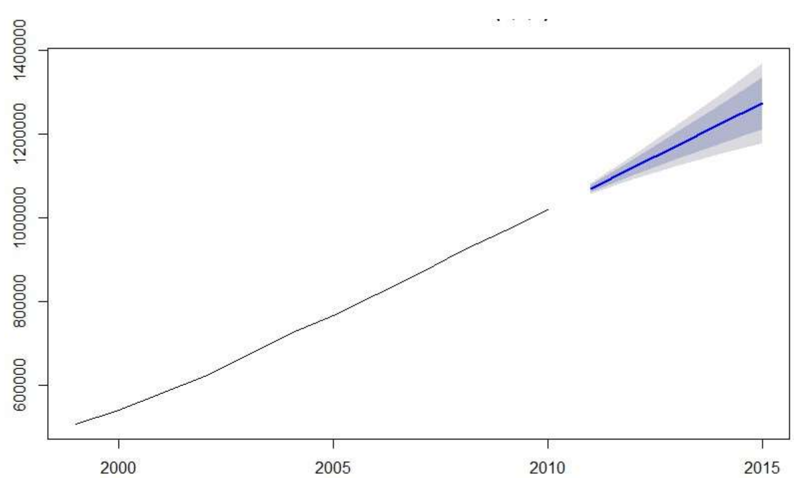
ARIMA (1, 1, 1)

Stands for ‘Auto-Regressive Integrated Moving Average’, is a forecasting algorithm based on the idea that the information in the past values of the time series can alone be used to predict the future values. It is the integration of two models i.e. auto-regressive model and moving average model. It consists of two parts, namely: Univariate and multi-variate time series forecasting. Here we are using univariate method as we only use the previous values of the time series to predict its future values.

Result for 2-W:

Forecasts:

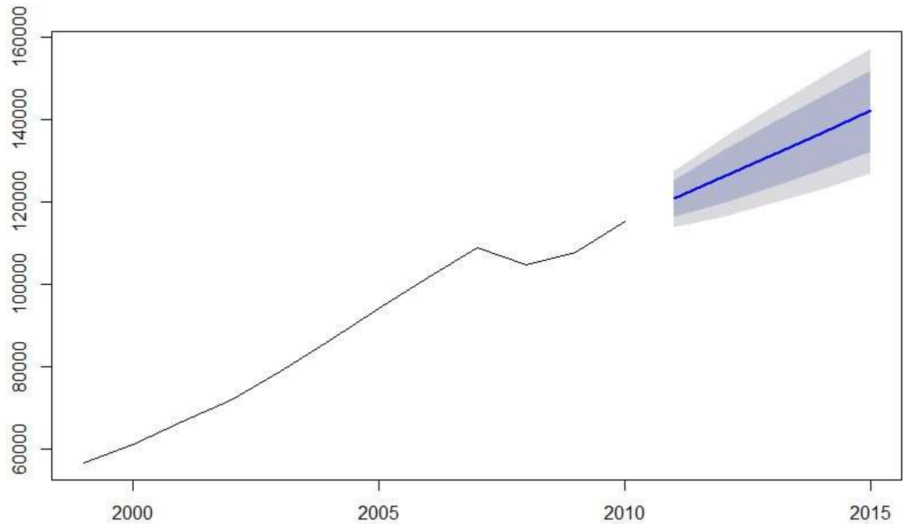
Point	Forecast	Lo 80	Hi 80	Lo 95	Hi 95
2011	1069319	1060857	1077781	1056377	1082261
2012	1120239	1101317	1139161	1091301	1149177
2013	1171159	1139497	1202821	1122736	1219582
2014	1222079	1175731	1268427	1151195	1292963
2015	1272999	1210243	1335755	1177022	1368976



Result for 4-W:

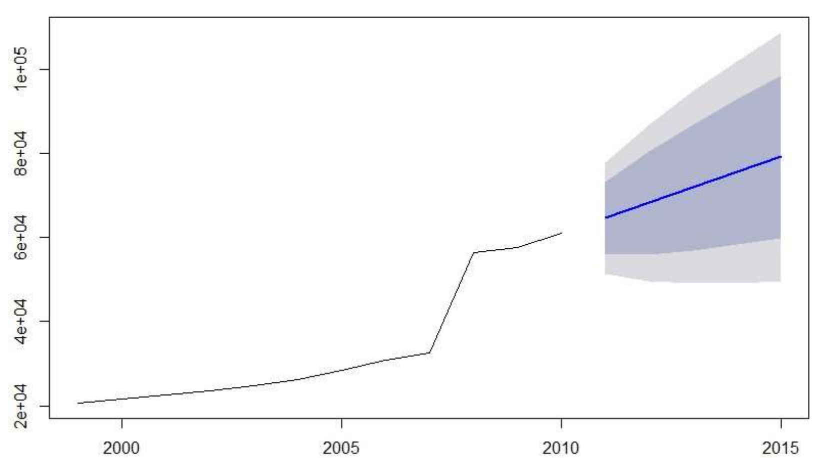
Forecasts:

Point	Forecast	Lo 80	Hi 80	Lo 95	Hi 95
2011	1069319	1060857	1077781	1056377	1082261
2012	1120239	1101317	1139161	1091301	1149177
2013	1171159	1139497	1202821	1122736	1219582
2014	1222079	1175731	1268427	1151195	1292963
2015	1272999	1210243	1335755	1177022	1368976



Code for Buses:

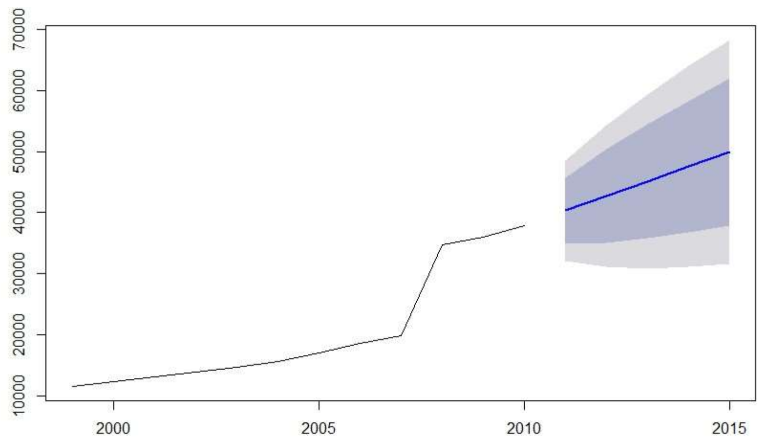
```
Forecasts:

Point       Forecast    Lo 80    Hi 80    Lo 95     Hi 95

2011        64594.91 55950.11 73239.70 51373.84  77815.98
2012        68260.82 56035.23 80486.40 49563.40  86958.24
2013        71926.73 56953.50 86899.95 49027.16  94826.30
2014        75592.64 58303.05 92882.23 49150.49 102034.78
2015        79258.55 59928.20 98588.90 49695.33 108821.76
```



Code for LCV:

Forecasts:

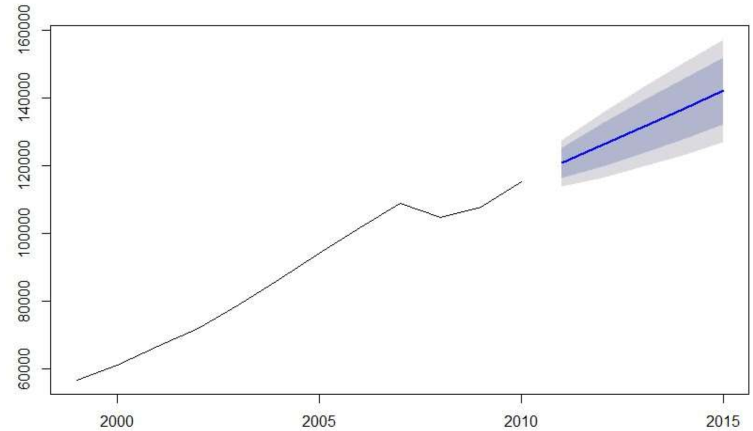
Point	Forecast	Lo 80	Hi 80	Lo 95	Hi 95
2011	40332.27	34954.92	45709.63	32108.32	48556.23
2012	42731.55	35126.82	50336.27	31101.12	54361.97
2013	45130.82	35816.97	54444.67	30886.51	59375.12
2014	47530.09	36775.38	58284.80	31082.18	63978.00
2015	49929.36	37905.23	61953.49	31540.05	68318.68



Code for Autos:

Forecasts:

Point	Forecast	Lo 80	Hi 80	Lo 95	Hi 95
2011	120686.2	116244.6	125127.8	113893.3	127479.1
2012	126021.4	119740.0	132302.8	116414.8	135627.9
2013	131356.5	123663.4	139049.7	119590.9	143122.2
2014	136691.7	127808.5	145575.0	123106.0	150277.5
2015	142026.9	132095.1	151958.7	126837.6	157216.2


160000
140000
120000
100000
80000
60000
2000
2005
2010
2015