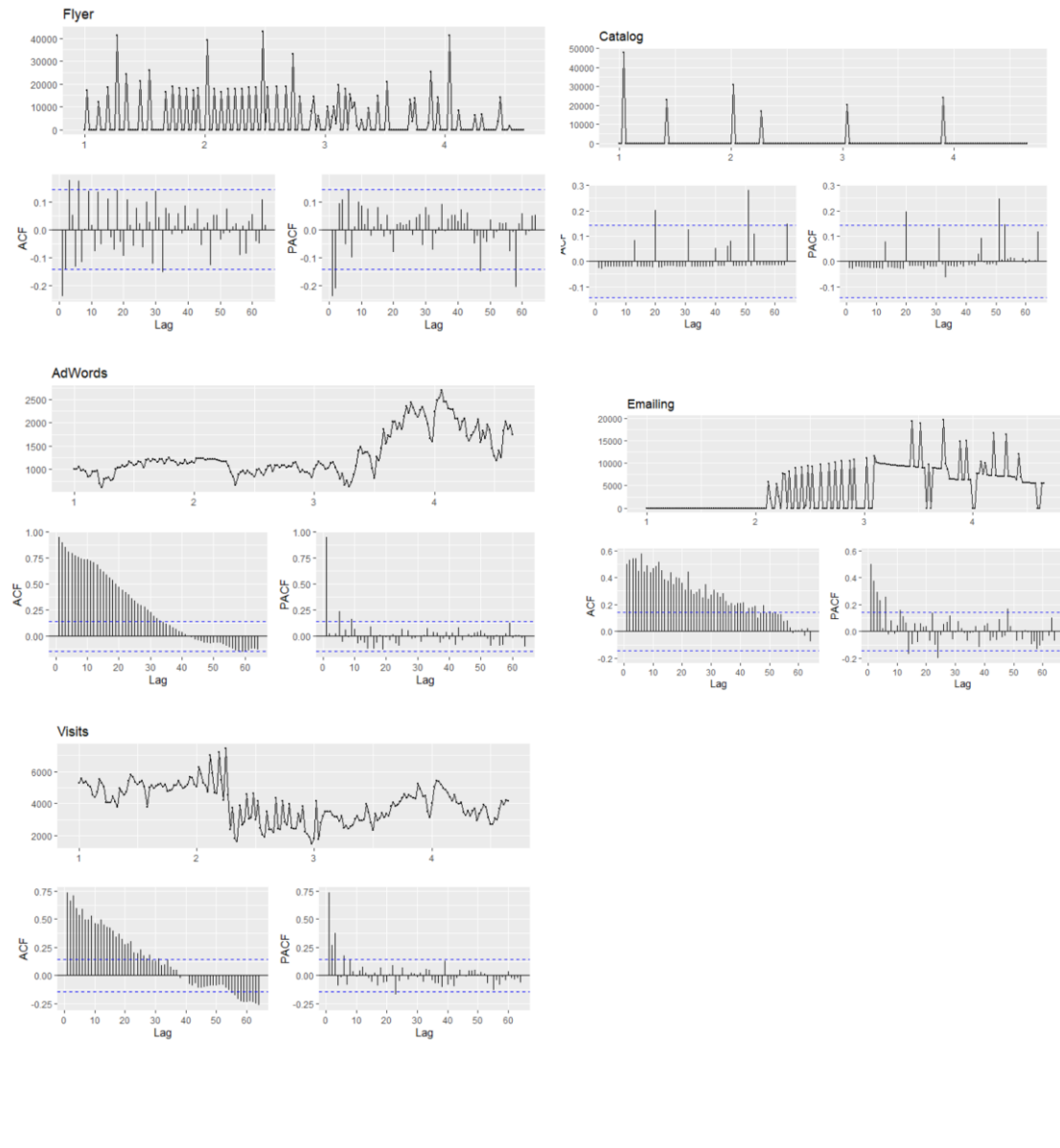


# 7. Appendix

## Appendix 7.1: ACF and PACF Plot for the Five Variables

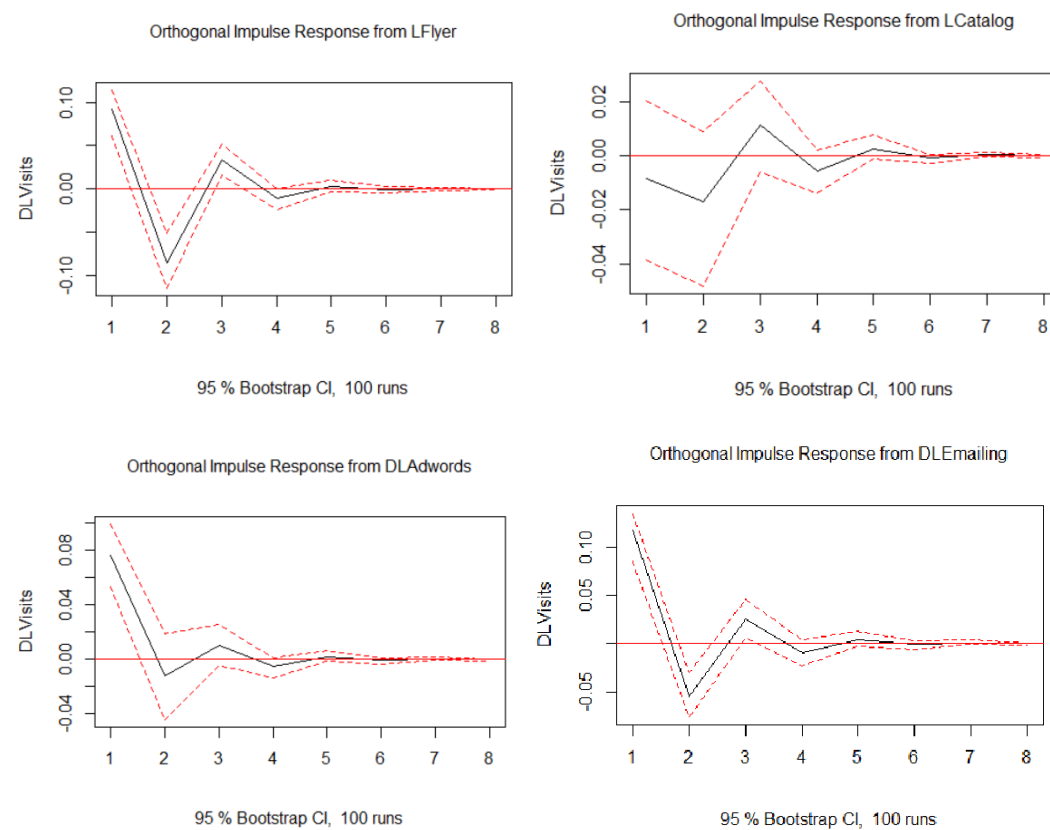


## Appendix 7.2: Summary of Var Model

	Dependent variable:				
	LFlyer (1)	LCatalog (2)	DLAdwords (3)	DLEmailing (4)	DLVisits (5)
LFlyer.11	-0.178** (0.081)	0.028 (0.033)	-0.004* (0.002)	-0.131** (0.065)	-0.013*** (0.004)
LCatalog.11	-0.134 (0.179)	0.003 (0.073)	-0.004 (0.005)	-0.195 (0.145)	-0.010 (0.009)
DLAdwords.11	-4.362 (3.354)	-1.080 (1.372)	-0.068 (0.089)	-5.891** (2.719)	-0.031 (0.162)
DLEmailing.11	-0.061 (0.123)	-0.033 (0.050)	0.003 (0.003)	-0.580*** (0.100)	-0.011* (0.006)
DLVisits.11	1.403 (2.417)	1.962** (0.989)	0.010 (0.064)	2.900 (1.960)	-0.149 (0.117)
const	3.374*** (0.393)	0.248 (0.161)	0.015 (0.010)	0.533* (0.319)	0.041** (0.019)
Observations	189	189	189	189	189
R2	0.045	0.052	0.033	0.293	0.236
Adjusted R2	0.019	0.026	0.006	0.274	0.215
Residual Std. Error (df = 183)	4.309	1.762	0.115	3.494	0.208
F Statistic (df = 5; 183)	1.737	1.998*	1.230	15.166***	11.318***

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

## Appendix 7.3: IRF Plots for the Four Marketing Variables



#### Appendix 7.4: Long-Term Effort of the Four Marketing Tools

	<b>Flyer</b>	<b>Catalog</b>	<b>AdWords</b>	<b>Emailing</b>
<b>Period</b>				
<b>1</b>	0.092	0	0.076	0.117
<b>2</b>	0	0	0	0
<b>3</b>	0.033	0.011	0.01	0.025
<b>4</b>	0	0	0	0
<b>5</b>	0	0.0025	0.0022	0
<b>Cumulative</b>	0.125	0.0136	0.088	0.142

#### Appendix 7.5: Summary of beginning level, potential stickiness, responsiveness to each marketing tools, conversion for leads, quotes, and orders for both online and offline channels

<b>Item</b>	<b>Online Leads</b>	<b>Online Quotes</b>	<b>Offline Leads</b>	<b>Offline Quotes</b>	<b>Online Orders</b>	<b>Offline Orders</b>
<b>beginning level</b>	0.206	0.048	0.118	0.226		
<b>potential</b>	0.794	0.952	0.882	0.774		
<b>stickiness</b>	0.803	0.937	0.532	0.862		
<b>Responsiveness to Flyer</b>	0.0082	-0.0005	-0.0001	-0.0004	0.0066	0.0125
<b>Responsiveness to Catalog</b>	0.0063	-0.0004	-0.0001	-0.0003	0.005	0.0173
<b>Responsiveness to AdWords</b>	0.0431	-0.0138	-0.0044	0.0167	0.0268	-0.1185
<b>Responsiveness to Emailing</b>	-0.0162	-0.0077	-0.0005	0.0032	-0.0003	-0.0088
<b>Conversion</b>	0.0629	0.004	0.0887	-0.0109		

Appendix 7.6: Summary of Appeal of Each Marketing Tools

	Online Leads	Online Quotes	Offline Leads	Offline Quotes
appeal_Flyer	0.002079	0	0	0
appeal_Catalog	0.001597	0	0	0
appeal_Adwords	0.010927	-0.00083	-0.00074	-0.00102
appeal_Emailing	-0.00411	-0.00047	0	-0.0002

Appendix 7.7 Forecast of Online Order

	Start	New	Gain	LRGain	Conversion
Flyer	4790	5843.8	1053.8	/	/
Catalog	854	819.84	-34.16	/	/
Adwords	1325	1086.5	-238.5	/	/
Emailing	4320	4320	0	/	/
Online_Leads	0.206	0.204526	-0.00715	-0.31655	-0.01991
Online_Quotes	0.048	0.048128	0.002659	0.033197	0.000133
Online_Order	85.69	85.32999	-0.0042	-0.00771	/

Appendix 7.8: Forecast of Offline Order

	Start	New	Gain	LRGain	Conversion
Flyer	4790	5843.8	1053.8	/	/
Catalog	854	819.84	-34.16	/	/
Adwords	1325	1086.5	-238.5	/	/
Emailing	4320	4320	0	/	/
Offline_Leads	0.118	0.118101	0.000858	0.037953	0.003366
Offline_Quotes	0.226	0.225237	-0.00338	-0.04214	0.000459
Offline_Order	85.69	87.88525	0.025619	0.047032	/