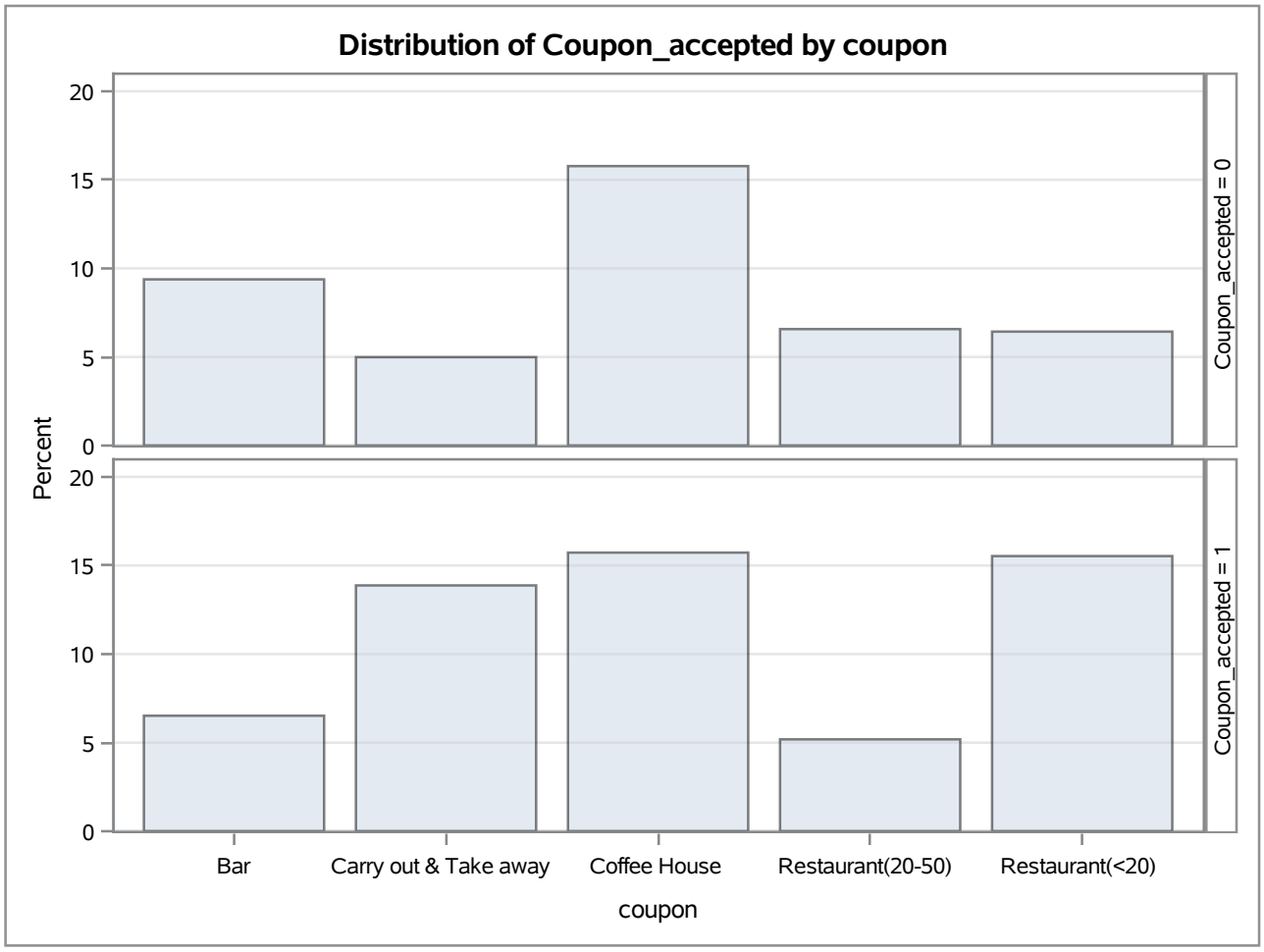
The FREQ Procedure

Frequency Expected Cell Chi-Square Row Pct	Table of Coupon_accepted by coupon					
	coupon					
Coupon_accepted	Bar	Carry out & Take away	Coffee House	Restaurant(20-50)	Restaurant(<20)	Total
0	1190 870.47 117.29 21.74	633 1032.7 154.73 11.56	2001 1724.5 44.318 36.55	834 643.9 56.125 15.24	816 1202.3 124.14 14.91	5474
1	827 1146.5 89.05 11.47	1760 1360.3 117.47 24.41	1995 2271.5 33.647 27.67	658 848.1 42.611 9.13	1970 1583.7 94.253 27.32	7210
Total	2017	2393	3996	1492	2786	12684



The FREQ Procedure

Statistics for Table of Coupon_accepted by coupon

Statistic	DF	Value	Prob
Chi-Square	4	873.6378	<.0001
Likelihood Ratio Chi-Square	4	893.2366	<.0001
Mantel-Haenszel Chi-Square	1	119.3799	<.0001
Phi Coefficient		0.2624	
Contingency Coefficient		0.2538	
Cramer's V		0.2624	

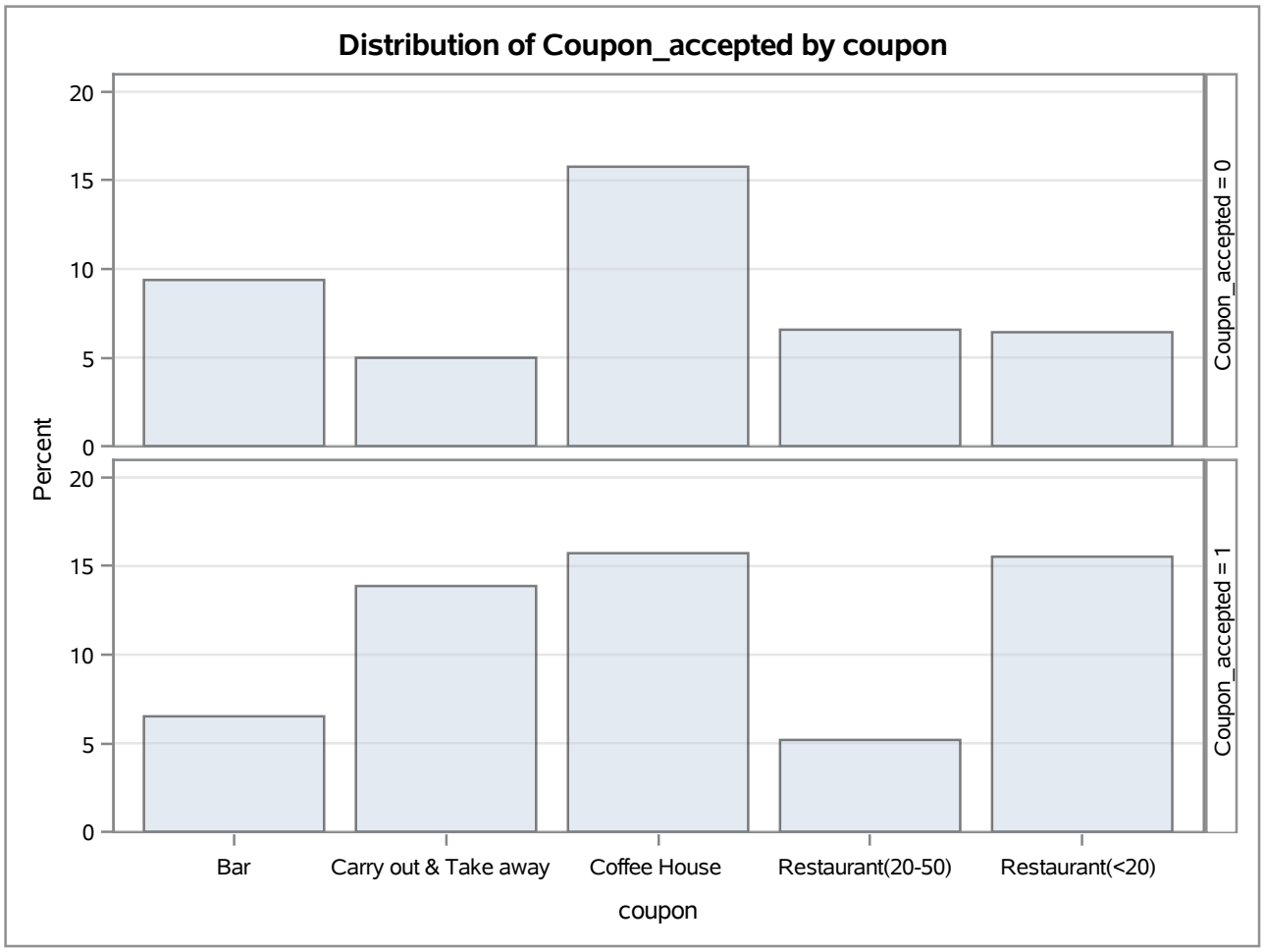
Sample Size = 12684

Frequency
Expected
Cell Chi-Square
Row Pct

Table of Coupon_accepted by coupon

Coupon_accepted	coupon					
	Bar	Carry out & Take away	Coffee House	Restaurant(20-50)	Restaurant(<20)	Total
0	1190 870.47 117.29 21.74	633 1032.7 154.73 11.56	2001 1724.5 44.318 36.55	834 643.9 56.125 15.24	816 1202.3 124.14 14.91	5474
1	827 1146.5 89.05 11.47	1760 1360.3 117.47 24.41	1995 2271.5 33.647 27.67	658 848.1 42.611 9.13	1970 1583.7 94.253 27.32	7210
Total	2017	2393	3996	1492	2786	12684

The FREQ Procedure



Statistics for Table of Coupon_accepted by coupon

Statistic	DF	Value	Prob
Chi-Square	4	873.6378	<.0001
Likelihood Ratio Chi-Square	4	893.2366	<.0001
Mantel-Haenszel Chi-Square	1	119.3799	<.0001
Phi Coefficient		0.2624	
Contingency Coefficient		0.2538	
Cramer's V		0.2624	

Sample Size = 12684

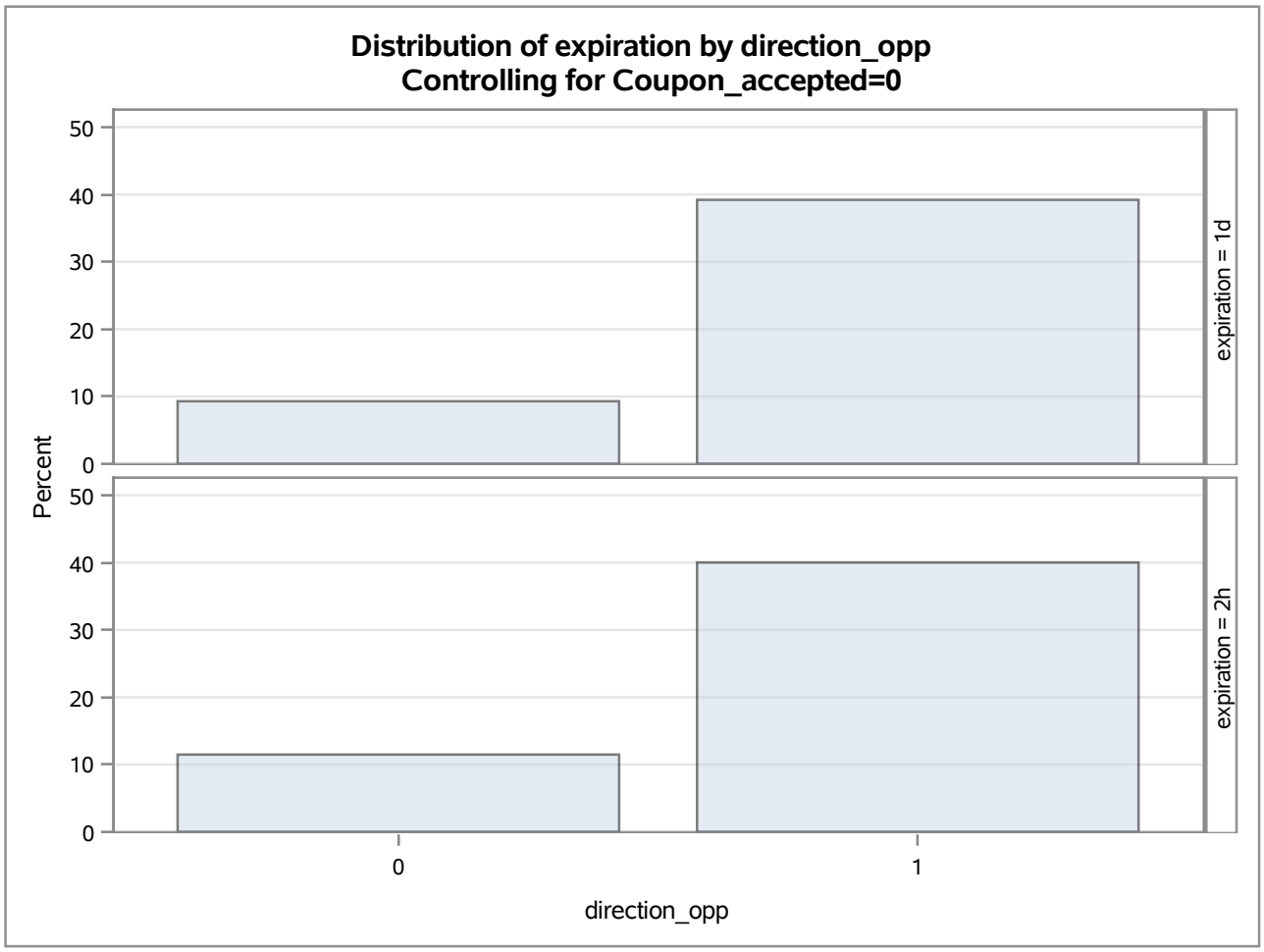
The FREQ Procedure

Frequency Expected Cell Chi-Square Row Pct

Table 1 of expiration by direction_opp

Controlling for Coupon_accepted=0

expiration	direction_opp 0	direction_opp 1	Total
1d	509 551.95 3.3426 19.17	2146 2103 0.8773 80.83	2655
2h	629 586.05 3.1481 22.31	2190 2233 0.8262 77.69	2819
Total	1138	4336	5474



The FREQ Procedure

Statistics for Table 1 of expiration by direction_opp
Controlling for Coupon_accepted=0

Statistic	DF	Value	Prob
Chi-Square	1	8.1942	0.0042
Likelihood Ratio Chi-Square	1	8.2097	0.0042
Continuity Adj. Chi-Square	1	8.0046	0.0047
Mantel-Haenszel Chi-Square	1	8.1927	0.0042
Phi Coefficient		-0.0387	
Contingency Coefficient		0.0387	
Cramer's V		-0.0387	

Fisher's Exact Test	
Cell (1,1) Frequency (F)	509
Left-sided Pr <= F	0.0023
Right-sided Pr >= F	0.9981
Table Probability (P)	0.0004
Two-sided Pr <= P	0.0046

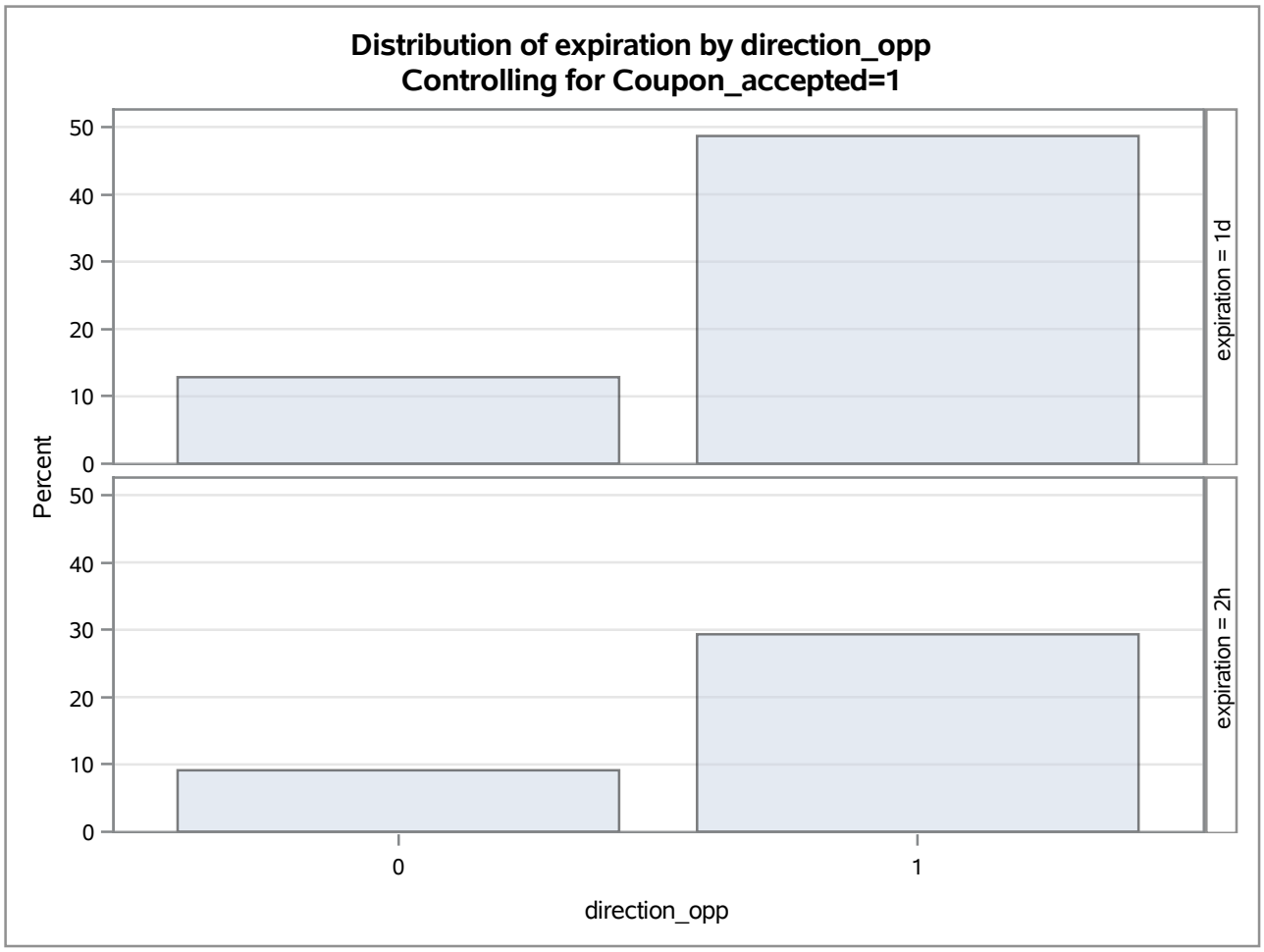
Odds Ratio and Relative Risks			
Statistic	Value	95% Confidence Limits	
Odds Ratio	0.8258	0.7243	0.9415
Relative Risk (Column 1)	0.8592	0.7742	0.9535
Relative Risk (Column 2)	1.0404	1.0126	1.0690

Sample Size = 5474

Frequency Expected Cell Chi-Square Row Pct

Table 2 of expiration by direction_opp			
Controlling for Coupon_accepted=1			
	direction_opp		
expiration	0	1	Total
1d	927 975.8 2.4402 20.90	3509 3460.2 0.6882 79.10	4436
2h	659 610.2 3.9022 23.76	2115 2163.8 1.1004 76.24	2774
Total	1586	5624	7210

The FREQ Procedure



The FREQ Procedure

Statistics for Table 2 of expiration by direction_opp
Controlling for Coupon_accepted=1

Statistic	DF	Value	Prob
Chi-Square	1	8.1310	0.0044
Likelihood Ratio Chi-Square	1	8.0778	0.0045
Continuity Adj. Chi-Square	1	7.9652	0.0048
Mantel-Haenszel Chi-Square	1	8.1299	0.0044
Phi Coefficient		-0.0336	
Contingency Coefficient		0.0336	
Cramer's V		-0.0336	

Fisher's Exact Test	
Cell (1,1) Frequency (F)	927
Left-sided Pr <= F	0.0024
Right-sided Pr >= F	0.9980
Table Probability (P)	0.0004
Two-sided Pr <= P	0.0046

Odds Ratio and Relative Risks			
Statistic	Value	95% Confidence Limits	
Odds Ratio	0.8479	0.7569	0.9498
Relative Risk (Column 1)	0.8796	0.8056	0.9604
Relative Risk (Column 2)	1.0375	1.0112	1.0645

Sample Size = 7210

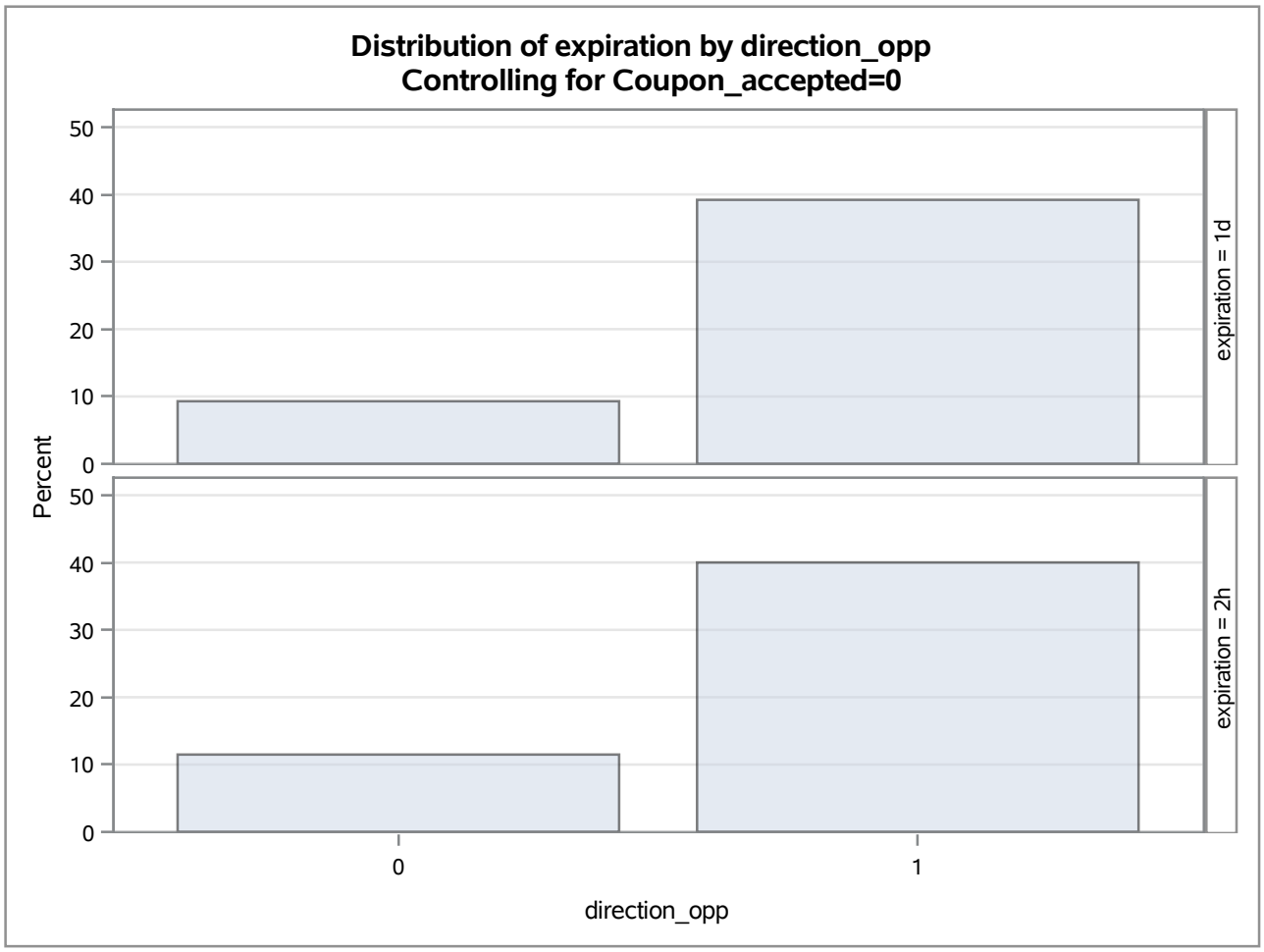
The FREQ Procedure

Frequency Expected Cell Chi-Square Row Pct

Table 1 of expiration by direction_opp

Controlling for Coupon_accepted=0

expiration	direction_opp 0	direction_opp 1	Total
1d	509 551.95 3.3426 19.17	2146 2103 0.8773 80.83	2655
2h	629 586.05 3.1481 22.31	2190 2233 0.8262 77.69	2819
Total	1138	4336	5474



The FREQ Procedure

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Sample Size = 5474

Frequency Expected Cell Chi-Square Row Pct

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Controlling for Coupon_accepted=1			
	direction_opp		
expiration	0	1	Total
1d	927 975.8 2.4402 20.90	3509 3460.2 0.6882 79.10	4436
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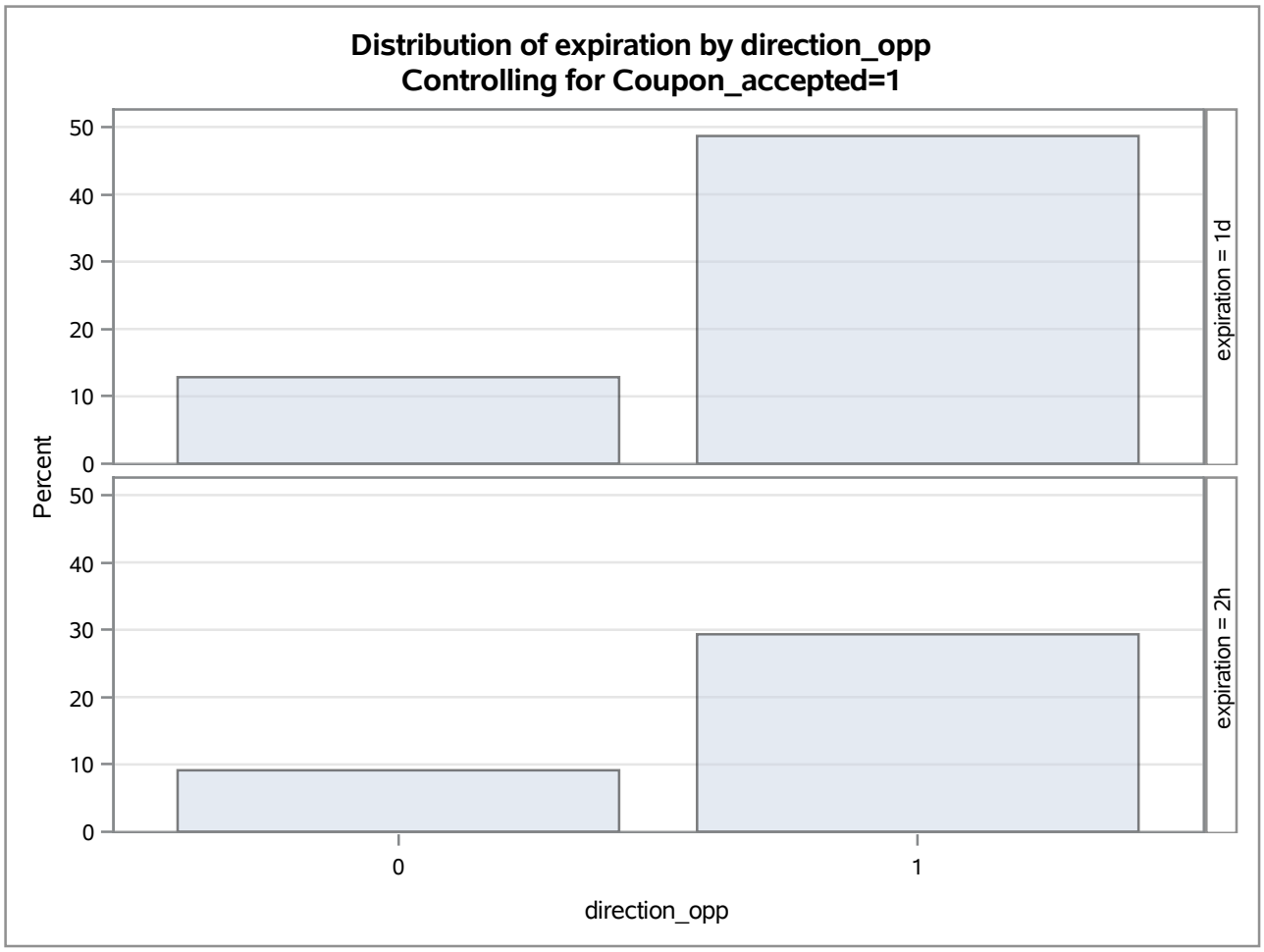
The FREQ Procedure



The FREQ Procedure

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Mantel-Haenszel Chi-Square	1	8.1299	0.0044
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Contingency Coefficient		0.0336	
Cramer's V		-0.0336	

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Relative Risk (Column 2)	1.0375	1.0112	1.0645

Sample Size = 7210

The LOGISTIC Procedure

Model Information	
Data Set	WORK.FINALPROJECT
Response Variable	Coupon_accepted
Number of Response Levels	2
Model	binary logit
Optimization Technique	Fisher's scoring

Number of Observations Read	12684
Number of Observations Used	12684

Response Profile		
Ordered Value	**Coupon_accepted**	**Total Frequency**
1	0	5474
2	1	7210

Probability modeled is Coupon_accepted=1.

Class Level Information					
Class	**Value**	**Design Variables**			
coupon	**Bar**	1	0	0	0
	Carry out & Take away	0	1	0	0
	Coffee House	0	0	1	0
	Restaurant(20-50)	0	0	0	0
	Restaurant(<20)	0	0	0	1
expiration	**1d**	1			
	2h	0			

Model Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	**Intercept Only**	**Intercept and Covariates**
AIC	17347.412	16142.166
SC	17354.860	16194.303
-2 Log L	17345.412	16128.166

The LOGISTIC Procedure

Testing Global Null Hypothesis: BETA=0			
Test	**Chi-Square**	**DF**	**Pr > ChiSq**
Likelihood Ratio	1217.2458	6	<.0001
Score	1172.2997	6	<.0001
Wald	1093.3178	6	<.0001

Type 3 Analysis of Effects			
Effect	**DF**	**Wald Chi-Square**	**Pr > ChiSq**
coupon	4	931.1929	<.0001
direction_same	1	0.0005	0.9819
direction_opp	0	.	.
expiration	1	316.6834	<.0001

Note: The following parameters have been set to 0, since the variables are a linear combination of other variables as shown.

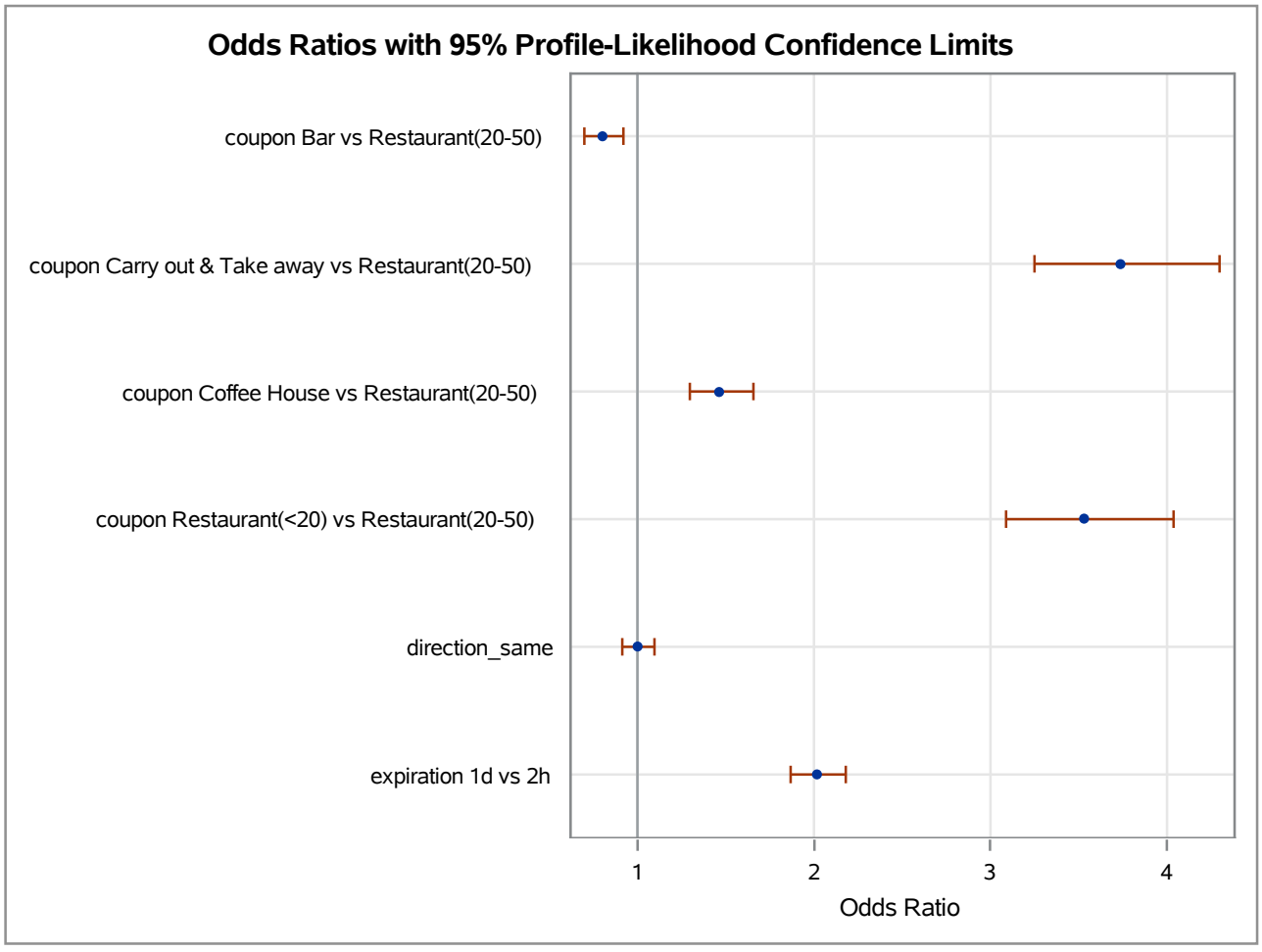
direction_opp =	Intercept - direction_same

Analysis of Maximum Likelihood Estimates						
Parameter		**DF**	**Estimate**	**Standard Error**	**Wald Chi-Square**	**Pr > ChiSq**
Intercept		1	-0.6955	0.0597	135.7277	<.0001
coupon	**Bar**	1	-0.2203	0.0701	9.8766	0.0017
coupon	**Carry out & Take away**	1	1.3178	0.0713	341.3813	<.0001
coupon	**Coffee House**	1	0.3823	0.0625	37.4130	<.0001
coupon	**Restaurant(<20)**	1	1.2612	0.0683	340.5411	<.0001
direction_same		1	0.00105	0.0464	0.0005	0.9819
direction_opp		0	0	.	.	.
expiration	**1d**	1	0.7020	0.0394	316.6834	<.0001

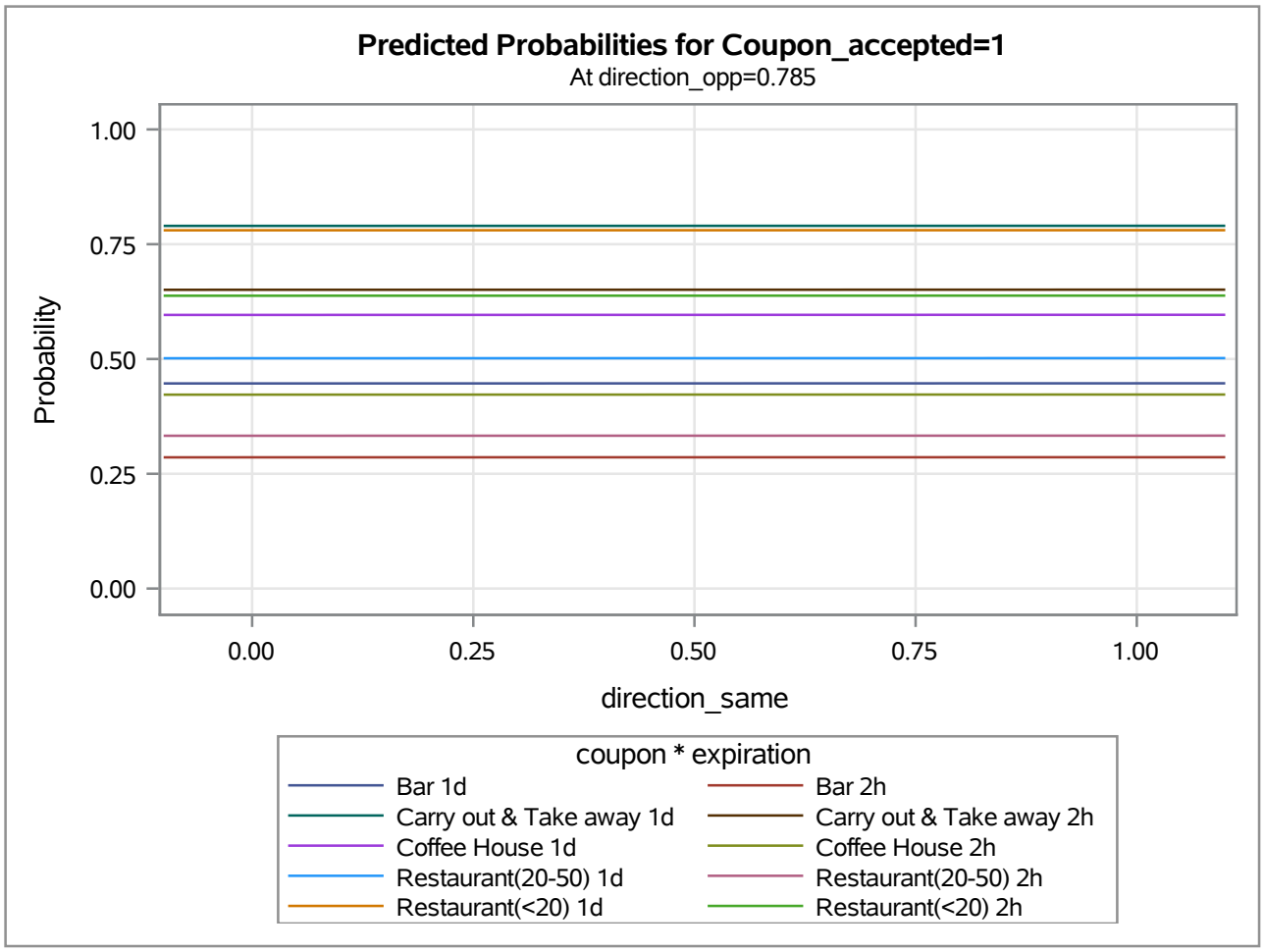
Association of Predicted Probabilities and Observed Responses			
Percent Concordant	63.5	**Somers' D**	0.343
Percent Discordant	29.2	**Gamma**	0.370
Percent Tied	7.3	**Tau-a**	0.168
Pairs	39467540	**c**	0.672

The LOGISTIC Procedure

Odds Ratio Estimates and Profile-Likelihood Confidence Intervals				
Effect	Unit	Estimate	95% Confidence Limits	
coupon Bar vs Restaurant(20-50)	1.0000	0.802	0.699	0.920
coupon Carry out & Take away vs Restaurant(20-50)	1.0000	3.735	3.249	4.298
coupon Coffee House vs Restaurant(20-50)	1.0000	1.466	1.297	1.657
coupon Restaurant(<20) vs Restaurant(20-50)	1.0000	3.530	3.088	4.037
direction_same	1.0000	1.001	0.914	1.096
expiration 1d vs 2h	1.0000	2.018	1.868	2.180



The LOGISTIC Procedure



The FREQ Procedure

Frequency
Expected

Table 1 of time by destination				
Controlling for Coupon_accepted=0				
	destination			
time	Home	No Urgent Place	Work	Total
10AM	0 260.11	891 374.53	0 256.36	891
10PM	629 287.84	357 414.47	0 283.7	986
2PM	0 198.51	680 285.84	0 195.65	680
6PM	969 391.76	373 564.11	0 386.13	1342
7AM	0 459.78	0 662.05	1575 453.16	1575
Total	1598	2301	1575	5474

Statistics for Table 1 of time by destination Controlling for Coupon_accepted=0

Statistic	DF	Value	Prob
Chi-Square	8	8062.7671	<.0001
Likelihood Ratio Chi-Square	8	8970.5039	<.0001
Mantel-Haenszel Chi-Square	1	1175.2422	<.0001
Phi Coefficient		1.2136	
Contingency Coefficient		0.7718	
Cramer's V		0.8582	

Sample Size = 5474

Frequency
Expected

Table 2 of time by destination				
Controlling for Coupon_accepted=1				
	destination			
time	Home	No Urgent Place	Work	Total
10AM	0 314.62	1384 764.37	0 305.02	1384
10PM	485 231.87	535 563.33	0 224.8	1020
2PM	0 302.11	1329 733.99	0 292.9	1329
6PM	1154 429.19	734 1042.7	0 416.09	1888

The FREQ Procedure

Frequency Expected	Table 2 of time by destination			
	Controlling for Coupon_accepted=1			
	destination			
time	Home	No Urgent Place	Work	Total
7AM	0 361.22	0 877.59	1589 350.2	1589
Total	1639	3982	1589	7210

Statistics for Table 2 of time by destination Controlling for Coupon_accepted=1

Statistic	DF	Value	Prob
Chi-Square	8	10054.4194	<.0001
Likelihood Ratio Chi-Square	8	10455.6971	<.0001
Mantel-Haenszel Chi-Square	1	971.6040	<.0001
Phi Coefficient		1.1809	
Contingency Coefficient		0.7631	
Cramer's V		0.8350	

Sample Size = 7210

The FREQ Procedure

Frequency
Expected

Table 1 of weather by temperature				
Controlling for Coupon_accepted=0				
	temperature			
weather	30	55	80	Total
Rainy	0 128.96	650 211.24	0 309.8	650
Snowy	744 147.6	0 241.79	0 354.6	744
Sunny	342 809.44	1129 1326	2609 1944.6	4080
Total	1086	1779	2609	5474

Statistics for Table 1 of weather by temperature Controlling for Coupon_accepted=0

Statistic	DF	Value	Prob
Chi-Square	4	4882.4027	<.0001
Likelihood Ratio Chi-Square	4	4449.2445	<.0001
Mantel-Haenszel Chi-Square	1	1117.0836	<.0001
Phi Coefficient		0.9444	
Contingency Coefficient		0.6866	
Cramer's V		0.6678	

Sample Size = 5474

Frequency
Expected

Table 2 of weather by temperature				
Controlling for Coupon_accepted=1				
	temperature			
weather	30	55	80	Total
Rainy	0 95.534	560 160.08	0 304.39	560
Snowy	661 112.76	0 188.95	0 359.29	661
Sunny	569 1021.7	1501 1712	3919 3255.3	5989
Total	1230	2061	3919	7210

The FREQ Procedure

Statistics for Table 2 of weather by temperature
Controlling for Coupon_accepted=1

Statistic	DF	Value	Prob
Chi-Square	4	4974.5822	<.0001
Likelihood Ratio Chi-Square	4	4133.8151	<.0001
Mantel-Haenszel Chi-Square	1	1240.7768	<.0001
Phi Coefficient		0.8306	
Contingency Coefficient		0.6390	
Cramer's V		0.5873	

Sample Size = 7210

The LOGISTIC Procedure

Model Information	
Data Set	WORK.FINALPROJECT
Response Variable	Coupon_accepted
Number of Response Levels	2
Model	binary logit
Optimization Technique	Fisher's scoring

Number of Observations Read	12684
Number of Observations Used	12684

Response Profile		
Ordered Value	**Coupon_accepted**	**Total Frequency**
1	0	5474
2	1	7210

Probability modeled is Coupon_accepted=1.

Class Level Information					
Class	**Value**	**Design Variables**			
coupon	**Bar**	1	0	0	0
	Carry out & Take away	0	1	0	0
	Coffee House	0	0	1	0
	Restaurant(20-50)	0	0	0	0
	Restaurant(<20)	0	0	0	1
weather	**Rainy**	0	0		
	Snowy	1	0		
	Sunny	0	1		
temperature	**30**	1	0		
	55	0	0		
	80	0	1		
time	**10AM**	1	0	0	0
	10PM	0	1	0	0
	2PM	0	0	1	0
	6PM	0	0	0	0
	7AM	0	0	0	1
destination	**Home**	0	0		
	No Urgent Place	1	0		
	Work	0	1		

The LOGISTIC Procedure

Model Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	17347.412	16096.654
SC	17354.860	16200.927
-2 Log L	17345.412	16068.654

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	1276.7584	13	<.0001
Score	1226.7072	13	<.0001
Wald	1136.3949	13	<.0001

Type 3 Analysis of Effects			
Effect	DF	Wald Chi-Square	Pr > ChiSq
coupon	4	836.9534	<.0001
weather	2	70.6037	<.0001
temperature	2	5.1790	0.0751
time	4	44.0185	<.0001
destination	1	70.6170	<.0001

Note: The following parameters have been set to 0, since the variables are a linear combination of other variables as shown.

destinationWork =	time7AM

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept		1	-0.5970	0.0915	42.5950	<.0001
coupon	Bar	1	-0.1796	0.0727	6.1081	0.0135
coupon	Carry out & Take away	1	1.3034	0.0725	323.5548	<.0001
coupon	Coffee House	1	0.0341	0.0636	0.2873	0.5919
coupon	Restaurant(<20)	1	0.9698	0.0693	195.7718	<.0001
weather	Snowy	1	0.1720	0.1229	1.9565	0.1619
weather	Sunny	1	0.5494	0.0760	52.3055	<.0001

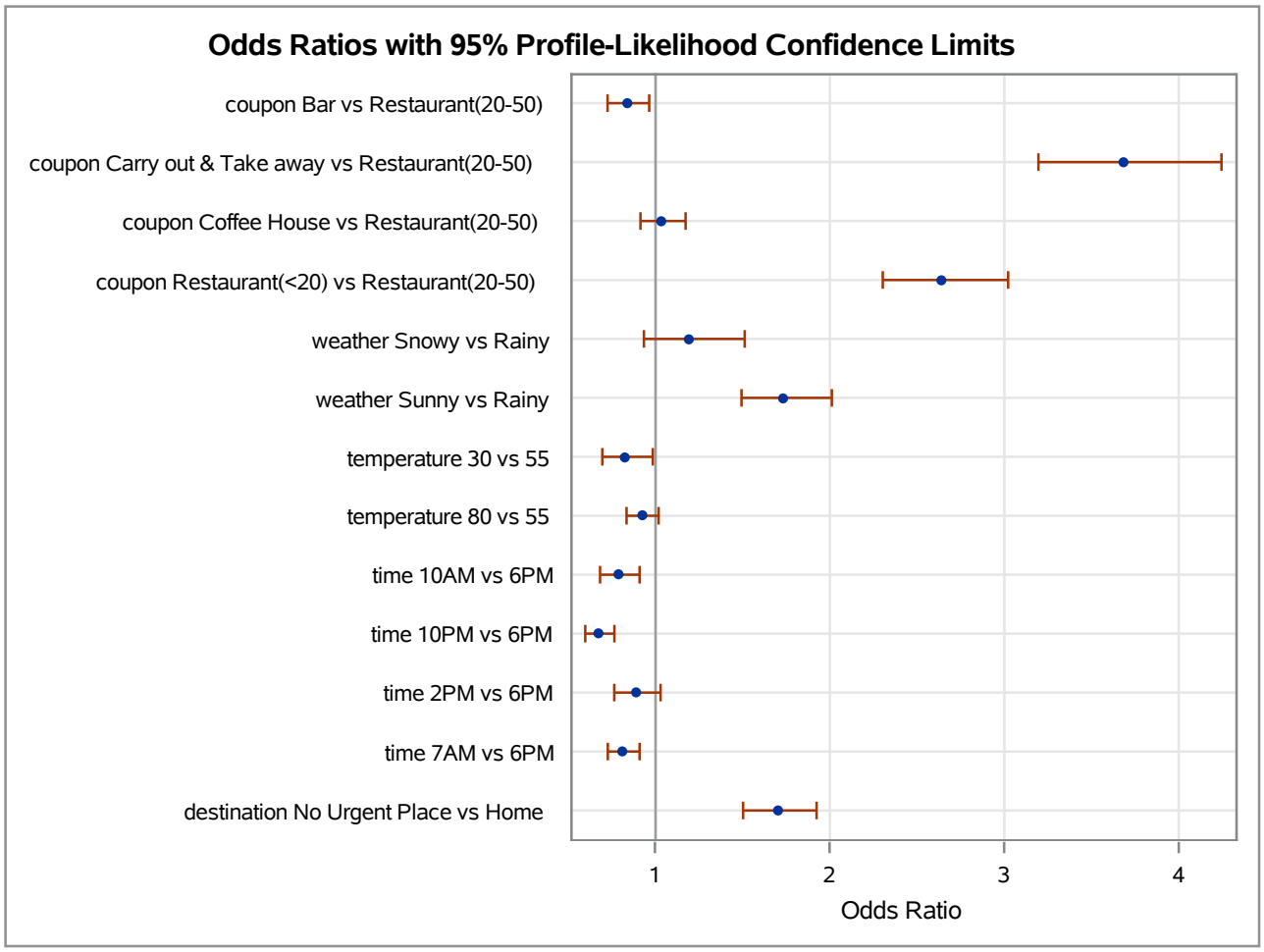
The LOGISTIC Procedure

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
temperature	30	1	-0.1904	0.0888	4.5997	0.0320
temperature	80	1	-0.0823	0.0509	2.6127	0.1060
time	10AM	1	-0.2394	0.0733	10.6691	0.0011
time	10PM	1	-0.3925	0.0629	38.9338	<.0001
time	2PM	1	-0.1208	0.0761	2.5189	0.1125
time	7AM	1	-0.2079	0.0571	13.2447	0.0003
destination	No Urgent Place	1	0.5302	0.0631	70.6170	<.0001
destination	Work	0	0	.	.	.

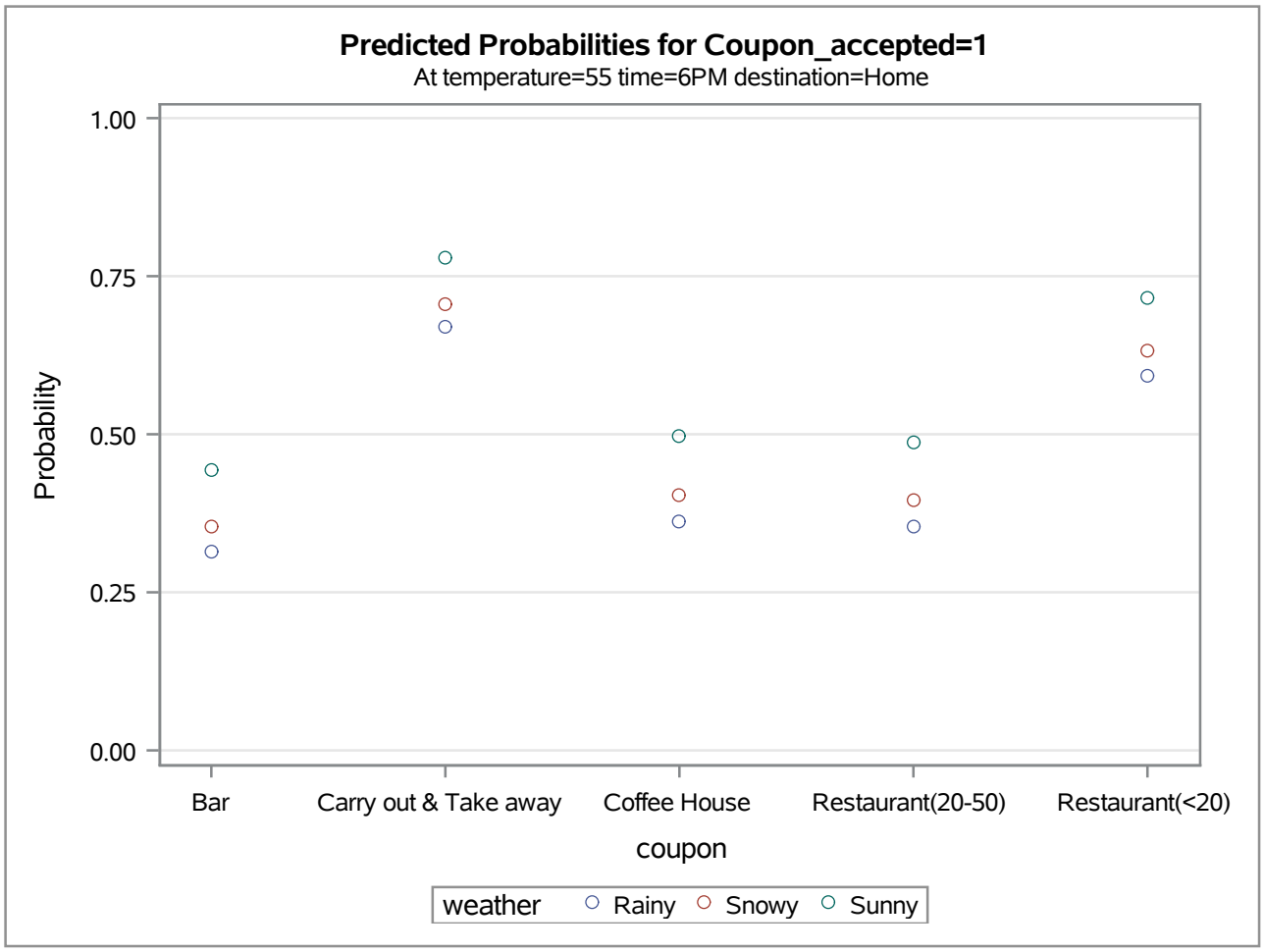
Association of Predicted Probabilities and Observed Responses			
Percent Concordant	66.9	Somers' D	0.356
Percent Discordant	31.3	Gamma	0.363
Percent Tied	1.8	Tau-a	0.175
Pairs	39467540	c	0.678

Odds Ratio Estimates and Profile-Likelihood Confidence Intervals				
Effect	Unit	Estimate	95% Confidence Limits	
coupon Bar vs Restaurant(20-50)	1.0000	0.836	0.725	0.964
coupon Carry out & Take away vs Restaurant(20-50)	1.0000	3.682	3.195	4.245
coupon Coffee House vs Restaurant(20-50)	1.0000	1.035	0.913	1.172
coupon Restaurant(<20) vs Restaurant(20-50)	1.0000	2.637	2.303	3.022
weather Snowy vs Rainy	1.0000	1.188	0.933	1.511
weather Sunny vs Rainy	1.0000	1.732	1.493	2.011
temperature 30 vs 55	1.0000	0.827	0.695	0.984
temperature 80 vs 55	1.0000	0.921	0.834	1.018
time 10AM vs 6PM	1.0000	0.787	0.682	0.909
time 10PM vs 6PM	1.0000	0.675	0.597	0.764
time 2PM vs 6PM	1.0000	0.886	0.763	1.029
time 7AM vs 6PM	1.0000	0.812	0.726	0.908
destination No Urgent Place vs Home	1.0000	1.699	1.502	1.923

The LOGISTIC Procedure



The LOGISTIC Procedure



The FREQ Procedure

Frequency

Table 1 of incomerange by maritalStatus

Controlling for Coupon_accepted=0

incomerange	maritalStatus					
	Divorced	Married partner	Single	Unmarried partner	Widowed	Total
high	0	284	111	24	0	419
low	42	285	298	194	0	819
lower h	0	224	166	53	0	443
lower m	44	330	277	136	0	787
middle	7	372	178	114	0	671
minimal	8	42	265	72	37	424
upper h	0	502	180	50	0	732
upper m	16	161	84	139	0	400
very lo	126	131	314	177	31	779
Total	243	2331	1873	959	68	5474

Statistics for Table 1 of incomerange by maritalStatus
Controlling for Coupon_accepted=0

Statistic	DF	Value	Prob
Chi-Square	32	1438.0967	<.0001
Likelihood Ratio Chi-Square	32	1396.0842	<.0001
Mantel-Haenszel Chi-Square	1	21.9940	<.0001
Phi Coefficient		0.5126	
Contingency Coefficient		0.4561	
Cramer's V		0.2563	

Sample Size = 5474

Frequency

Table 2 of incomerange by maritalStatus

Controlling for Coupon_accepted=1

incomerange	maritalStatus					
	Divorced	Married partner	Single	Unmarried partner	Widowed	Total
high	0	278	134	64	0	476
low	74	302	555	263	0	1194
lower h	0	265	94	55	0	414
lower m	44	357	471	146	0	1018
middle	15	494	283	196	0	988
minimal	14	30	443	104	27	618
upper h	0	645	300	59	0	1004

The FREQ Procedure

Frequency	Table 2 of incomerange by maritalStatus					
	Controlling for Coupon_accepted=1					
	maritalStatus					
incomerange	Divorced	Married partner	Single	Unmarried partner	Widowed	Total
upper m	12	211	147	76	0	446
very lo	114	187	452	264	35	1052
Total	273	2769	2879	1227	62	7210

Statistics for Table 2 of incomerange by maritalStatus
Controlling for Coupon_accepted=1

Statistic	DF	Value	Prob
Chi-Square	32	1589.0182	<.0001
Likelihood Ratio Chi-Square	32	1683.3295	<.0001
Mantel-Haenszel Chi-Square	1	7.8246	0.0052
Phi Coefficient		0.4695	
Contingency Coefficient		0.4250	
Cramer's V		0.2347	

Sample Size = 7210

The LOGISTIC Procedure

Model Information	
Data Set	WORK.FINALPROJECT
Response Variable	Coupon_accepted
Number of Response Levels	2
Model	binary logit
Optimization Technique	Fisher's scoring

Number of Observations Read	12684
Number of Observations Used	12684

Response Profile		
Ordered Value	**Coupon_accepted**	**Total Frequency**
1	0	5474
2	1	7210

Probability modeled is Coupon_accepted=1.

Class Level Information									
Class	**Value**	**Design Variables**							
coupon	**Bar**	1	0	0	0				
	Carry out & Take away	0	1	0	0				
	Coffee House	0	0	1	0				
	Restaurant(20-50)	0	0	0	0				
	Restaurant(<20)	0	0	0	1				
maritalStatus	**Divorced**	1	0	0	0				
	Married partner	0	0	0	0				
	Single	0	1	0	0				
	Unmarried partner	0	0	1	0				
	Widowed	0	0	0	1				
incomerange	**high**	1	0	0	0	0	0	0	0
	low	0	1	0	0	0	0	0	0
	lower h	0	0	1	0	0	0	0	0
	lower m	0	0	0	1	0	0	0	0
	middle	0	0	0	0	0	0	0	0
	minimal	0	0	0	0	1	0	0	0
	upper h	0	0	0	0	0	1	0	0
	upper m	0	0	0	0	0	0	1	0
	very lo	0	0	0	0	0	0	0	1

The LOGISTIC Procedure

Model Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	17347.412	16388.085
SC	17354.860	16514.702
-2 Log L	17345.412	16354.085

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	991.3274	16	<.0001
Score	964.8961	16	<.0001
Wald	920.3165	16	<.0001

Type 3 Analysis of Effects			
Effect	DF	Wald Chi-Square	Pr > ChiSq
coupon	4	846.3449	<.0001
maritalStatus	4	42.7977	<.0001
incomerange	8	51.2103	<.0001

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept		1	-0.1748	0.0736	5.6326	0.0176
coupon	Bar	1	-0.1185	0.0694	2.9152	0.0877
coupon	Carry out & Take away	1	1.2686	0.0701	327.7611	<.0001
coupon	Coffee House	1	0.2259	0.0613	13.5872	0.0002
coupon	Restaurant(<20)	1	1.1274	0.0670	282.9328	<.0001
maritalStatus	Divorced	1	-0.1518	0.1004	2.2864	0.1305
maritalStatus	Single	1	0.2322	0.0451	26.5177	<.0001
maritalStatus	Unmarried partner	1	0.0643	0.0557	1.3348	0.2479
maritalStatus	Widowed	1	-0.3568	0.1908	3.4987	0.0614
incomerange	high	1	-0.2958	0.0870	11.5622	0.0007
incomerange	low	1	-0.0627	0.0707	0.7850	0.3756
incomerange	lower h	1	-0.5179	0.0882	34.4635	<.0001

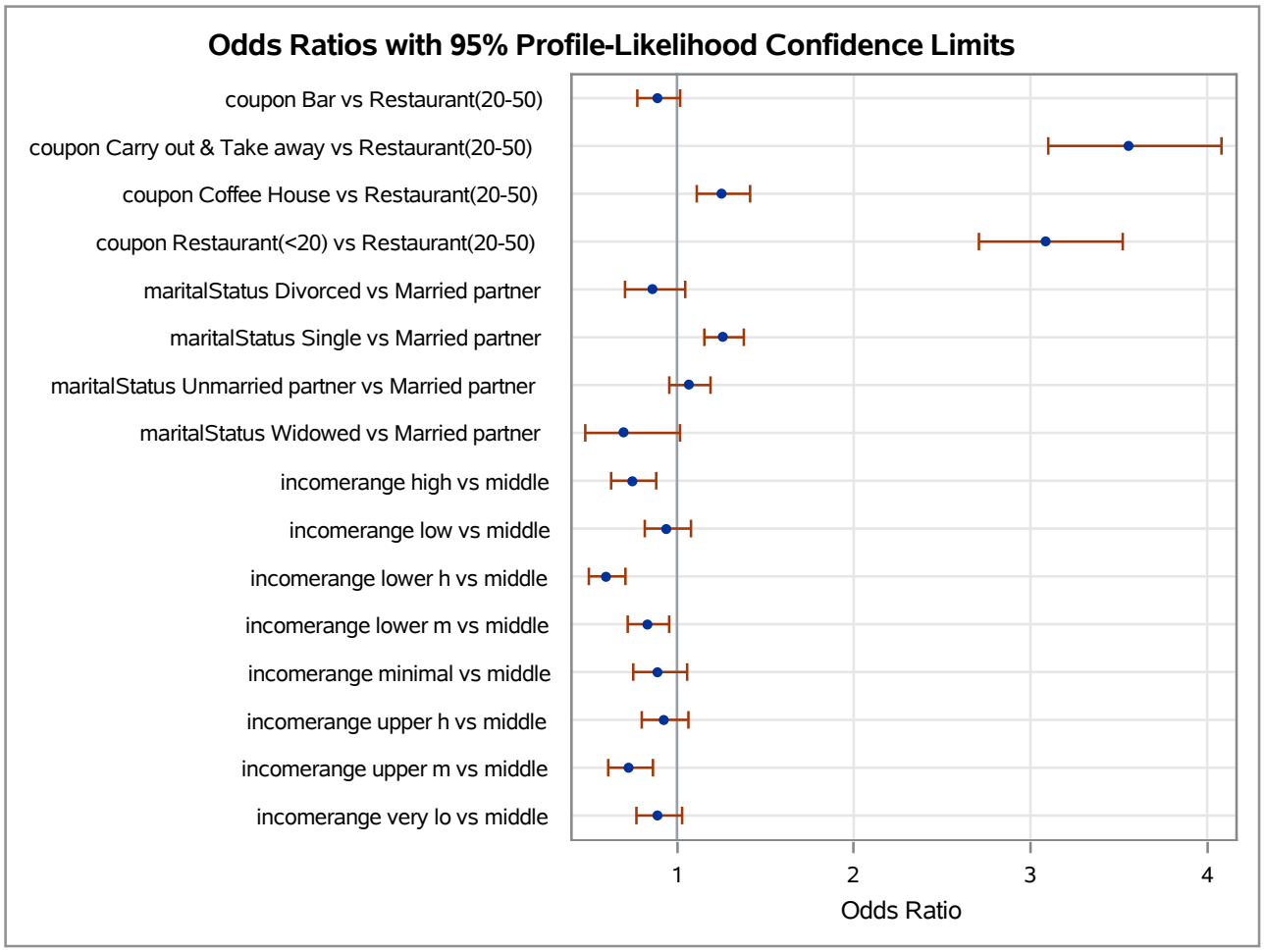
The LOGISTIC Procedure

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
incomerange	lower m	1	-0.1862	0.0719	6.7036	0.0096
incomerange	minimal	1	-0.1147	0.0868	1.7442	0.1866
incomerange	upper h	1	-0.0801	0.0727	1.2122	0.2709
incomerange	upper m	1	-0.3199	0.0885	13.0745	0.0003
incomerange	very lo	1	-0.1162	0.0738	2.4796	0.1153

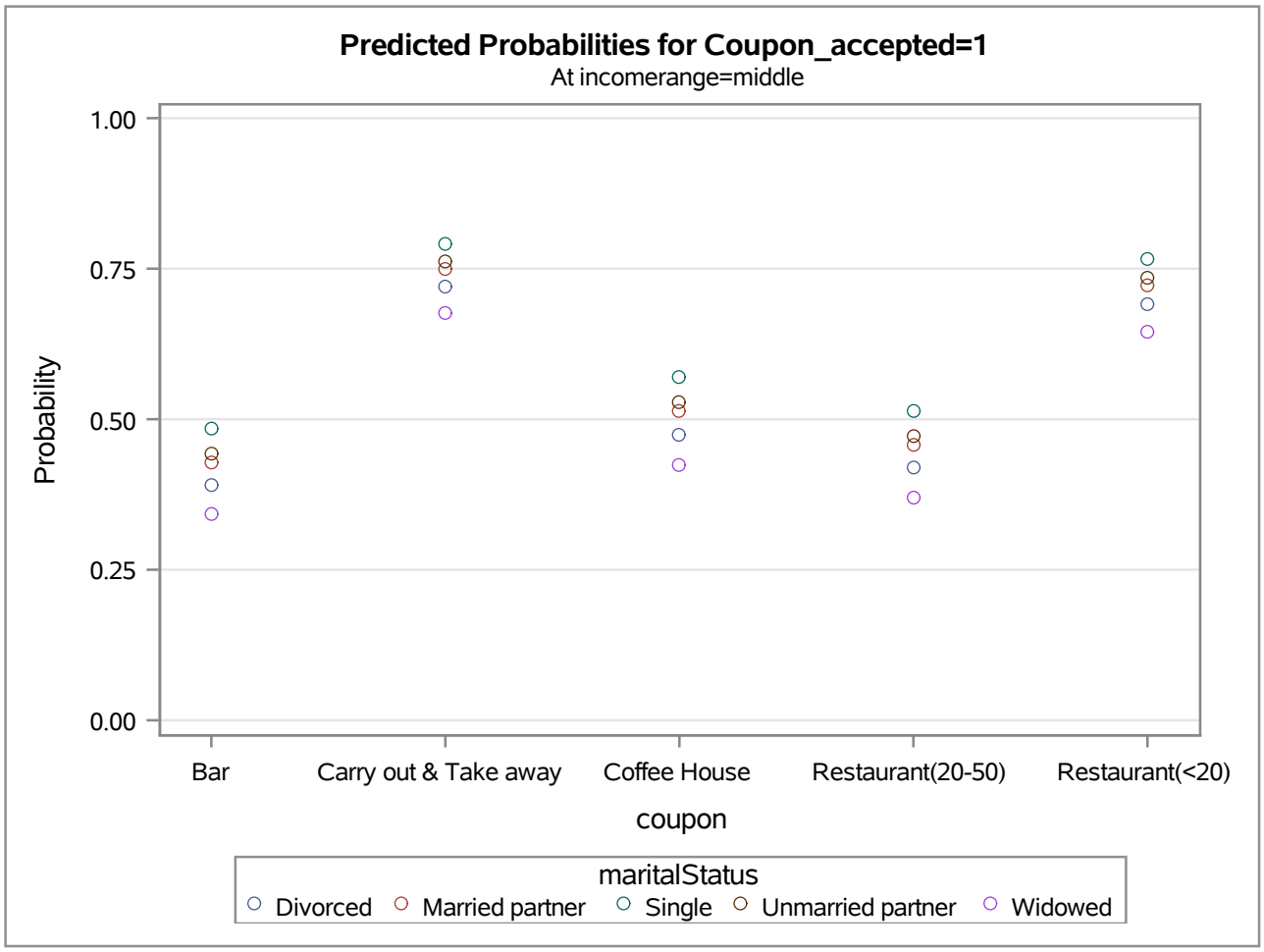
Association of Predicted Probabilities and Observed Responses			
Percent Concordant	65.4	Somers' D	0.318
Percent Discordant	33.6	Gamma	0.321
Percent Tied	0.9	Tau-a	0.156
Pairs	39467540	c	0.659

Odds Ratio Estimates and Profile-Likelihood Confidence Intervals				
Effect	Unit	Estimate	95% Confidence Limits	
coupon Bar vs Restaurant(20-50)	1.0000	0.888	0.775	1.018
coupon Carry out & Take away vs Restaurant(20-50)	1.0000	3.556	3.101	4.081
coupon Coffee House vs Restaurant(20-50)	1.0000	1.253	1.112	1.414
coupon Restaurant(<20) vs Restaurant(20-50)	1.0000	3.088	2.708	3.522
maritalStatus Divorced vs Married partner	1.0000	0.859	0.706	1.046
maritalStatus Single vs Married partner	1.0000	1.261	1.155	1.378
maritalStatus Unmarried partner vs Married partner	1.0000	1.066	0.956	1.189
maritalStatus Widowed vs Married partner	1.0000	0.700	0.481	1.017
incomerange high vs middle	1.0000	0.744	0.627	0.882
incomerange low vs middle	1.0000	0.939	0.818	1.079
incomerange lower h vs middle	1.0000	0.596	0.501	0.708
incomerange lower m vs middle	1.0000	0.830	0.721	0.956
incomerange minimal vs middle	1.0000	0.892	0.752	1.057
incomerange upper h vs middle	1.0000	0.923	0.800	1.064
incomerange upper m vs middle	1.0000	0.726	0.611	0.864
incomerange very lo vs middle	1.0000	0.890	0.770	1.029

The LOGISTIC Procedure



The LOGISTIC Procedure



The LOGISTIC Procedure

Model Information	
Data Set	WORK.FINALPROJECT
Response Variable	Coupon_accepted
Number of Response Levels	2
Model	binary logit
Optimization Technique	Fisher's scoring

Number of Observations Read	12684
Number of Observations Used	12684

Response Profile		
Ordered Value	**Coupon_accepted**	**Total Frequency**
1	0	5474
2	1	7210

Probability modeled is Coupon_accepted=1.

Class Level Information					
Class	**Value**	**Design Variables**			
coupon	**Bar**	1	0	0	0
	Carry out & Take away	0	1	0	0
	Coffee House	0	0	1	0
	Restaurant(20-50)	0	0	0	0
	Restaurant(<20)	0	0	0	1
destination	**Home**	0	0		
	No Urgent Place	1	0		
	Work	0	1		
time	**10AM**	1	0	0	0
	10PM	0	1	0	0
	2PM	0	0	1	0
	6PM	0	0	0	0
	7AM	0	0	0	1
direction_same	**0**	1			
	1	0			
direction_opp	**0**	1			
	1	0			
expiration	**1d**	1			
	2h	0			

The LOGISTIC Procedure

Class Level Information					
Class	**Value**	**Design Variables**			
weather	**Rainy**	0	0		
	Snowy	1	0		
	Sunny	0	1		
temperature	**30**	1	0		
	55	0	0		
	80	0	1		

Model Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics		
Criterion	**Intercept Only**	**Intercept and Covariates**
AIC	17347.412	15650.144
SC	17354.860	15799.106
-2 Log L	17345.412	15610.144

Testing Global Null Hypothesis: BETA=0			
Test	**Chi-Square**	**DF**	**Pr > ChiSq**
Likelihood Ratio	1735.2681	19	<.0001
Score	1651.4699	19	<.0001
Wald	1481.3058	19	<.0001

Joint Tests			
Effect	**DF**	**Wald Chi-Square**	**Pr > ChiSq**
coupon	4	844.2314	<.0001
destination	2	206.1978	<.0001
time	3	14.7327	0.0021
direction_same	1	75.5712	<.0001
direction_opp	0	.	.
expiration	1	86.8378	<.0001
weather	2	55.2411	<.0001
temperature	2	10.7762	0.0046
weather*temperature	0	.	.
time*expiration	4	43.8427	<.0001

The LOGISTIC Procedure

Note: Under full-rank parameterizations, Type 3 effect tests are replaced by joint tests. The joint test for an effect is a test that all the parameters associated with that effect are zero. Such joint tests might not be equivalent to Type 3 effect tests under GLM parameterization.

Note: The following parameters have been set to 0, since the variables are a linear combination of other variables as shown.

time7AM =	destinationWork
direction_opp0 =	Intercept - direction_same0
weatherSnowytemperature30 =	weatherSnowy
weatherSnowytemperature80 =	0
weatherSunnytemperature30 =	-weatherSnowy + temperature30
weatherSunnytemperature80 =	temperature80

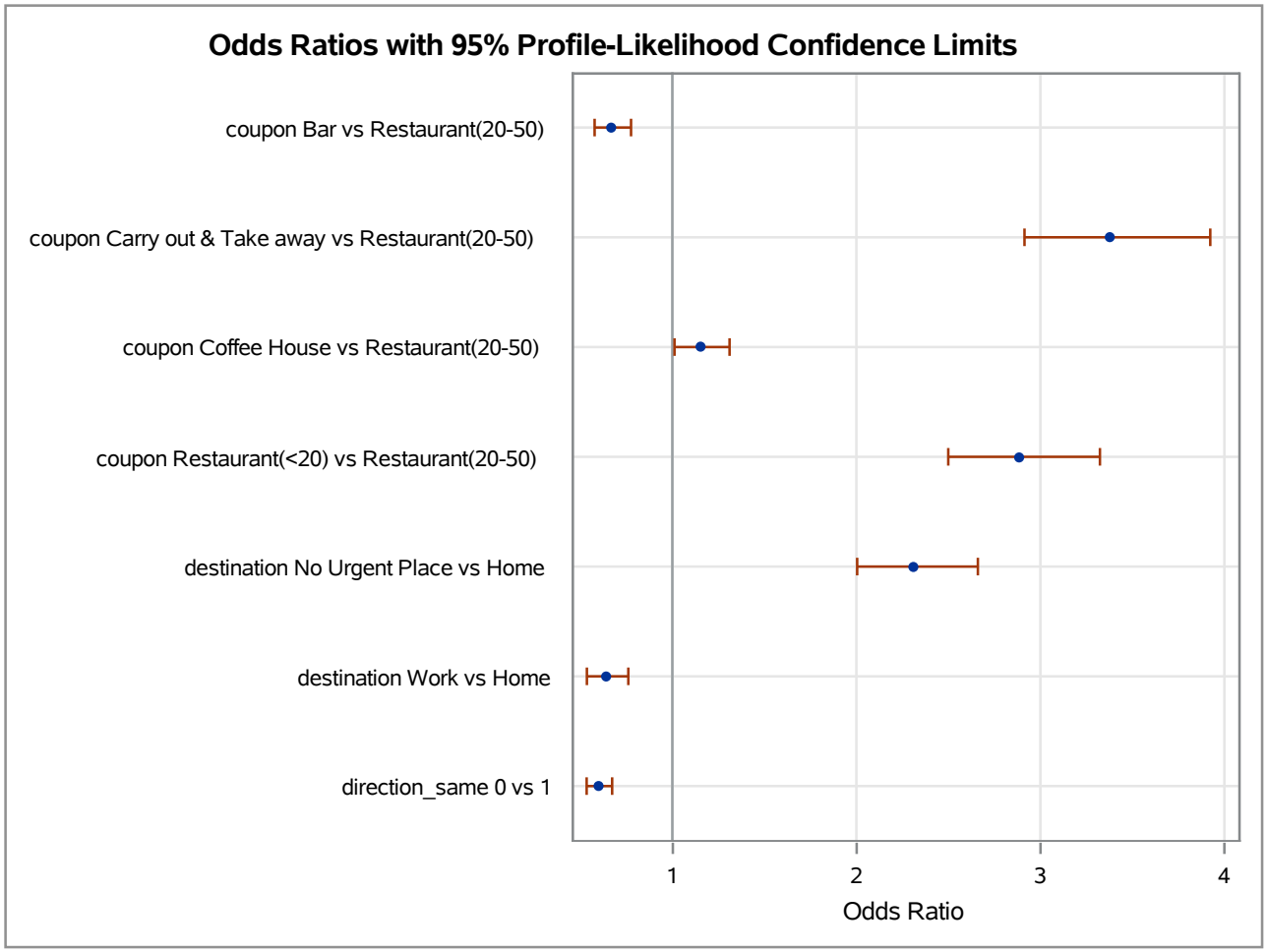
Analysis of Maximum Likelihood Estimates

Parameter			DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept			1	-0.6278	0.1159	29.3555	<.0001
coupon	**Bar**		1	-0.4018	0.0752	28.5352	<.0001
coupon	**Carry out & Take away**		1	1.2178	0.0759	257.5253	<.0001
coupon	**Coffee House**		1	0.1410	0.0661	4.5538	0.0328
coupon	**Restaurant(<20)**		1	1.0582	0.0727	211.8641	<.0001
destination	**No Urgent Place**		1	0.8366	0.0722	134.1638	<.0001
destination	**Work**		1	-0.4489	0.0895	25.1653	<.0001
time	**10AM**		1	-0.0611	0.0912	0.4484	0.5031
time	**10PM**		1	-0.3488	0.0963	13.1163	0.0003
time	**2PM**		1	-0.1960	0.1027	3.6401	0.0564
time	**7AM**		0	0	.	.	.
direction_same	**0**		1	-0.5114	0.0588	75.5712	<.0001
direction_opp	**0**		0	0	.	.	.
expiration	**1d**		1	0.7427	0.0797	86.8378	<.0001
weather	**Snowy**		1	0.0518	0.1279	0.1642	0.6853
weather	**Sunny**		1	0.4612	0.0786	34.4416	<.0001
temperature	**30**		1	-0.2557	0.0917	7.7775	0.0053
temperature	**80**		1	-0.1542	0.0550	7.8637	0.0050
weather*temperature	**Snowy**	**30**	0	0	.	.	.
weather*temperature	**Snowy**	**80**	0	0	.	.	.
weather*temperature	**Sunny**	**30**	0	0	.	.	.
weather*temperature	**Sunny**	**80**	0	0	.	.	.
time*expiration	**10AM**	**1d**	1	-0.3122	0.1195	6.8312	0.0090
time*expiration	**10PM**	**1d**	1	0.00910	0.1331	0.0047	0.9455
time*expiration	**2PM**	**1d**	1	-0.0975	0.1285	0.5750	0.4483
time*expiration	**7AM**	**1d**	1	0.4534	0.1130	16.0908	<.0001

The LOGISTIC Procedure

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	70.4	Somers' D	0.419
Percent Discordant	28.5	Gamma	0.423
Percent Tied	1.0	Tau-a	0.206
Pairs	39467540	c	0.709

Odds Ratio Estimates and Profile-Likelihood Confidence Intervals				
Effect	Unit	Estimate	95% Confidence Limits	
coupon Bar vs Restaurant(20-50)	1.0000	0.669	0.577	0.775
coupon Carry out & Take away vs Restaurant(20-50)	1.0000	3.380	2.914	3.923
coupon Coffee House vs Restaurant(20-50)	1.0000	1.151	1.012	1.311
coupon Restaurant(<20) vs Restaurant(20-50)	1.0000	2.881	2.499	3.324
destination No Urgent Place vs Home	1.0000	2.308	2.004	2.660
destination Work vs Home	1.0000	0.638	0.536	0.761
direction_same 0 vs 1	1.0000	0.600	0.534	0.673



The LOGISTIC Procedure