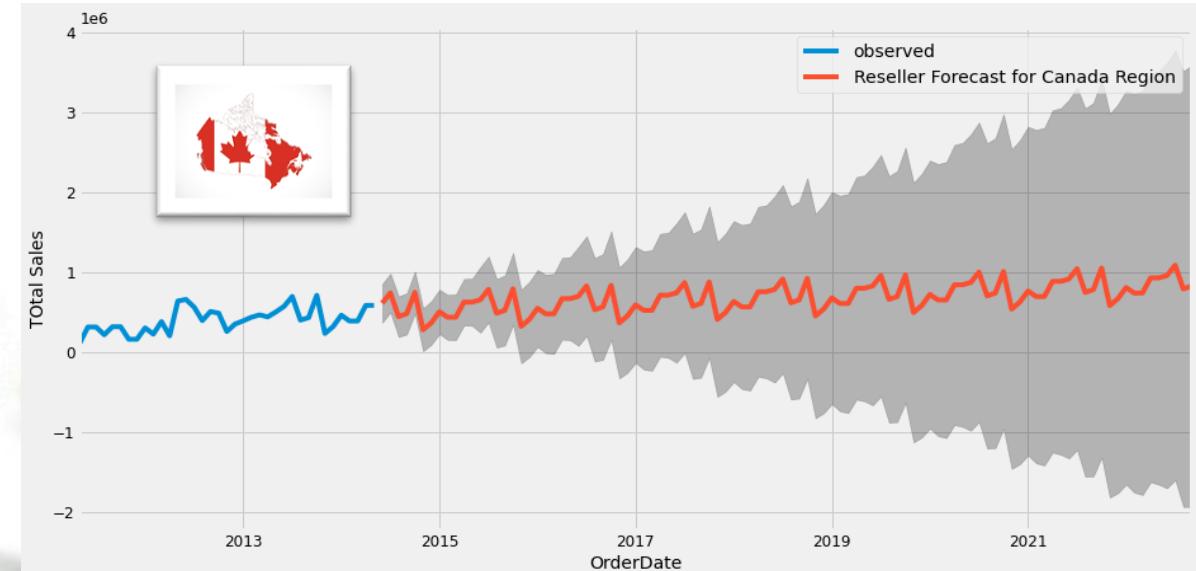
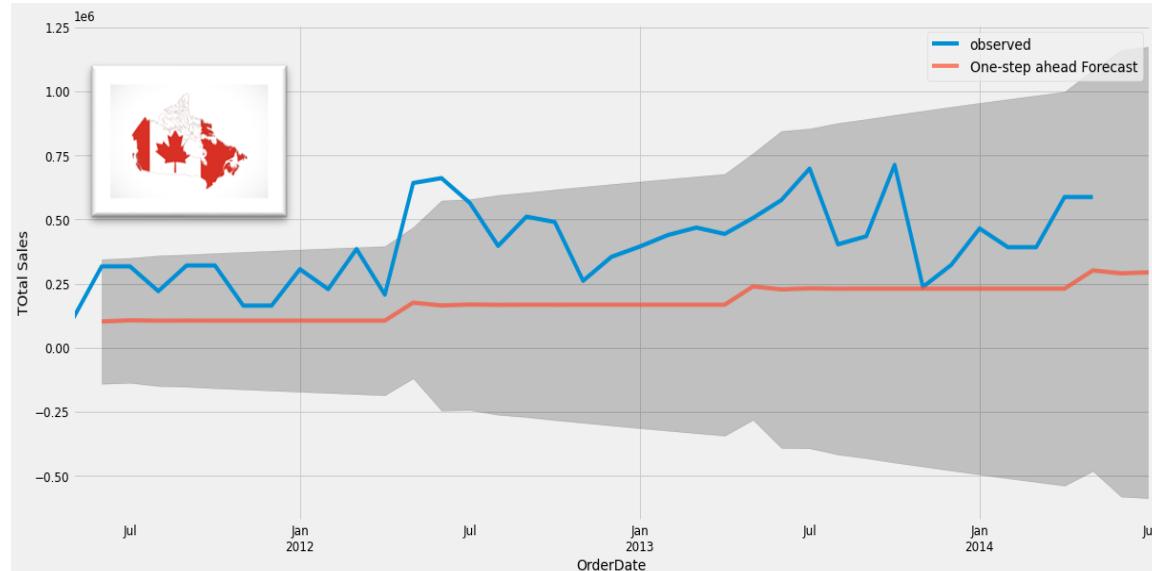
- ❖ The Total Sales for United States :
 - 2011 : 1.3M
 - 2012: 2.0M
 - 2013 : 3.2M
 - 2014: 2.9M
- ❖ 5 Year Forecast for US SW suggests the total sales will remain constant/practically null until 2016 .From 2018 ,sales increases to 25% till 2021 with some fluctuation in 2020.

5 Year Forecast – Reseller(Australia)



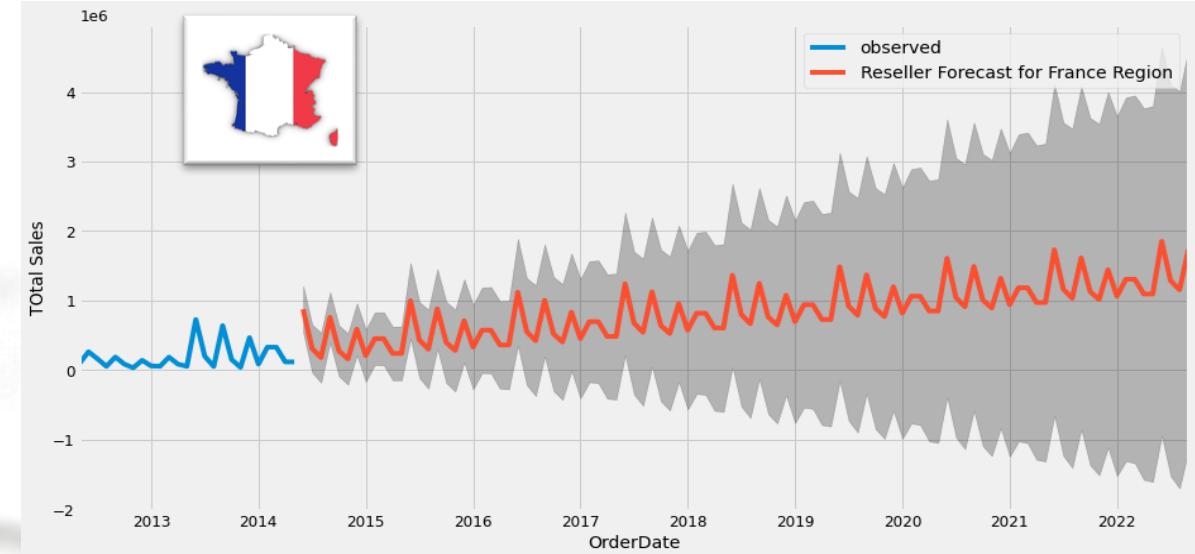
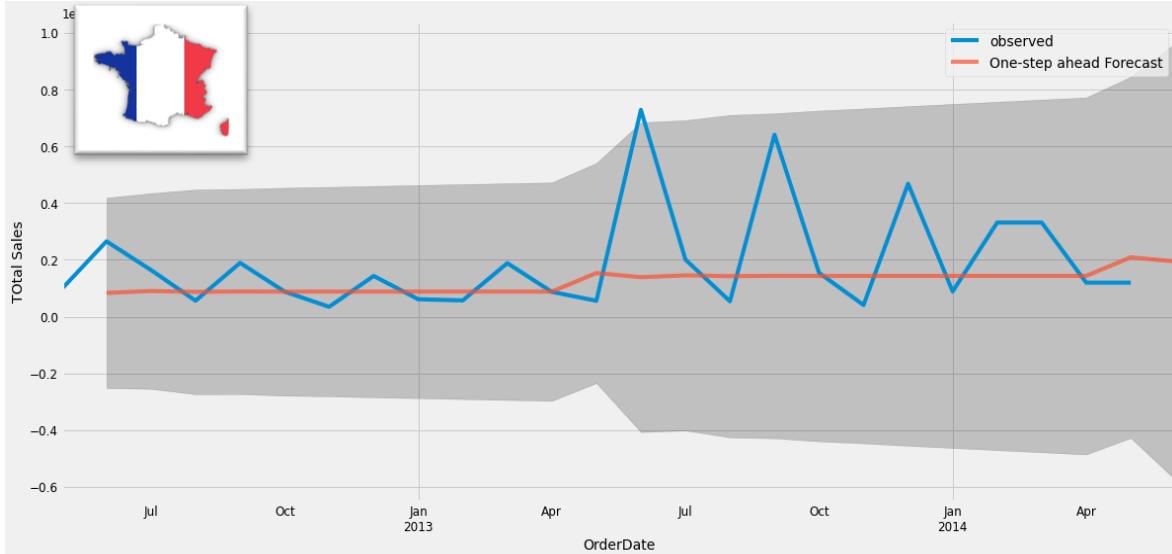
- ❖ The Reseller Total Sales for Australia:
 - 2013 : 1.02M
 - 2014: 0.6M
- ❖ Although, the reseller channel started in 2013, it is second largest region after US in terms of total sales.
- ❖ 5 Year Forecast suggests promising increase in sales from 2015 to reach 1.75M without major fluctuations.

5 Year Forecast – Reseller(Canada)



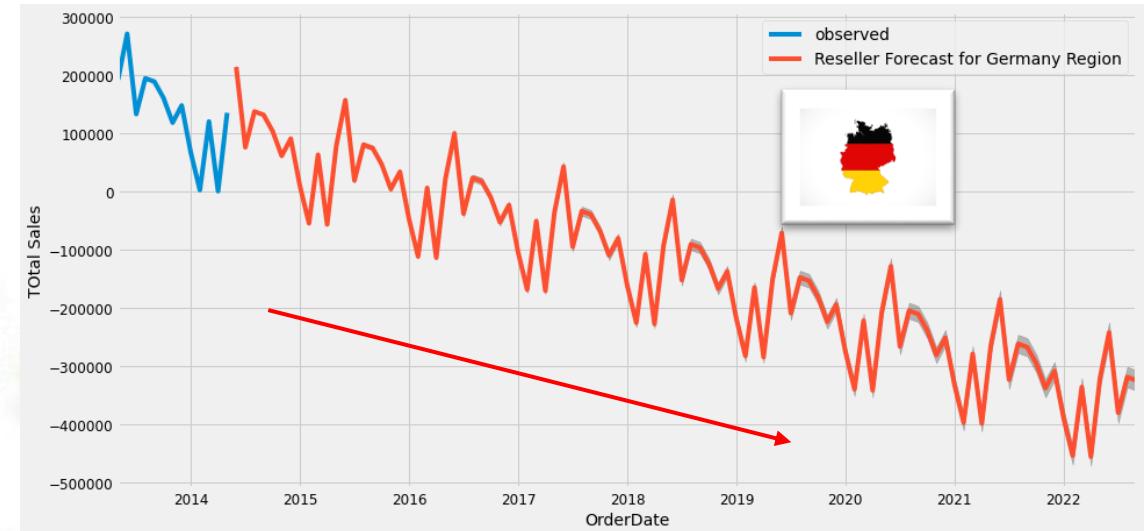
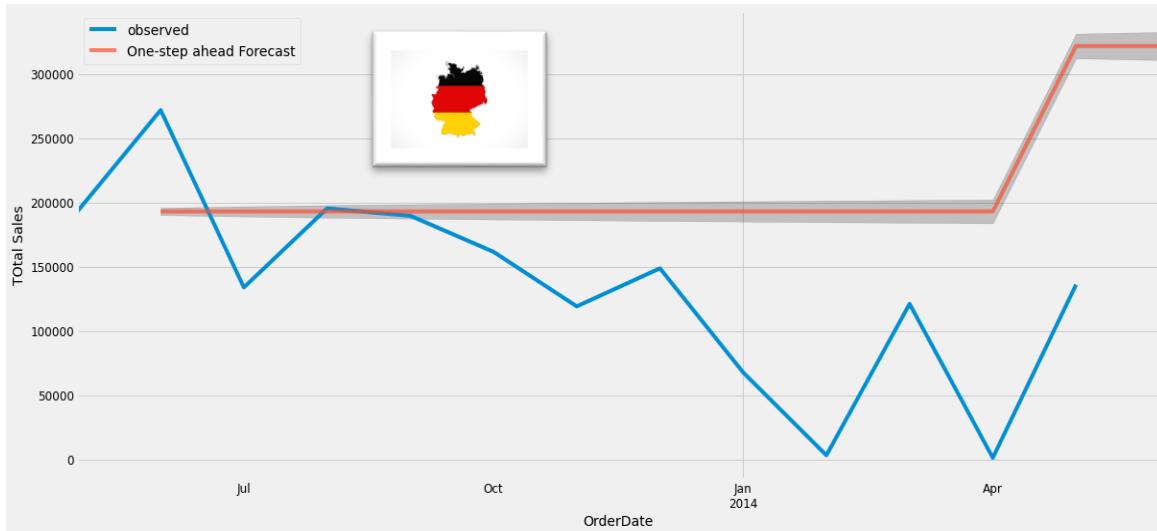
- ❖ The Reseller Total Sales for Canada:
 - 2011 : 1.7M
 - 2012: 5.3M
 - 2013 : 5.6M
 - 2014: 1.8M
- ❖ The Reseller was highest in 2013 and 2014
- ❖ 5 Year Forecast suggests the total sales will be consistent from 2015 -2021 reaching more than 1 million.

5 Year Forecast – Reseller(France)



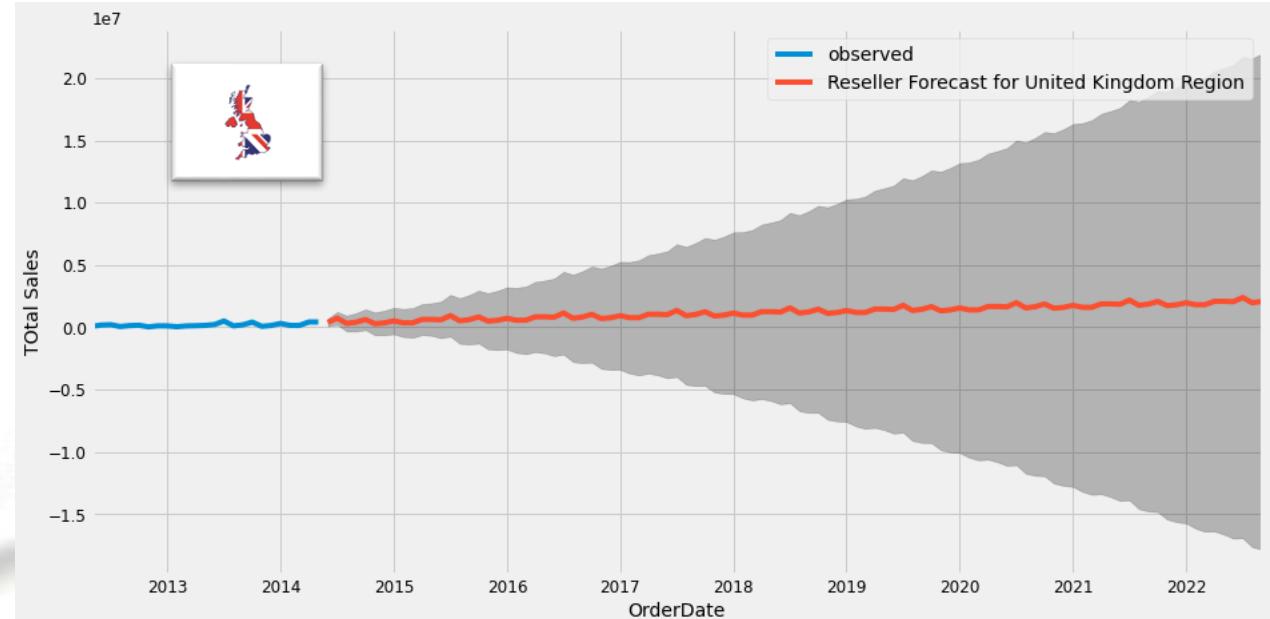
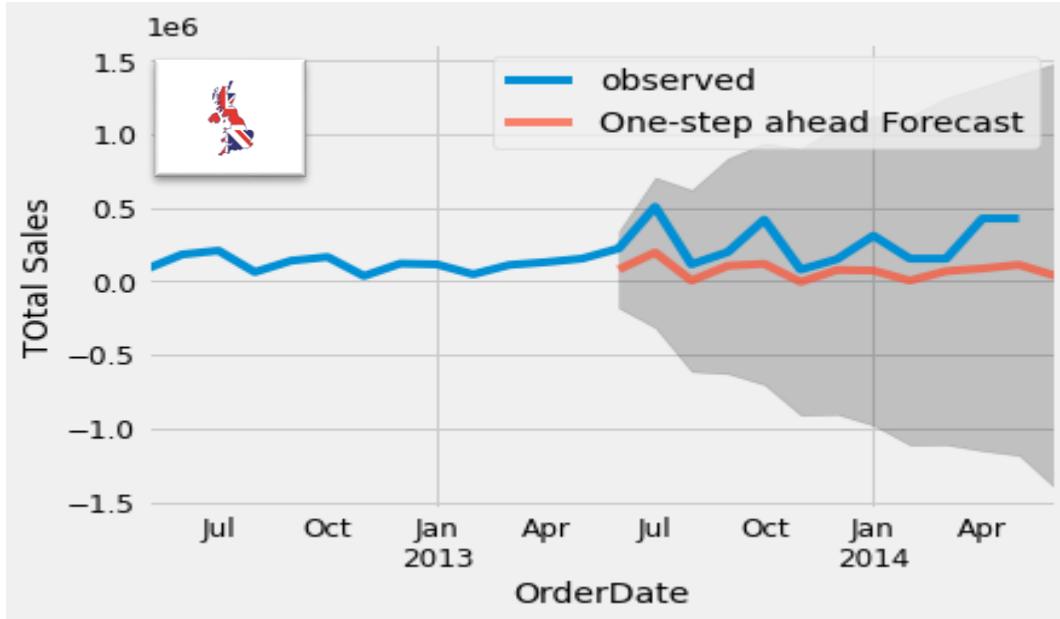
- ❖ The Reseller Total Sales for France:
 - 2012: 1.0M
 - 2013 : 2.7M
 - 2014: 0.9M
- ❖ The France Reseller Channel started in 2012 , highest sales was in 2013 dropping to 80% in 2014.
- ❖ 5 Year Forecast suggests the total sales will slowly recovery with consistent increase in sales from 2015 reaching around 2M by 2022.

5 Year Forecast – Reseller(Germany)



- ❖ The Reseller Total Sales for Germany :
2013 : 1.4M
2014: 0.6M
- ❖ The Germany Reseller Channel started in 2013 , where it made highest sales dropping to 50% in 2014.
- ❖ 5 Year Forecast suggests the total sales will decline from 2015 -2022.

5 Year Forecast – Reseller(United Kingdom)



❖ The Reseller Total Sales for United Kingdom :

2012: 1M

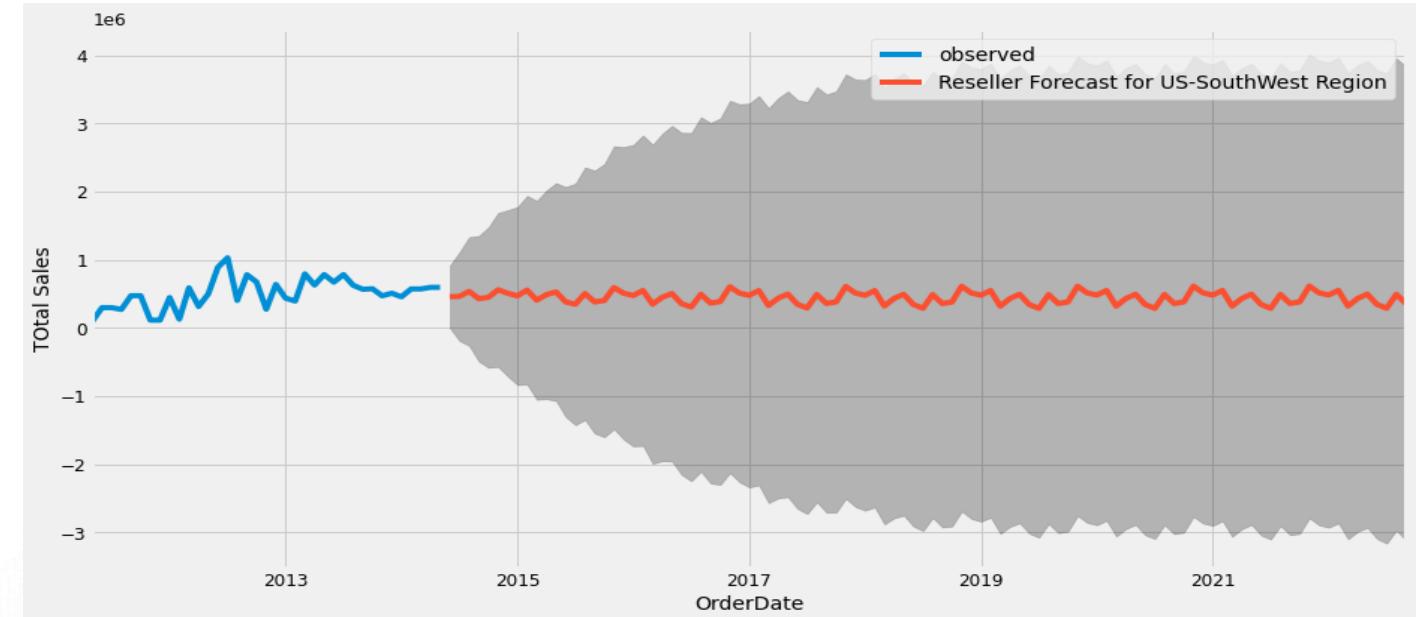
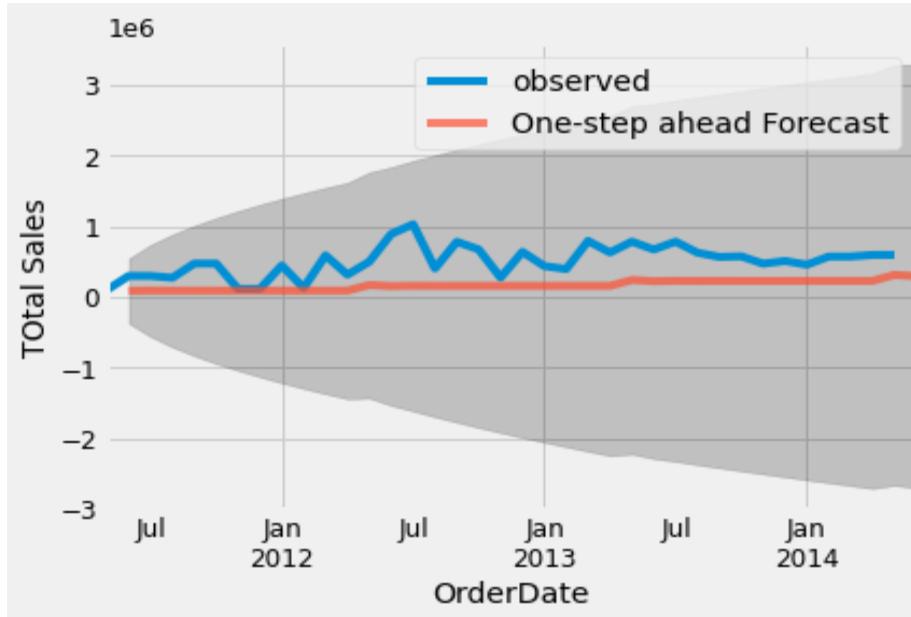
2013 : 2.3M

2014: 1M

❖ The United Kingdom Reseller Channel started in 2012 , where it made highest sales dropping to 50% in 2014.

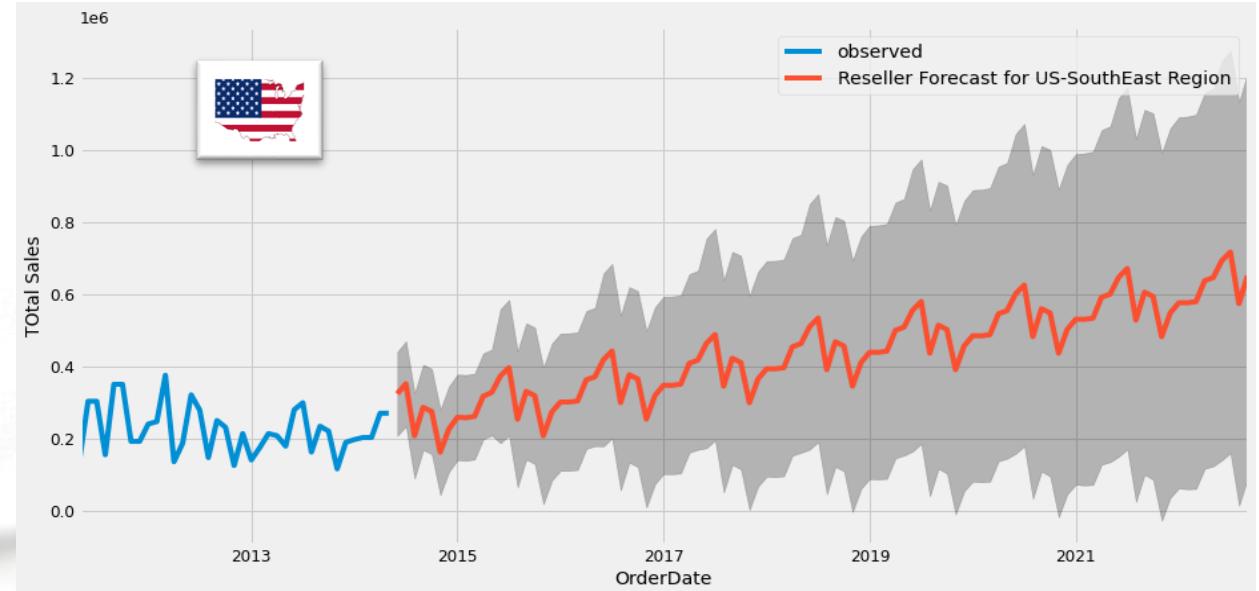
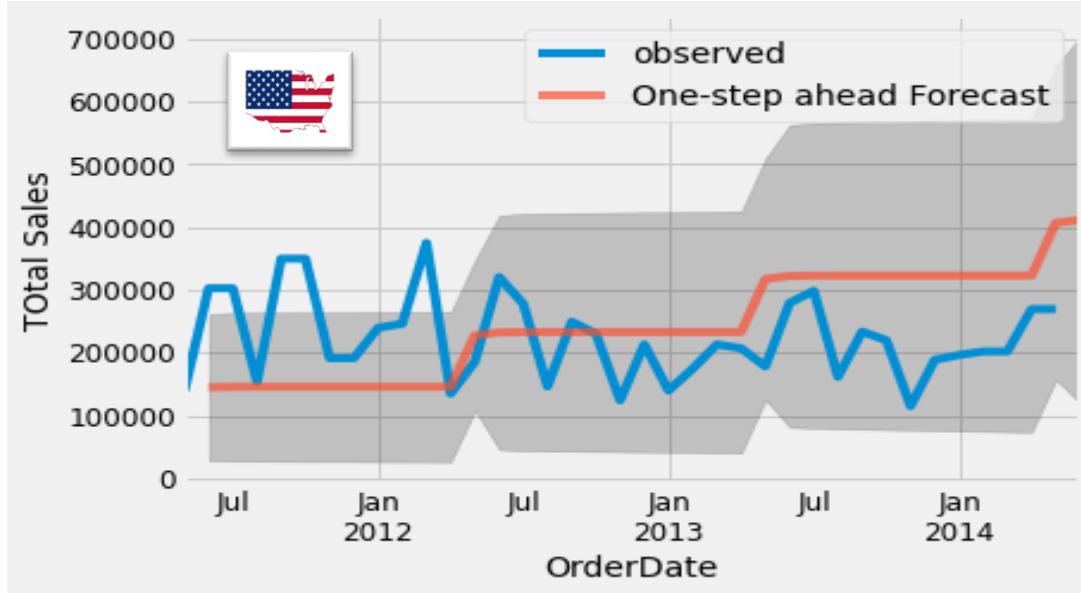
❖ 5 Year Forecast suggests the total sales will remain constant with consistent increase in sales 0.3M by 2022.

5 Year Forecast – Reseller(United States-SouthWest)



- ❖ The Reseller Total Sales for United States :
 - 2011: 7M
 - 2012: 20M
 - 2013 : 20M
 - 2014: 7M
- ❖ The Reseller Sales Channel has been generating positive sales throughout the years.
- ❖ 5 Year Forecast suggests the total sales will remain constant with consistent increase in sales 0.3M by 2022.

5 Year Forecast – Reseller(United States-SouthEast)



- ❖ The Reseller Total Sales for United States :
 - 2011: 7M
 - 2012: 20M
 - 2013 : 20M
 - 2014: 7M
- ❖ The Reseller Sales Channel has been generating positive sales throughout the years with decline in 2011 and start of 2014.
- ❖ 5 Year Forecast suggests the total sales will continuously increase to 60% by 2021.

AHG FUTURE STRATEGY

Introduce online features:

Subscription for Repairs, Warranty, Premium Delivery with Bike Fitting, Membership, offer Discount when 2 more than products together, Encourage customer to leave feedback with rewards

Hold Monthly Meeting

with Vendor to set targets and do monthly sales competition between vendors

Introducing new area

such as Fitness supplements: Nutrition products ,sports shoes, fitness watch , kinesthetics equipment such as neck massager, thermo gun.

Enter New Region

where policy already in place for green environment such Netherlands, Amsterdam, Denmark. Can also look into Asia Region countries such as Singapore, Japan, India, Hongkong

Introduce/Manufacturing

new varieties of Bikes with competitors in view such electric bike, electric scooter, folding bikes, rental bikes. Manufacturing can be changed to region where manufacturing cost is less such as India, China, Indonesia

Price Evaluation

Introduce the price evaluation on every mid year ,understand the trend n the market. Offer competitors comparison value to ensure the price doesn't generate negative profit on yearly basis.

AHG RECOMMENDATIONS

- ❖ Introduce “Components” Category to online sales channel to boost sales.
- ❖ In Reseller Market, all TB and RB are sold with 60 % negative profit. List Price is greater Unit price. The avg.unit profit for Road and Touring Bike is -403.55.If the Bikes were sold with Unit Price greater than Avg .cost probably by 2-3%, then it would have made profit. This leads to recommendation of revaluation of Unit price which is greater than Avg.Cost and less then List Price to generate positive profit.
- ❖ Average Standard Cost has not been changed since establishment of AHG, should be investigated for possible loophole.
- ❖ Days Delay Delivery: 18.89% of Work Orders are Late. AHG has only 290 employees. This could be reason for delay in delivery. In addition, look into shipping cost if AHG is paying higher then others.
- ❖ Penetrate to New Regions initially with online sales channel and set up advert ad for vendors with commission and offer them Volume Discount . For Reseller, offer franchise sale with all packages including customer service, sales, engineer service and installation.
- ❖ Hold Monthly Meeting with Vendors – Introduce monthly targets, set competition with monetary rewards.
- ❖ Contact Corporate for rental bikes on yearly basis as part of their cycle to work policy.
- ❖ Rental bikes can be offered on online sales channel as well.

Thank You



Thank you my Family for continuous support and encouragement.

Thank you Pairview LTD for being patient and continuous encouragement.

