1 Impact Study of Flight Data Cutout

The experimental results is displayed as Table 1 below.

```
> library(xtable)
> myFile <- list.files(path = "/home/albert/simplifiedthesis/img",
+                      pattern = ".csv", full.names = TRUE)
> myTable <- read.table(myFile[1], header = TRUE)
> print(xtable(myTable[,1:8]), floating = FALSE)
```

	number_of_flights	arima	t1	t2	r_sqared	r_sqaured_adj	sigma.2	model_p_value
1	1	arima(12,0,2)	0	0	0.35	-0.34	0.48	0.89
2	1	arima(12,0,4)	0	0	0.87	0.67	0.24	0.01
3	1	arima(12,0,6)	0	0	0.63	-0.12	0.44	0.64
4	3	arima(12,0,2)	0	0	0.51	-0.01	0.42	0.52
5	3	arima(12,0,4)	0	0	0.82	0.55	0.28	0.03
6	3	arima(12,0,6)	0	0	0.72	0.17	0.38	0.35
7	4	arima(14,0,2)	0	0	0.49	-0.25	0.47	0.78
8	4	arima(14,0,4)	0	0	0.63	-0.10	0.44	0.63
9	4	arima(14,0,6)	0	0	0.88	0.55	0.28	0.10

Table 1: Table of the results

2 Visualization of Fit Goodness of ARIMA-LRM

Use r programming to execute the experimental design as shown as Table 1 above.

```
> filez <- list.files(path = "/home/albert/simplifiedthesis/img",
+                     pattern = ".png", full.names = TRUE)
> for (i in 1:nrow(myTable)) {
+         sca <- ifelse(i==1, 0.90, 0.90)
+         cat("\\setkeys{Gin}{width=",sca,"\\textwidth}", sep="")
+         AR1 <- substr(filez[i], 45, 46)
+         MA1 <- substr(filez[i], 50, 50)
+         Num1 <- substr(filez[i], 53, 53)
+         t11 <- substr(filez[i], 62, 64)
+         t21 <- substr(filez[i], 70, 72)
+         cap <- paste("$data$=",Num1,"-Combined-Filights; $arima(",AR1,",0,",
+                     MA1,")$; $t_1$=",t11, "; $t_2$=", t21, sep="")
+         cat("\\begin{figure}[!h]")
+         cat("\\begin{center}")
+         cat("\\includegraphics{", filez[i], "}\n\n", sep="")
+         cat("\\caption{", cap, "}", sep="")
+         cat("\\label{fig:fig", i, "}",sep="")
+         cat("\\end{center}")
+         cat("\\end{figure}")
+         cat("\\hfill \\break")
+ }
```

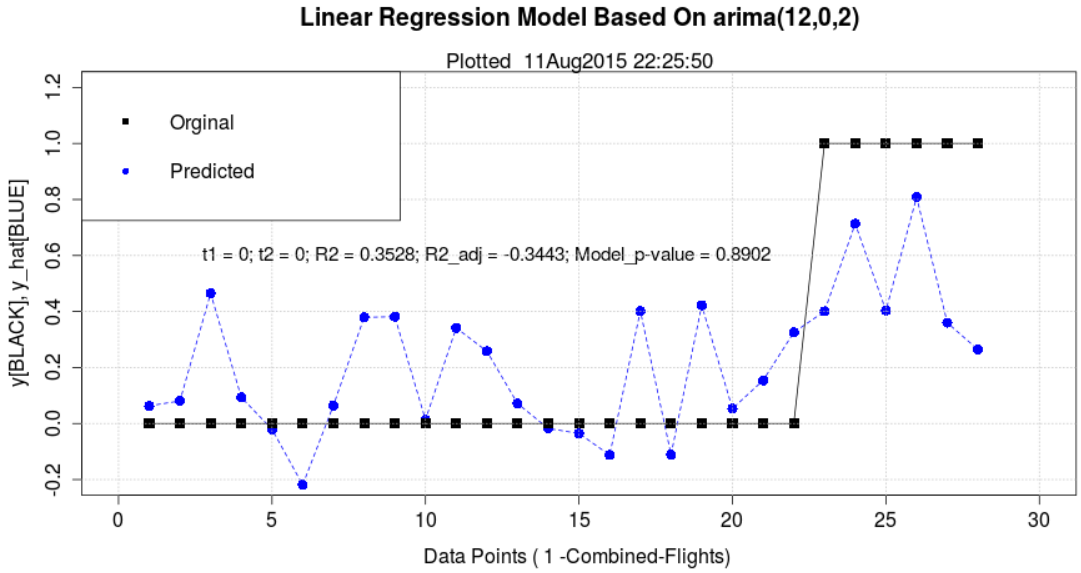

Figure 1: $data$=1-Combined-Filights; $arima(12, 0, 2)$; t_1=000; t_2=000

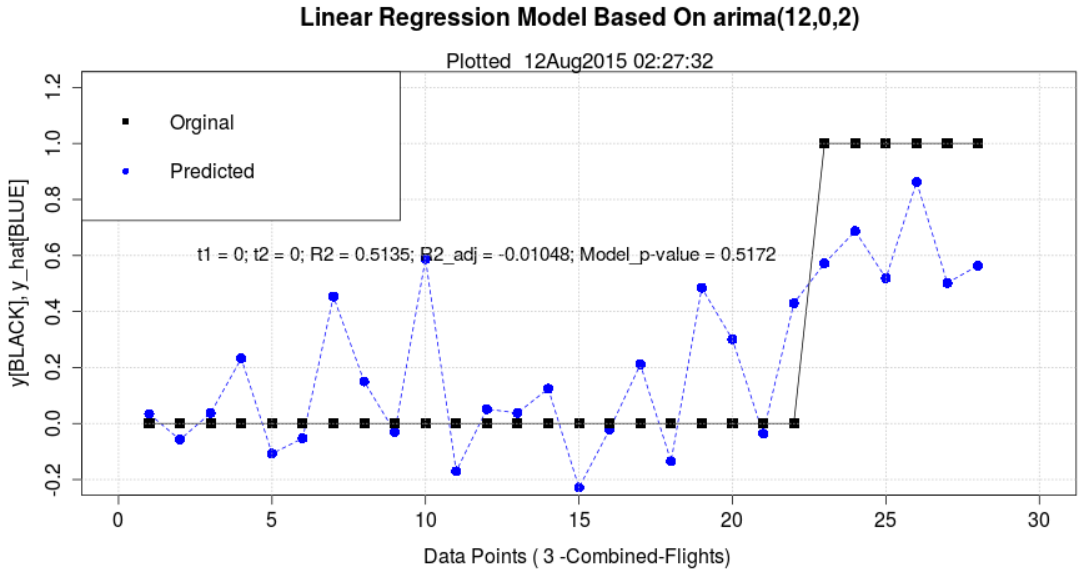

Figure 2: $data$=3-Combined-Filights; $arima(12, 0, 2)$; t_1=000; t_2=000

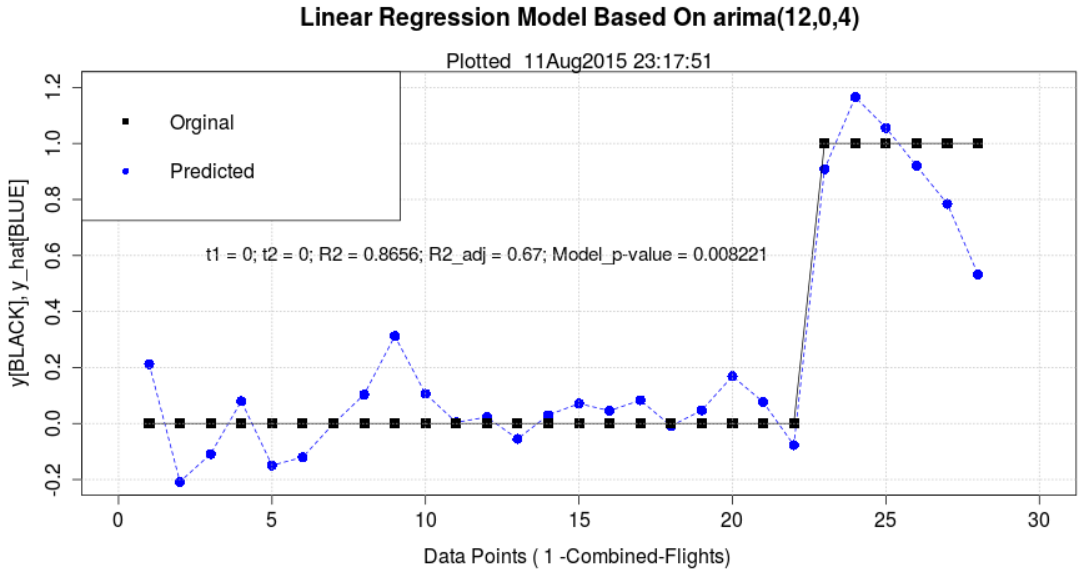

Figure 3: $data$=1-Combined-Filights; $arima(12, 0, 4)$; t_1=000; t_2=000

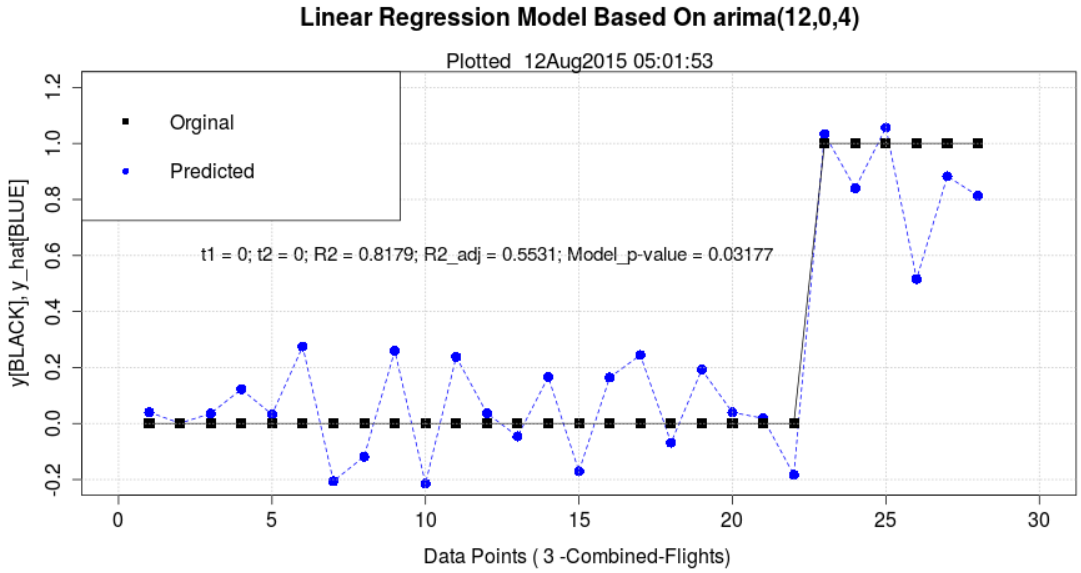

Figure 4: $data$=3-Combined-Filights; $arima(12, 0, 4)$; t_1=000; t_2=000

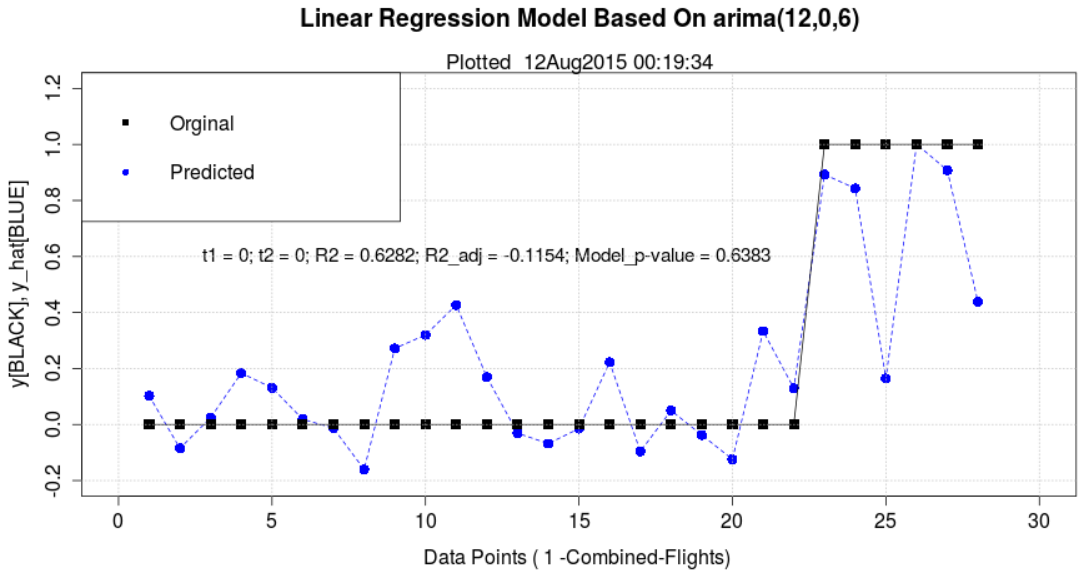

Figure 5: $data$=1-Combined-Filights; $arima(12, 0, 6)$; t_1=000; t_2=000

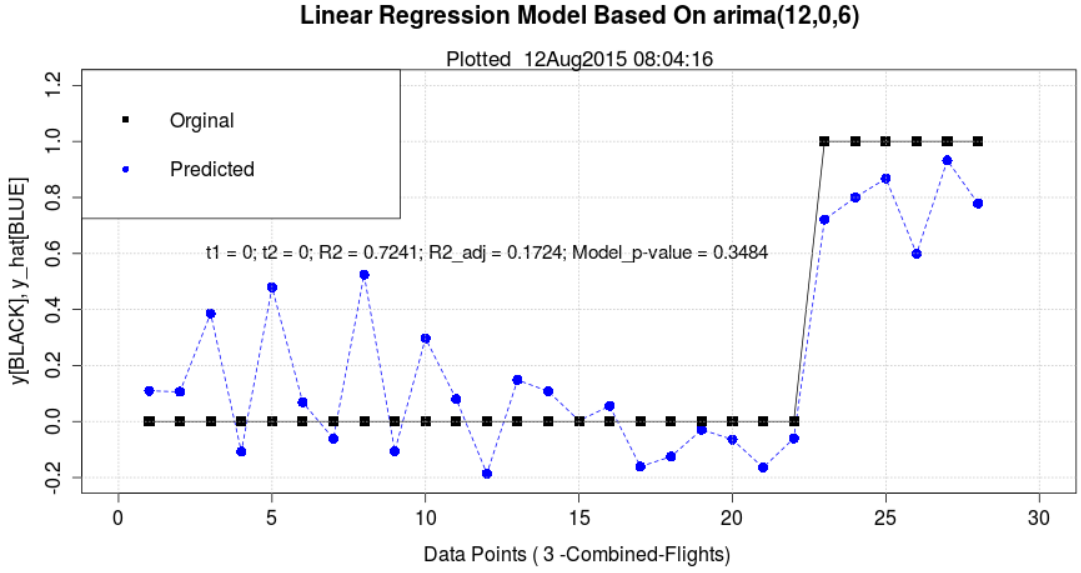

Figure 6: $data$=3-Combined-Filights; $arima(12, 0, 6)$; t_1=000; t_2=000

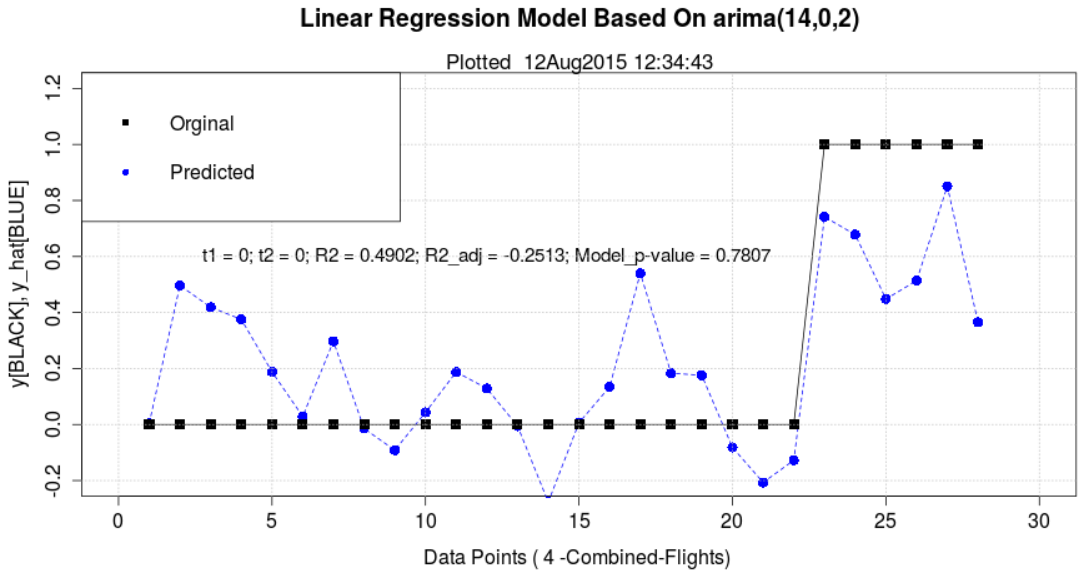

Figure 7: *data*=4-Combined-Filights; $arima(14, 0, 2)$; t_1=000; t_2=000

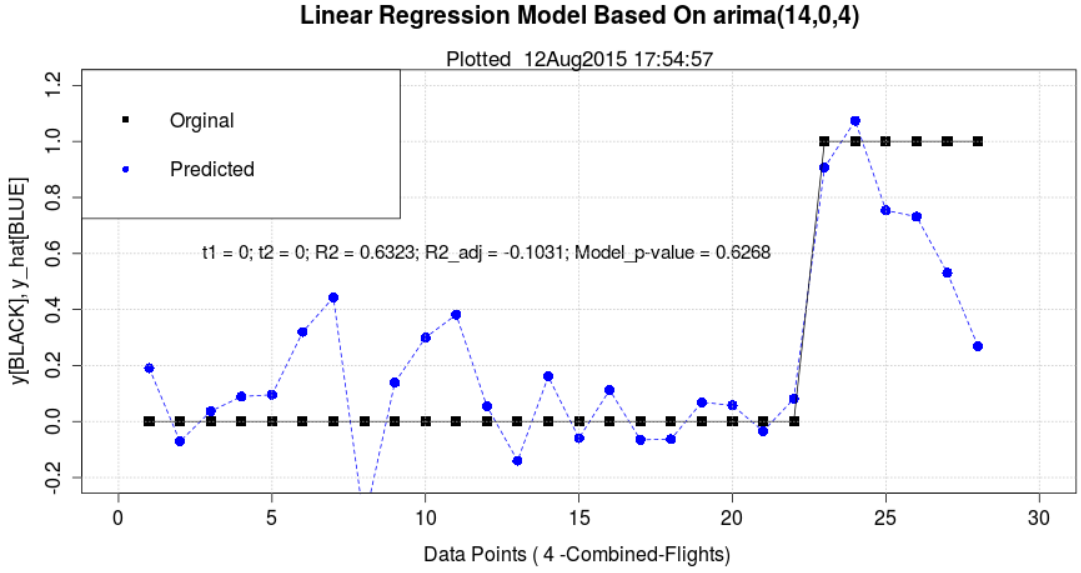

Figure 8: *data*=4-Combined-Filights; $arima(14, 0, 4)$; t_1=000; t_2=000

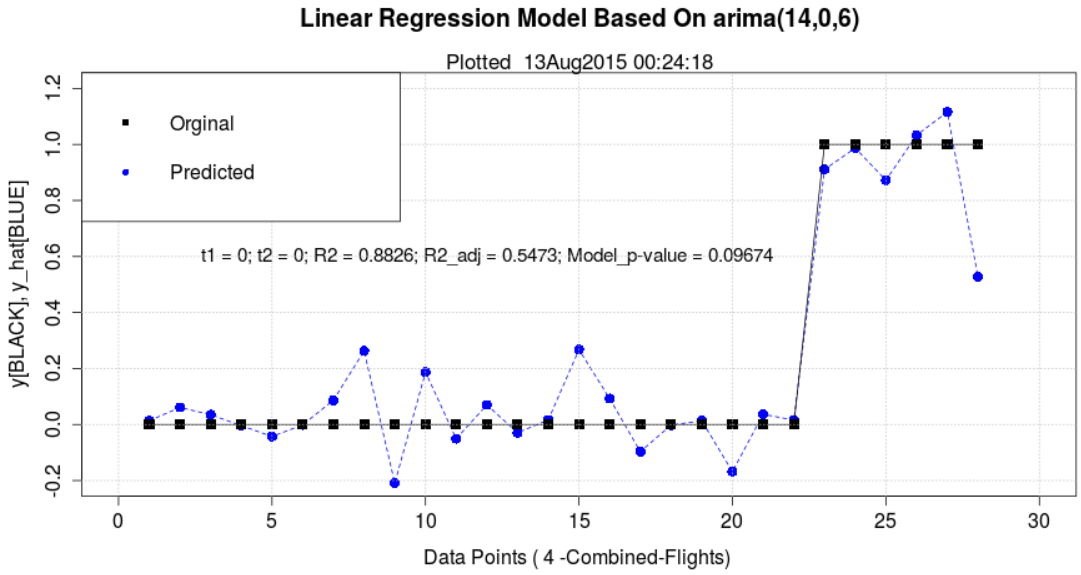

Figure 9: $data$=4-Combined-Filights; $arima(14, 0, 6)$; t_1=000; t_2=000