

Retail-Giant Sales Forecasting

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- This presentation deck contains the details of Time analysis forecast Sales and Demand for next 6 months that would help the company to manage the revenue and inventory accordingly.

Objective:

- Use the Global Superstore data available to analyze the top 2 most profitable segment and manage its forecast for next 6 months.

Input Data:

- Superstore data consisting details of customers, ordered item`s details such as segment, area, sales, quantity, profit based on ordered dates etc.

Deliverables:

- Time Analysis through R programming to forecast demand and Sales supply for next 6 months.
- PPT deck which contains the business implications of your findings.

Business Understanding:

- Global Superstore has 3 major Segments i.e. Consumer, Corporate and Home Office.
- The store services to 7 different Market regions.

Data Understanding:

- The data contains order placed at a particular time of a day with all the details.
- We need to find out top 2 profitable sectors based on Market-Segment analysis.
- Convert order time to correct Date format.
- Major areas to focus on for our forecasting are: Sales, Profit, Market, Segment, Quantity.

Top 2 Market-Segments:

Based on monthly Sales and Quantity analysis, we have identified the below two as most Profitable Segments.

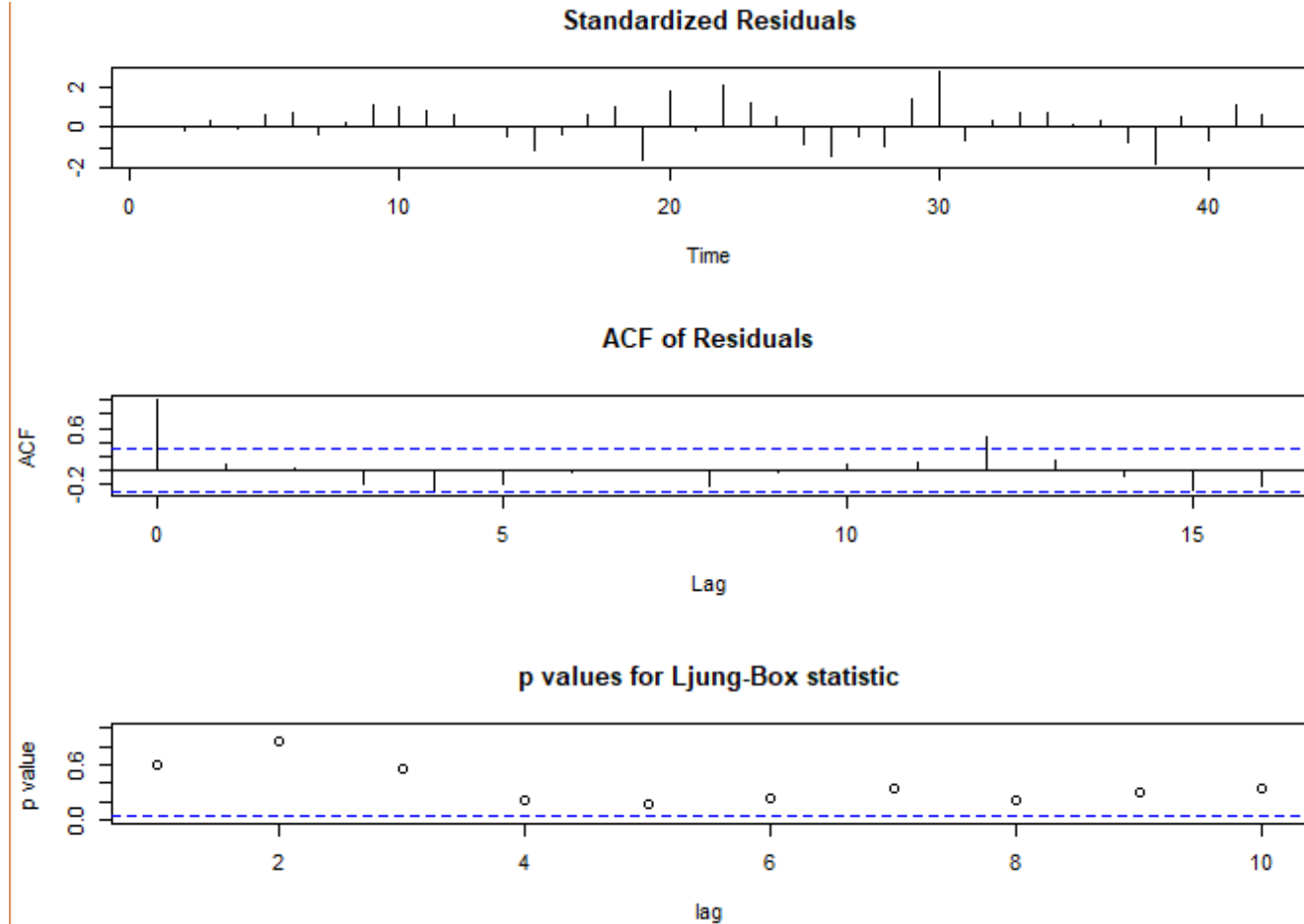
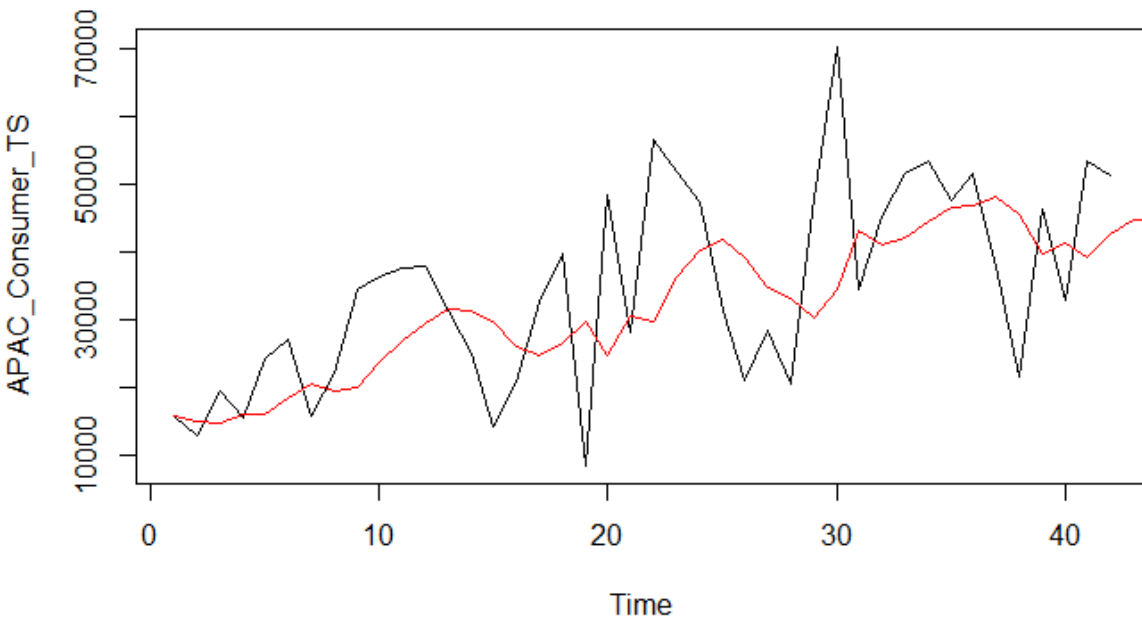
- APAC Consumer
- EU Consumer

Market	Segment	Total.Profit	Profit_Var
APAC	Consumer	177389.251	0.6036334
EU	Consumer	152355.715	0.6553335

APAC Consumer Sales

MAPE value of Auto Arima is better than Classical Decomposition.

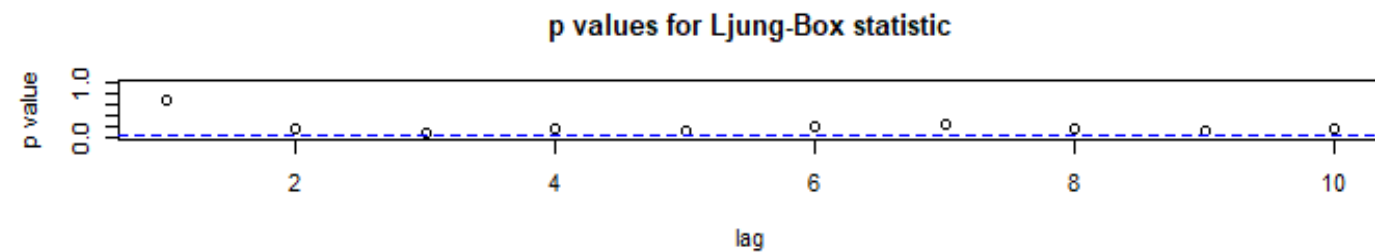
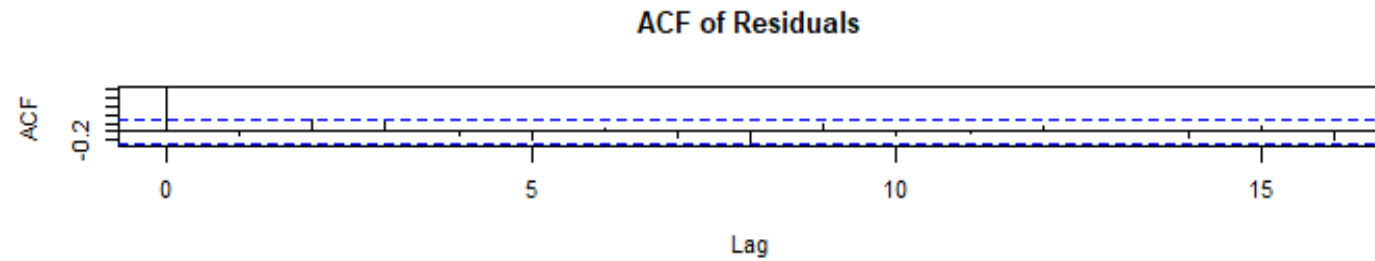
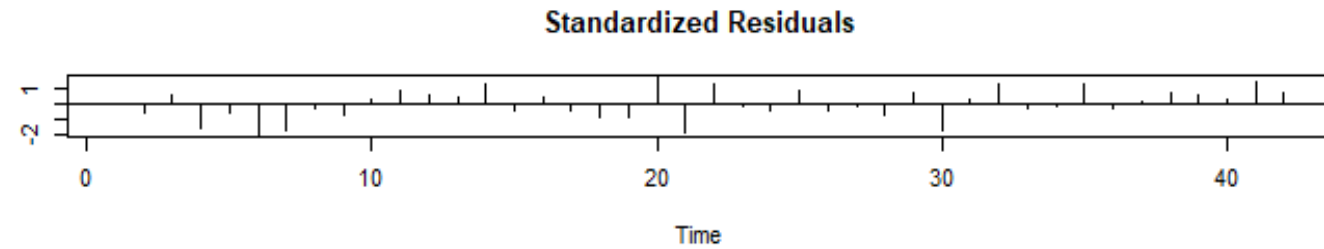
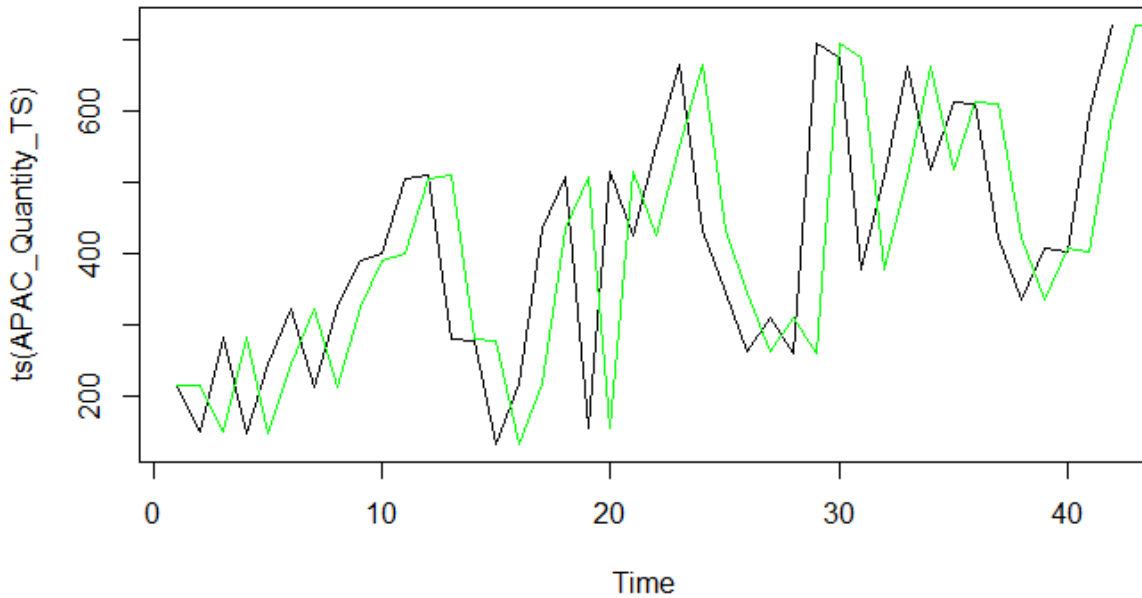
MAPE(Auto Arima) = 27.689



APAC Consumer Quantity

MAPE value of Auto Arima is better than Classical Decomposition.

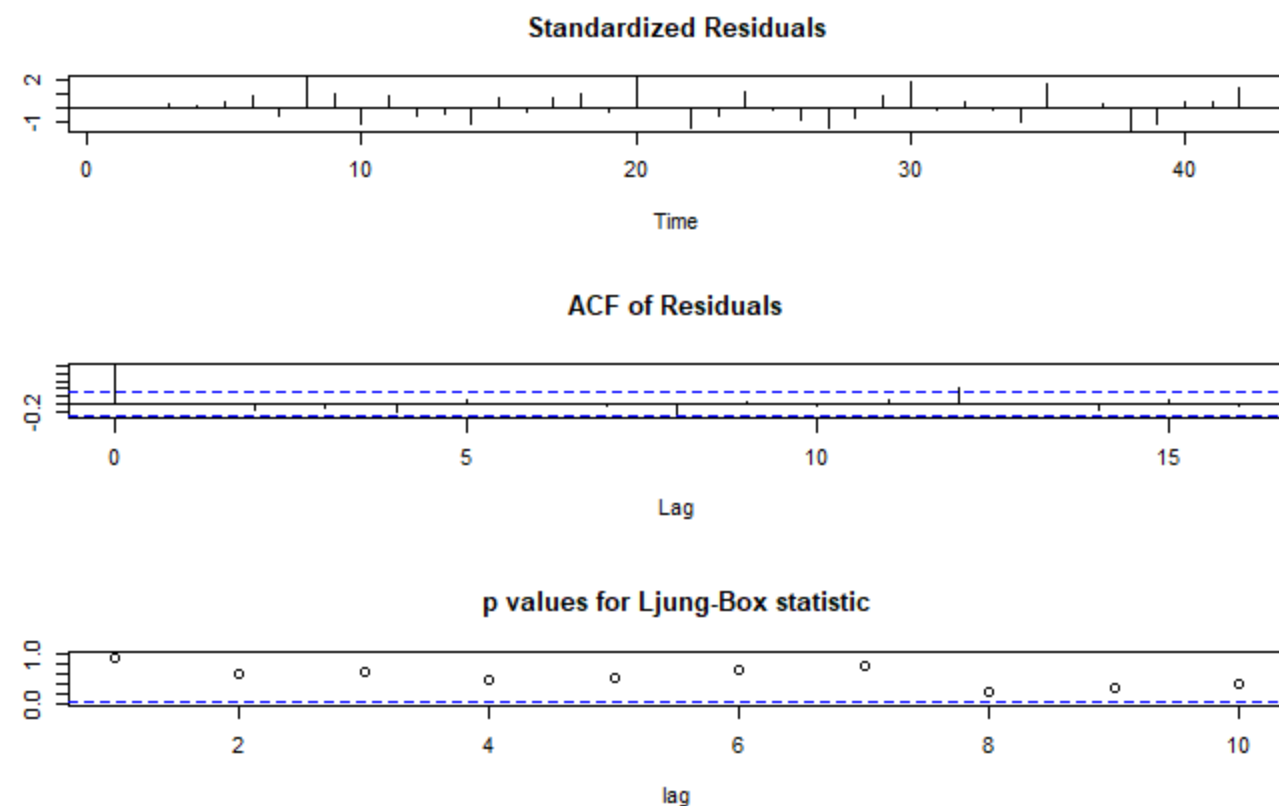
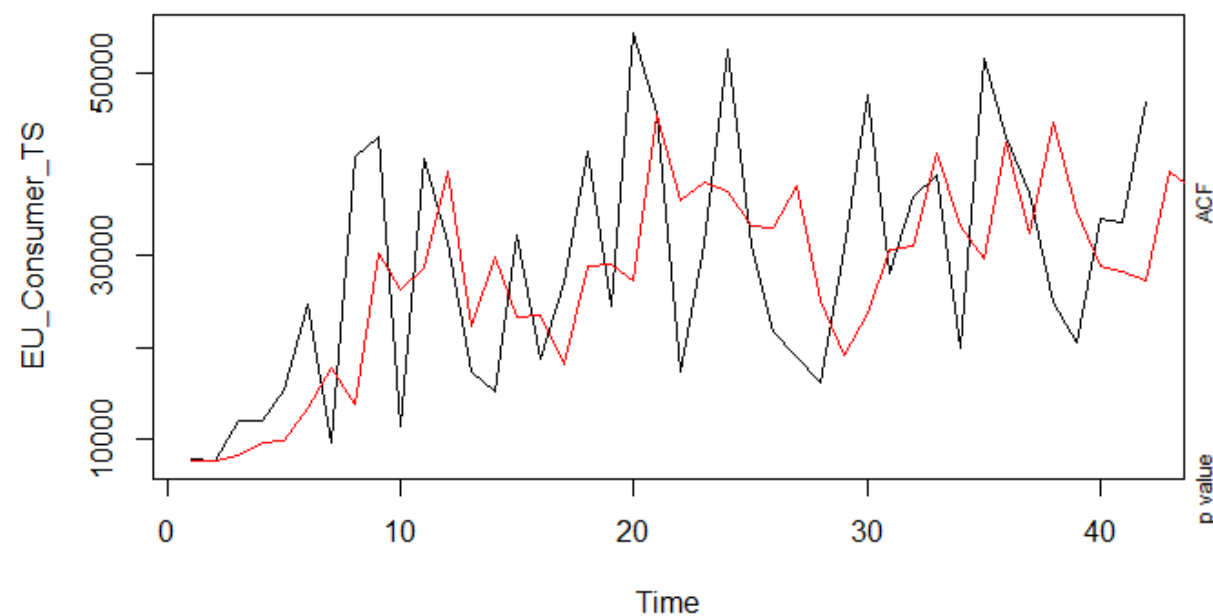
MAPE(Auto Arima) = 26.244



EU Consumer Sales

MAPE value of Auto Arima is better than Classical Decomposition.

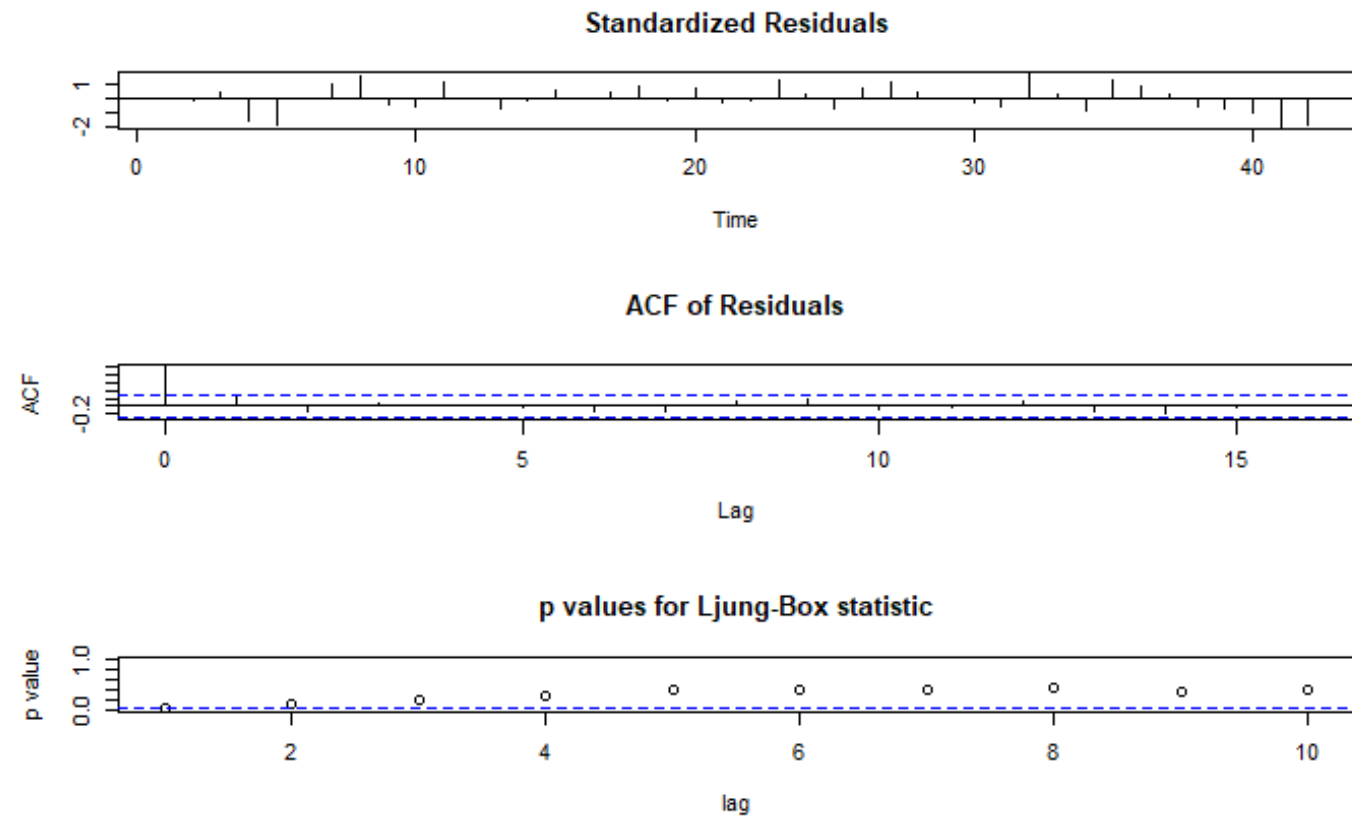
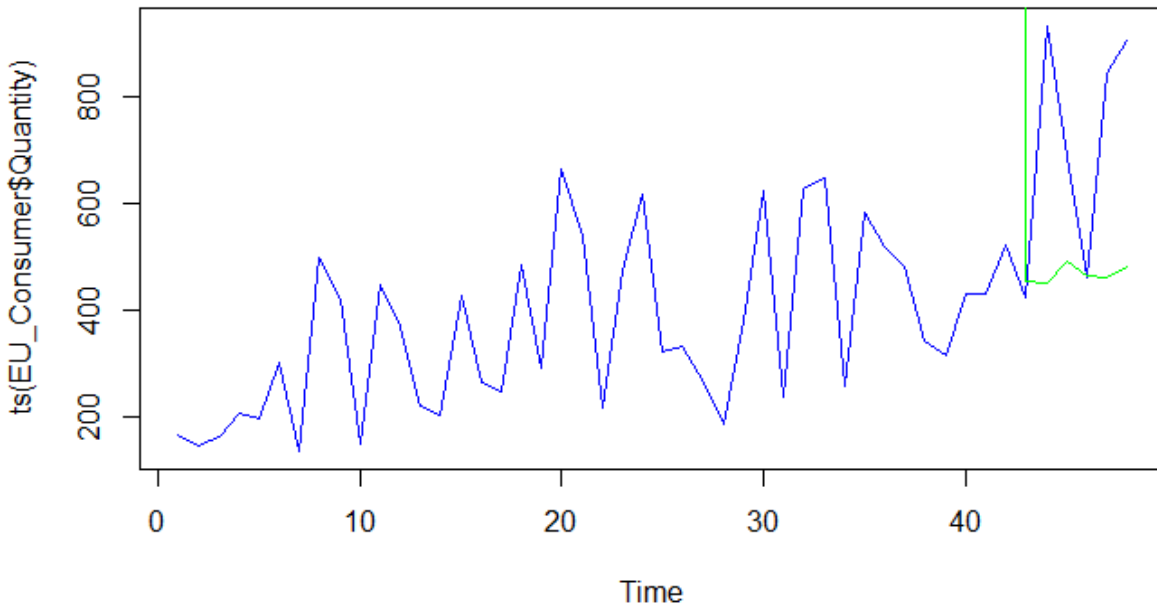
MAPE(Auto Arima) = 28.9226



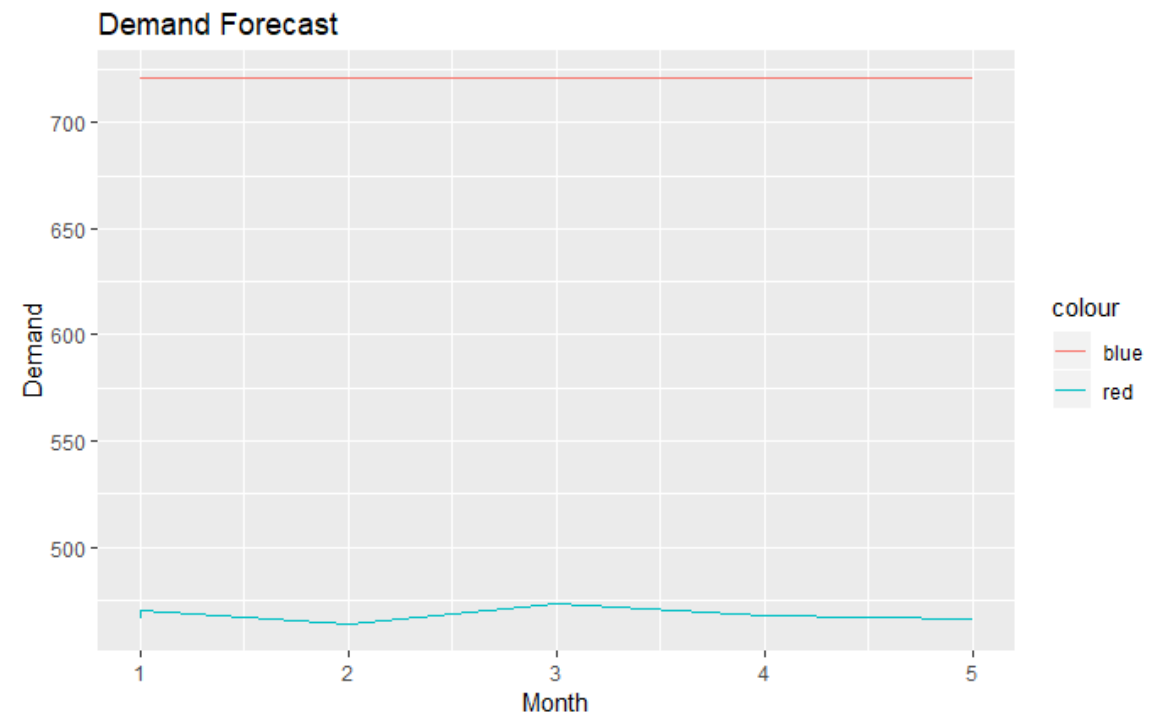
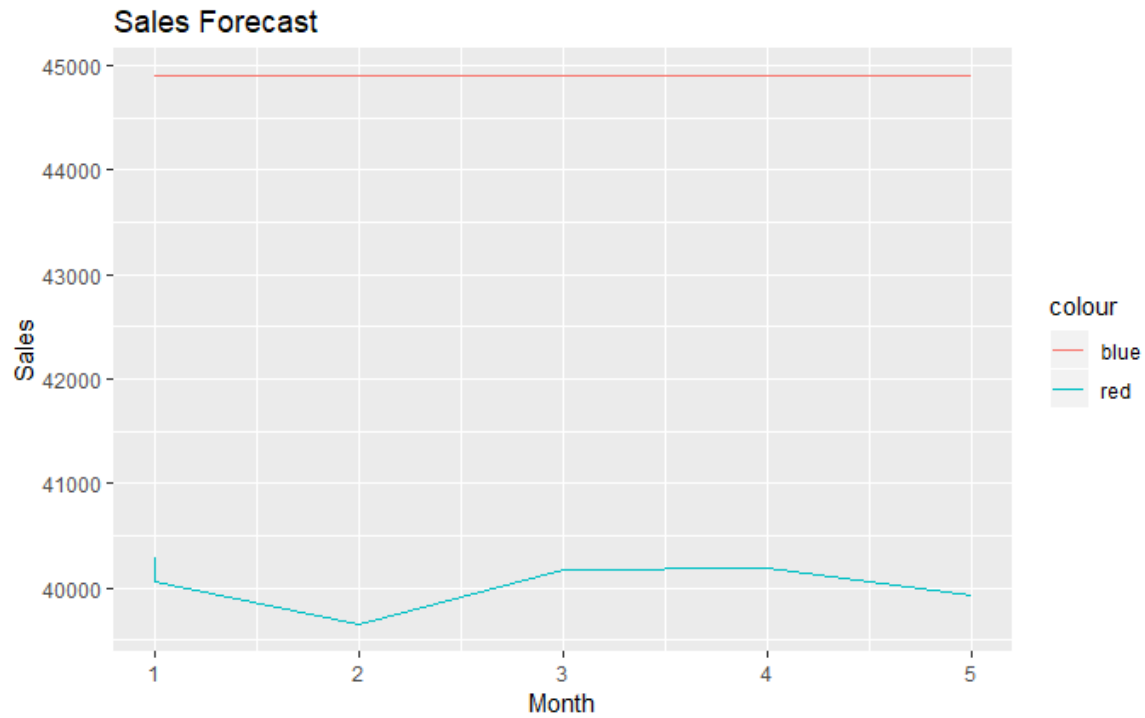
EU Consumer Quantity

MAPE value of Auto Arima is better than Classical Decomposition.

MAPE(Auto Arima) = 30.13



Sales and Demand Forecast



Conclusion

- The 2 most profitable Market Segments were :
 - a. APAC Consumer
 - b. EU Consumer
- Auto Arima shows a better estimation than Classical Decomposition for both APAC and EU Customer forecasts.
- Sales for both APAC and EU Consumer has shown a seasonal behavior.
- Quantity for both APAC and EU Consumer has shown a linear trend behavior.