| Model Information                |                  |  |  |
|----------------------------------|------------------|--|--|
| Data Set WORK.DATA_SE            |                  |  |  |
| Response Variable                | dv               |  |  |
| <b>Number of Response Levels</b> | 2                |  |  |
| Model                            | binary logit     |  |  |
| Optimization Technique           | Fisher's scoring |  |  |

Number of Observations Read 40459 **Number of Observations Used** 40459

| Response Profile |    |           |
|------------------|----|-----------|
| Ordered Total    |    |           |
| Value            | dv | Frequency |
| 1                | 1  | 7738      |
| 2                | 0  | 32721     |

Probability modeled is dv=1.

# **Stepwise Selection Procedure**

# Step 0. Intercept entered:

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

**-2 Log L** = 39491.068

**Residual Chi-Square Test** Chi-Square DF Pr > ChiSq 19250.4434 40

## Step 1. Effect var35 entered:

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

| Model Fit Statistics                              |           |           |  |  |
|---|-----------|-----------|--|--|
| Criterion Intercept Only Intercept and Covariates |           |           |  |  |
| AIC   | 39493.068 | 24441.266 |  |  |
| SC  | 39501.676 | 24458.482 |  |  |
| -2 Log L  | 39491.068 | 24437.266 |  |  |

R-Square 0.3107 Max-rescaled R-Square 0.4985

| Testing Global Null Hypothesis: BETA=0 |            |    |            |
|--|------------|----|------------|
| Test                                   | Chi-Square | DF | Pr > ChiSq |
| Likelihood Ratio                       | 15053.8026 | 1  | <.0001     |
| Score                                  | 16668.8308 | 1  | <.0001     |

| Testing Global Null Hypothesis: BETA=0 |            |    |            |  |
|--|------------|----|------------|--|
| Test                                   | Chi-Square | DF | Pr > ChiSq |  |
| Wald                                   | 8866.0343  | 1  | <.0001     |  |

| Residual Chi-Square Test |    |            |  |
|--------------------------|----|------------|--|
| Chi-Square               | DF | Pr > ChiSq |  |
| 4463.8100                | 39 | <.0001     |  |

Note: No effects for the model in Step 1 are removed.

Step 2. Effect var38 entered:

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

| Model Fit Statistics                              |           |           |  |
|---|-----------|-----------|--|
| Criterion Intercept Only Intercept and Covariates |           |           |  |
| AIC   | 39493.068 | 22685.868 |  |
| SC  | 39501.676 | 22711.692 |  |
| -2 Log L  | 39491.068 | 22679.868 |  |

R-Square 0.3400 Max-rescaled R-Square 0.5456

| Testing Global Null Hypothesis: BETA=0 |            |    |            |
|--|------------|----|------------|
| Test                                   | Chi-Square | DF | Pr > ChiSq |
| <b>Likelihood Ratio</b>                | 16811.2008 | 2  | <.0001     |
| Score                                  | 17041.3598 | 2  | <.0001     |
| Wald                                   | 8334.1235  | 2  | <.0001     |

| Residual Chi-Square Test |    |        |  |
|--------------------------|----|--------|--|
| Chi-Square DF Pr > ChiSq |    |        |  |
| 2591.6171                | 38 | <.0001 |  |

Note: No effects for the model in Step 2 are removed.

## Step 3. Effect var39 entered:

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

| Model Fit Statistics                              |           |           |  |
|---|-----------|-----------|--|
| Criterion Intercept Only Intercept and Covariates |           |           |  |
| AIC   | 39493.068 | 21313.366 |  |
| SC  | 39501.676 | 21347.798 |  |
| -2 Log L  | 39491.068 | 21305.366 |  |

R-Square 0.3620 Max-rescaled R-Square 0.5809

| Testing Global Null Hypothesis: BETA=0 |            |    |            |  |
|--|------------|----|------------|--|
| Test                                   | Chi-Square | DF | Pr > ChiSq |  |
| <b>Likelihood Ratio</b>                | 18185.7020 | 3  | <.0001     |  |
| Score                                  | 17640.0792 | 3  | <.0001     |  |
| Wald                                   | 8196.3169  | 3  | <.0001     |  |

| Residual Chi-Square Test |    |        |  |
|--------------------------|----|--------|--|
| Chi-Square DF Pr > ChiSq |    |        |  |
| 1519.5335                | 37 | <.0001 |  |

Note: No effects for the model in Step 3 are removed.

Step 4. Effect var34 entered:

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

|           | Model Fit      | Statistics                      |
|-----------|----------------|---------------------------------|
| Criterion | Intercept Only | <b>Intercept and Covariates</b> |
| AIC       | 39493.068      | 20950.632                       |
| SC        | 39501.676      | 20993.672                       |
| -2 Log L  | 39491 068      | 20940 632                       |

R-Square 0.3678 Max-rescaled R-Square 0.5901

| Testing Global Null Hypothesis: BETA=0 |            |    |            |
|--|------------|----|------------|
| Test                                   | Chi-Square | DF | Pr > ChiSq |
| <b>Likelihood Ratio</b>                | 18550.4362 | 4  | <.0001     |
| Score                                  | 18069.5828 | 4  | <.0001     |
| Wald                                   | 8298.0070  | 4  | <.0001     |

| Residual Chi-Square Test |    |            |
|--------------------------|----|------------|
| <b>Chi-Square</b>        | DF | Pr > ChiSq |
| 1171.9345                | 36 | <.0001     |

Note: No effects for the model in Step 4 are removed.

Step 5. Effect var36 entered:

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

| Model Fit Statistics |                       |                          |
|----------------------|-----------------------|--------------------------|
| Criterion            | <b>Intercept Only</b> | Intercept and Covariates |
| AIC                  | 39493.068             | 20409.171                |
| SC                   | 39501.676             | 20460.819                |
| -2 Log L             | 39491.068             | 20397.171                |

# R-Square 0.3762 Max-rescaled R-Square 0.6037

| Testing Global Null Hypothesis: BETA=0 |            |    |            |
|--|------------|----|------------|
| Test                                   | Chi-Square | DF | Pr > ChiSq |
| <b>Likelihood Ratio</b>                | 19093.8977 | 5  | <.0001     |
| Score                                  | 18661.7390 | 5  | <.0001     |
| Wald                                   | 8521.6222  | 5  | <.0001     |

**Residual Chi-Square Test** Chi-Square DF Pr > ChiSq 671.6623 35 <.0001

Note: No effects for the model in Step 5 are removed.

## Step 6. Effect var32 entered:

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

|           | Model Fit Statistics |                                 |  |
|-----------|----------------------|---------------------------------|--|
| Criterion | Intercept Only       | <b>Intercept and Covariates</b> |  |
| AIC       | 39493.068            | 20206.346                       |  |
| SC        | 39501.676            | 20266.602                       |  |
| -2 Log L  | 39491.068            | 20192.346                       |  |

# R-Square 0.3794 Max-rescaled R-Square 0.6087

| Testing Global Null Hypothesis: BETA=0 |            |   |        |
|--|------------|---|--------|
| Test Chi-Square DF Pr > ChiSq          |            |   |        |
| <b>Likelihood Ratio</b>                | 19298.7227 | 6 | <.0001 |
| Score                                  | 18777.4268 | 6 | <.0001 |
| Wald                                   | 8448.9391  | 6 | <.0001 |

**Residual Chi-Square Test** Chi-Square DF Pr > ChiSq 467.3303 34 <.0001

Note: No effects for the model in Step 6 are removed.

## Step 7. Effect var31 entered:

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

| Model Fit Statistics |                |                          |
|----------------------|----------------|--------------------------|
| Criterion            | Intercept Only | Intercept and Covariates |
| AIC                  | 39493.068      | 20059.160                |
| SC                   | 39501.676      | 20128.024                |

|           | Model Fit      | Statistics                      |
|-----------|----------------|---------------------------------|
| Criterion | Intercept Only | <b>Intercept and Covariates</b> |
| -2 Log L  | 39491.068      | 20043.160                       |

R-Square 0.3816 Max-rescaled R-Square 0.6124

| Testing Global Null Hypothesis: BETA=0 |            |    |            |
|--|------------|----|------------|
| Test                                   | Chi-Square | DF | Pr > ChiSq |
| Likelihood Ratio                       | 19447.9085 | 7  | <.0001     |
| Score                                  | 19054.0761 | 7  | <.0001     |
| Wald                                   | 8618.1961  | 7  | <.0001     |

| Residual Chi-Square Test |    |            |
|--------------------------|----|------------|
| <b>Chi-Square</b>        | DF | Pr > ChiSq |
| 330.8970                 | 33 | <.0001     |

Note: No effects for the model in Step 7 are removed.

Step 8. Effect var5 entered:

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

|           | Model Fit Statistics |                                 |  |  |
|-----------|----------------------|---------------------------------|--|--|
| Criterion | Intercept Only       | <b>Intercept and Covariates</b> |  |  |
| AIC       | 39493.068            | 20022.222                       |  |  |
| SC        | 39501.676            | 20099.695                       |  |  |
| -2 Log L  | 39491.068            | 20004.222                       |  |  |

R-Square 0.3822 Max-rescaled R-Square 0.6133

| Testing Global Null Hypothesis: BETA=0 |            |    |            |
|--|------------|----|------------|
| Test                                   | Chi-Square | DF | Pr > ChiSq |
| <b>Likelihood Ratio</b>                | 19486.8461 | 8  | <.0001     |
| Score                                  | 19067.6532 | 8  | <.0001     |
| Wald                                   | 8607.6409  | 8  | <.0001     |

| Residual Chi-Square Test |    |            |  |
|--------------------------|----|------------|--|
| Chi-Square               | DF | Pr > ChiSq |  |
| 284.9640                 | 32 | <.0001     |  |

Note: No effects for the model in Step 8 are removed.

Step 9. Effect var1 entered:

| Model Convergenc            | e Status | <b>;</b>   |
|-----------------------------|----------|------------|
| Convergence criterion (GCON | IV=1E-8  | satisfied. |

| Model Fit Statistics |                       |                                 |  |
|----------------------|-----------------------|---------------------------------|--|
| Criterion            | <b>Intercept Only</b> | <b>Intercept and Covariates</b> |  |
| AIC                  | 39493.068             | 19985.886                       |  |
| SC                   | 39501.676             | 20071.967                       |  |
| -2 Log L             | 39491.068             | 19965.886                       |  |

R-Square 0.3828 Max-rescaled R-Square 0.6143

| Testing Global Null Hypothesis: BETA=0 |            |    |            |
|--|------------|----|------------|
| Test                                   | Chi-Square | DF | Pr > ChiSq |
| Likelihood Ratio                       | 19525.1819 | 9  | <.0001     |
| Score                                  | 19094.4368 | 9  | <.0001     |
| Wald                                   | 8596.6916  | 9  | <.0001     |

Residual Chi-Square Test Chi-Square DF Pr > ChiSq 246.5233 31 <.0001

Note: No effects for the model in Step 9 are removed.

Step 10. Effect var40 entered:

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

|           | Model Fit Statistics |                                 |  |  |
|-----------|----------------------|---------------------------------|--|--|
| Criterion | Intercept Only       | <b>Intercept and Covariates</b> |  |  |
| AIC       | 39493.068            | 19948.218                       |  |  |
| SC        | 39501.676            | 20042.906                       |  |  |
| -2 Log L  | 39491.068            | 19926.218                       |  |  |

R-Square 0.3834 Max-rescaled R-Square 0.6152

| Testing Global Null Hypothesis: BETA=0 |            |    |        |
|--|------------|----|--------|
| Test   Chi-Square   DF   Pr > ChiSq    |            |    |        |
| Likelihood Ratio                       | 19564.8503 | 10 | <.0001 |
| Score                                  | 19113.3074 | 10 | <.0001 |
| Wald                                   | 8578.0949  | 10 | <.0001 |

**Residual Chi-Square Test** Chi-Square DF Pr > ChiSq 208.2297 30 <.0001

Note: No effects for the model in Step 10 are removed.

Step 11. Effect var27 entered:

# **Model Convergence Status**

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

|           | Model Fit Statistics |                                 |  |  |
|-----------|----------------------|---------------------------------|--|--|
| Criterion | Intercept Only       | <b>Intercept and Covariates</b> |  |  |
| AIC       | 39493.068            | 19907.394                       |  |  |
| SC        | 39501.676            | 20010.690                       |  |  |
| -2 Log L  | 39491.068            | 19883.394                       |  |  |

R-Square 0.3841 Max-rescaled R-Square 0.6163

| Testing Global Null Hypothesis: BETA=0 |            |    |            |
|--|------------|----|------------|
| Test                                   | Chi-Square | DF | Pr > ChiSq |
| Likelihood Ratio                       | 19607.6747 | 11 | <.0001     |
| Score                                  | 19140.9983 | 11 | <.0001     |
| Wald                                   | 8557.2929  | 11 | <.0001     |

| Residual Chi-Square Test |    |            |  |
|--------------------------|----|------------|--|
| <b>Chi-Square</b>        | DF | Pr > ChiSq |  |
| 165.0324                 | 29 | <.0001     |  |

Note: No effects for the model in Step 11 are removed.

# Step 12. Effect var37 entered:

# **Model Convergence Status**

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

|           | Model Fit Statistics |                                 |  |  |
|-----------|----------------------|---------------------------------|--|--|
| Criterion | Intercept Only       | <b>Intercept and Covariates</b> |  |  |
| AIC       | 39493.068            | 19878.507                       |  |  |
| SC        | 39501.676            | 19990.412                       |  |  |
| -2 Log L  | 39491.068            | 19852.507                       |  |  |

R-Square 0.3845 Max-rescaled R-Square 0.6170

| Testing Global Null Hypothesis: BETA=0 |            |    |            |
|--|------------|----|------------|
| Test                                   | Chi-Square | DF | Pr > ChiSq |
| Likelihood Ratio                       | 19638.5613 | 12 | <.0001     |
| Score                                  | 19169.6934 | 12 | <.0001     |
| Wald                                   | 8536.7118  | 12 | <.0001     |

| Residual Chi-Square Test |    |            |  |
|--------------------------|----|------------|--|
| <b>Chi-Square</b>        | DF | Pr > ChiSq |  |
| 134.1641                 | 28 | <.0001     |  |

Note: No effects for the model in Step 12 are removed.

# **Model Convergence Status**

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

|           | Model Fit Statistics |                                 |  |  |
|-----------|----------------------|---------------------------------|--|--|
| Criterion | Intercept Only       | <b>Intercept and Covariates</b> |  |  |
| AIC       | 39493.068            | 19853.918                       |  |  |
| SC        | 39501.676            | 19974.431                       |  |  |
| -2 Log L  | 39491.068            | 19825.918                       |  |  |

R-Square 0.3849 Max-rescaled R-Square 0.6177

| Testing Global Null Hypothesis: BETA=0 |            |    |            |
|--|------------|----|------------|
| Test                                   | Chi-Square | DF | Pr > ChiSq |
| <b>Likelihood Ratio</b>                | 19665.1501 | 13 | <.0001     |
| Score                                  | 19183.7589 | 13 | <.0001     |
| Wald                                   | 8529.0060  | 13 | <.0001     |

| <b>Residual Chi-Square Test</b> |    |            |  |
|---------------------------------|----|------------|--|
| <b>Chi-Square</b>               | DF | Pr > ChiSq |  |
| 108.0859                        | 27 | <.0001     |  |

Note: No effects for the model in Step 13 are removed.

# Step 14. Effect var6 entered:

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

|           | Model Fit Statistics |                                 |  |  |
|-----------|----------------------|---------------------------------|--|--|
| Criterion | Intercept Only       | <b>Intercept and Covariates</b> |  |  |
| AIC       | 39493.068            | 19834.598                       |  |  |
| SC        | 39501.676            | 19963.718                       |  |  |
| -2 Log L  | 39491.068            | 19804.598                       |  |  |

R-Square 0.3853 Max-rescaled R-Square 0.6182

| Testing Global Null Hypothesis: BETA=0 |            |    |            |
|--|------------|----|------------|
| Test                                   | Chi-Square | DF | Pr > ChiSq |
| <b>Likelihood Ratio</b>                | 19686.4705 | 14 | <.0001     |
| Score                                  | 19194.0952 | 14 | <.0001     |
| Wald                                   | 8523.3587  | 14 | <.0001     |

| Residual Chi-Square Test |    |            |  |
|--------------------------|----|------------|--|
| <b>Chi-Square</b>        | DF | Pr > ChiSq |  |
| 87.1494                  | 26 | <.0001     |  |

Note: No effects for the model in Step 14 are removed.

# **Model Convergence Status**

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

|           | Model Fit Statistics |                                 |  |  |
|-----------|----------------------|---------------------------------|--|--|
| Criterion | Intercept Only       | <b>Intercept and Covariates</b> |  |  |
| AIC       | 39493.068            | 19823.346                       |  |  |
| SC        | 39501.676            | 19961.075                       |  |  |
| -2 Log L  | 39491.068            | 19791.346                       |  |  |

R-Square 0.3855 Max-rescaled R-Square 0.6185

| Testing Global Null Hypothesis: BETA=0 |            |    |            |
|--|------------|----|------------|
| Test                                   | Chi-Square | DF | Pr > ChiSq |
| Likelihood Ratio                       | 19699.7223 | 15 | <.0001     |
| Score                                  | 19200.7435 | 15 | <.0001     |
| Wald                                   | 8524.9487  | 15 | <.0001     |

| <b>Residual Chi-Square Test</b> |    |            |  |
|---------------------------------|----|------------|--|
| <b>Chi-Square</b>               | DF | Pr > ChiSq |  |
| 74.5916                         | 25 | <.0001     |  |

Note: No effects for the model in Step 15 are removed.

# Step 16. Effect var3 entered:

# **Model Convergence Status**

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

|           | Model Fit Statistics |                                 |  |  |
|-----------|----------------------|---------------------------------|--|--|
| Criterion | Intercept Only       | <b>Intercept and Covariates</b> |  |  |
| AIC       | 39493.068            | 19814.623                       |  |  |
| SC        | 39501.676            | 19960.960                       |  |  |
| -2 Log L  | 39491.068            | 19780.623                       |  |  |

R-Square 0.3856 Max-rescaled R-Square 0.6188

| Testing Global Null Hypothesis: BETA=0 |            |    |        |  |  |  |
|--|------------|----|--------|--|--|--|
| Test   Chi-Square   DF   Pr > ChiSq    |            |    |        |  |  |  |
| <b>Likelihood Ratio</b>                | 19710.4452 | 16 | <.0001 |  |  |  |
| Score                                  | 19204.3747 | 16 | <.0001 |  |  |  |
| Wald                                   | 8519.4406  | 16 | <.0001 |  |  |  |

| Residual Chi-Square Test |    |            |  |  |
|--------------------------|----|------------|--|--|
| <b>Chi-Square</b>        | DF | Pr > ChiSq |  |  |
| 63.8076                  | 24 | <.0001     |  |  |

Note: No effects for the model in Step 16 are removed.

# **Model Convergence Status**

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

| Model Fit Statistics                           |           |           |  |  |
|--|-----------|-----------|--|--|
| Criterion Intercept Only Intercept and Covaria |           |           |  |  |
| AIC  | 39493.068 | 19808.671 |  |  |
| SC   | 39501.676 | 19963.616 |  |  |
| -2 Log L                                       | 39491.068 | 19772.671 |  |  |

R-Square 0.3858 Max-rescaled R-Square 0.6190

| Testing Global Null Hypothesis: BETA=0 |            |    |        |  |  |  |
|--|------------|----|--------|--|--|--|
| Test   Chi-Square   DF   Pr > ChiSc    |            |    |        |  |  |  |
| Likelihood Ratio                       | 19718.3969 | 17 | <.0001 |  |  |  |
| Score                                  | 19211.0683 | 17 | <.0001 |  |  |  |
| Wald                                   | 8523.1998  | 17 | <.0001 |  |  |  |

| Residual Chi-Square Test |    |            |  |  |
|--------------------------|----|------------|--|--|
| <b>Chi-Square</b>        | DF | Pr > ChiSq |  |  |
| 55.9323                  | 23 | 0.0001     |  |  |

Note: No effects for the model in Step 17 are removed.

# Step 18. Effect var22 entered:

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

| Model Fit Statistics                             |           |           |  |  |  |
|--|-----------|-----------|--|--|--|
| Criterion Intercept Only Intercept and Covariate |           |           |  |  |  |
| AIC  | 39493.068 | 19799.985 |  |  |  |
| SC   | 39501.676 | 19963.538 |  |  |  |
| -2 Log L   | 39491.068 | 19761.985 |  |  |  |

R-Square 0.3859 Max-rescaled R-Square 0.6192

| Testing Global Null Hypothesis: BETA=0 |            |    |        |  |  |  |
|--|------------|----|--------|--|--|--|
| Test   Chi-Square   DF   Pr > ChiSq    |            |    |        |  |  |  |
| <b>Likelihood Ratio</b>                | 19729.0834 | 18 | <.0001 |  |  |  |
| Score                                  | 19218.9035 | 18 | <.0001 |  |  |  |
| Wald                                   | 8522.3144  | 18 | <.0001 |  |  |  |

| Residual Chi-Square Test |    |            |  |  |
|--------------------------|----|------------|--|--|
| <b>Chi-Square</b>        | DF | Pr > ChiSq |  |  |
| 48.8670                  | 22 | 0.0008     |  |  |

Step 19. Effect var22 is removed:

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

| Model Fit Statistics                             |           |           |  |  |
|--|-----------|-----------|--|--|
| Criterion Intercept Only Intercept and Covariate |           |           |  |  |
| AIC  | 39493.068 | 19808.671 |  |  |
| SC   | 39501.676 | 19963.616 |  |  |
| -2 Log L   | 39491.068 | 19772.671 |  |  |

R-Square 0.3858 Max-rescaled R-Square 0.6190

| Testing Global Null Hypothesis: BETA=0 |            |    |        |  |  |  |
|--|------------|----|--------|--|--|--|
| Test   Chi-Square   DF   Pr > ChiSq    |            |    |        |  |  |  |
| <b>Likelihood Ratio</b>                | 19718.3969 | 17 | <.0001 |  |  |  |
| Score                                  | 19211.0683 | 17 | <.0001 |  |  |  |
| Wald                                   | 8523.1998  | 17 | <.0001 |  |  |  |

| Residual Chi-Square Test |    |            |  |  |
|--------------------------|----|------------|--|--|
| Chi-Square               | DF | Pr > ChiSq |  |  |
| 55.9323                  | 23 | 0.0001     |  |  |

Note: No effects for the model in Step 19 are removed.

Note: Model building terminates because the last effect entered is removed by the Wald statistic criterion.

|      | Summary of Stepwise Selection |         |    |        |            |            |        |
|------|-------------------------------|---------|----|--------|------------|------------|--------|
|      | Ef                            | fect    |    |        |            |            |        |
|      |                               |         |    | Number | Score      | Wald       | Pr>    |
| Step | Entered                       | Removed | DF | In     | Chi-Square | Chi-Square | ChiSq  |
| 1    | var35                         |         | 1  | 1      | 16668.8308 |            | <.0001 |
| 2    | var38                         |         | 1  | 2      | 1677.0726  |            | <.0001 |
| 3    | var39                         |         | 1  | 3      | 1205.5100  |            | <.0001 |
| 4    | var34                         |         | 1  | 4      | 335.4547   |            | <.0001 |
| 5    | var36                         |         | 1  | 5      | 495.4051   |            | <.0001 |
| 6    | var32                         |         | 1  | 6      | 198.3820   |            | <.0001 |
| 7    | var31                         |         | 1  | 7      | 139.0298   |            | <.0001 |
| 8    | var5                          |         | 1  | 8      | 45.5429    |            | <.0001 |
| 9    | var1                          |         | 1  | 9      | 38.9503    |            | <.0001 |
| 10   | var40                         |         | 1  | 10     | 39.2425    |            | <.0001 |
| 11   | var27                         |         | 1  | 11     | 43.2786    |            | <.0001 |
| 12   | var37                         |         | 1  | 12     | 30.5313    |            | <.0001 |
| 13   | var33                         |         | 1  | 13     | 26.0448    |            | <.0001 |
| 14   | var6                          |         | 1  | 14     | 21.1084    |            | <.0001 |
| 15   | var10                         |         | 1  | 15     | 12.3727    |            | 0.0004 |
| 16   | var3                          |         | 1  | 16     | 10.6524    |            | 0.0011 |
| 17   | var2                          |         | 1  | 17     | 7.9322     |            | 0.0049 |

| Summary of Stepwise Selection |
|-------------------------------|
| Variable                      |
| Label                         |
|                               |
|                               |
|                               |
|                               |
|                               |
|                               |
| INTERNATIONAL_ROAMING_DAYS    |
| FLAG_3G                       |
|                               |
|                               |
|                               |
| TOTAL_CIRCLE_ROAM             |
| PEAKTIME_OG_A2F_MOU           |
| AON_CURR_HANDSET              |
| PORT_IN_FLAG                  |

| Summary of Stepwise Selection |         |         |    |        |            |            |        |  |
|-------------------------------|---------|---------|----|--------|------------|------------|--------|--|
|                               | E1      | fect    |    |        |            |            |        |  |
|                               |         |         |    | Number | Score      | Wald       | Pr>    |  |
| Step                          | Entered | Removed | DF | In     | Chi-Square | Chi-Square | ChiSq  |  |
| 40                            |         |         | 4  | 40     | 7.0040     |            | 0.0070 |  |
| 18                            | var22   |         | 1  | 18     | 7.0816     |            | 0.0078 |  |

| Analysis of Maximum Likelihood Estimates |    |          |          |            |            |  |  |  |
|--|----|----------|----------|------------|------------|--|--|--|
|  |    |          | Standard | Wald       |            |  |  |  |
| <b>Parameter</b>                         | DF | Estimate | Error    | Chi-Square | Pr > ChiSq |  |  |  |
| Intercept                                | 1  | 4.0866   | 0.1612   | 642.4611   | <.0001     |  |  |  |
| var1                                     | 1  | -0.3529  | 0.0632   | 31.1938    | <.0001     |  |  |  |
| var2                                     | 1  | -0.1114  | 0.0396   | 7.9289     | 0.0049     |  |  |  |
| var3                                     | 1  | -0.00024 | 0.000065 | 13.1439    | 0.0003     |  |  |  |
| var5                                     | 1  | 0.0948   | 0.0143   | 44.1295    | <.0001     |  |  |  |
| var6                                     | 1  | -0.0684  | 0.0165   | 17.2242    | <.0001     |  |  |  |
| var10                                    | 1  | -0.00145 | 0.000427 | 11.5748    | 0.0007     |  |  |  |
| var27                                    | 1  | 0.2918   | 0.0450   | 41.9655    | <.0001     |  |  |  |
| var31                                    | 1  | -0.0897  | 0.00694  | 166.6887   | <.0001     |  |  |  |
| var32                                    | 1  | -0.1744  | 0.0114   | 234.6124   | <.0001     |  |  |  |
| var33                                    | 1  | -0.0706  | 0.0141   | 25.1597    | <.0001     |  |  |  |
| var34                                    | 1  | -0.2833  | 0.0105   | 725.2979   | <.0001     |  |  |  |
| var35                                    | 1  | 0.1405   | 0.00909  | 238.6854   | <.0001     |  |  |  |

| Summary  | of Stepwise Selection |
|----------|-----------------------|
| Variable |                       |
| Label    |                       |
|          |                       |
|          |                       |

| Analysis of Maximum Likelihood Estimates |    |          |         |            |            |  |  |  |  |
|--|----|----------|---------|------------|------------|--|--|--|--|
|  |    |          |         |            |            |  |  |  |  |
| <b>Parameter</b>                         | DF | Estimate | Error   | Chi-Square | Pr > ChiSq |  |  |  |  |
| var36                                    | 1  | -0.1976  | 0.0115  | 295.7961   | <.0001     |  |  |  |  |
| var37                                    | 1  | -0.0793  | 0.0127  | 38.8262    | <.0001     |  |  |  |  |
| var38                                    | 1  | -0.2463  | 0.00557 | 1951.5497  | <.0001     |  |  |  |  |
| var39                                    | 1  | -0.0453  | 0.00132 | 1172.6150  | <.0001     |  |  |  |  |
| var40                                    | 1  | -0.0128  | 0.00217 | 34.8302    | <.0001     |  |  |  |  |

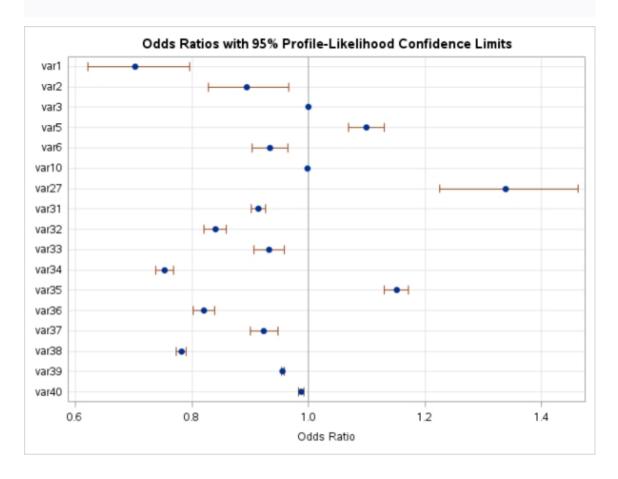
| <b>Association of Predicted Probabilities and Observed Responses</b> |           |       |       |  |  |  |  |  |
|--|-----------|-------|-------|--|--|--|--|--|
| Percent Concordant 93.5 Somers' D 0.870                              |           |       |       |  |  |  |  |  |
| Percent Discordant   | 6.5       | Gamma | 0.870 |  |  |  |  |  |
| Percent Tied   | 0.0       | Tau-a | 0.269 |  |  |  |  |  |
| Pairs  | 253195098 | С     | 0.935 |  |  |  |  |  |

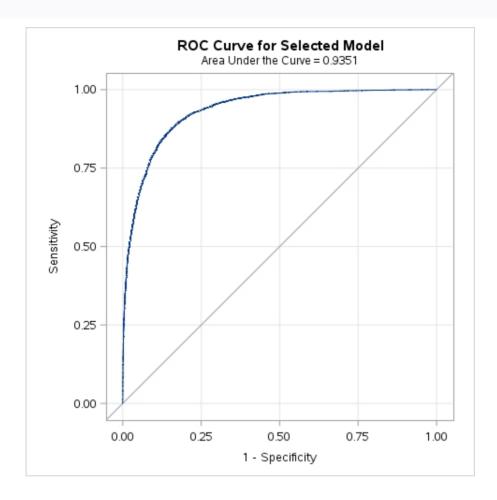
| Parameter Estimates and Wald Confidence |  |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|--|
| Intervals                               |  |  |  |  |  |  |  |  |
| <b>Parameter</b>                        | Parameter   Estimate   95% Confidence Limits |  |  |  |  |  |  |  |
| Intercept                               |  |  |  |  |  |  |  |  |

The LOGISTIC Procedure

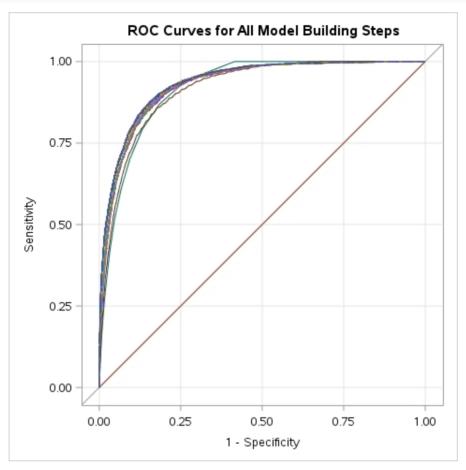
| Parameter Estimates and Wald Confidence Intervals |          |            |             |  |  |  |
|---|----------|------------|-------------|--|--|--|
| Parameter   |          | 95% Confid | ence Limits |  |  |  |
| var1  | -0.3529  | -0.4768    | -0.2291     |  |  |  |
| var2  | -0.1114  | -0.1889    | -0.0339     |  |  |  |
| var3  | -0.00024 | -0.00037   | -0.00011    |  |  |  |
| var5  | 0.0948   | 0.0668     | 0.1228      |  |  |  |
| var6  | -0.0684  | -0.1008    | -0.0361     |  |  |  |
| var10   | -0.00145 | -0.00229   | -0.00062    |  |  |  |
| var27   | 0.2918   | 0.2035     | 0.3801      |  |  |  |
| var31   | -0.0897  | -0.1033    | -0.0760     |  |  |  |
| var32   | -0.1744  | -0.1967    | -0.1521     |  |  |  |
| var33   | -0.0706  | -0.0982    | -0.0430     |  |  |  |
| var34   | -0.2833  | -0.3040    | -0.2627     |  |  |  |
| var35   | 0.1405   | 0.1226     | 0.1583      |  |  |  |
| var36   | -0.1976  | -0.2201    | -0.1751     |  |  |  |
| var37   | -0.0793  | -0.1042    | -0.0543     |  |  |  |
| var38   | -0.2463  | -0.2572    | -0.2354     |  |  |  |
| var39   | -0.0453  | -0.0478    | -0.0427     |  |  |  |
| var40   | -0.0128  | -0.0170    | -0.00854    |  |  |  |

| Odds          | Odds Ratio Estimates and Profile-Likelihood |                 |             |             |  |  |  |  |
|---------------|---|-----------------|-------------|-------------|--|--|--|--|
|               |   | Confidenc       | e Intervals |             |  |  |  |  |
| <b>Effect</b> | Unit  | <b>Estimate</b> | 95% Confid  | ence Limits |  |  |  |  |
| var1          | 1.0000                                      | 0.703           | 0.621       | 0.795       |  |  |  |  |
| var2          | 1.0000                                      | 0.895           | 0.828       | 0.967       |  |  |  |  |
| var3          | 1.0000                                      | 1.000           | 1.000       | 1.000       |  |  |  |  |
| var5          | 1.0000                                      | 1.099           | 1.069       | 1.130       |  |  |  |  |
| var6          | 1.0000                                      | 0.934           | 0.904       | 0.964       |  |  |  |  |
| var10         | 1.0000                                      | 0.999           | 0.998       | 0.999       |  |  |  |  |
| var27         | 1.0000                                      | 1.339           | 1.226       | 1.462       |  |  |  |  |
| var31         | 1.0000                                      | 0.914           | 0.902       | 0.927       |  |  |  |  |
| var32         | 1.0000                                      | 0.840           | 0.821       | 0.859       |  |  |  |  |
| var33         | 1.0000                                      | 0.932           | 0.906       | 0.958       |  |  |  |  |
| var34         | 1.0000                                      | 0.753           | 0.738       | 0.769       |  |  |  |  |
| var35         | 1.0000                                      | 1.151           | 1.131       | 1.172       |  |  |  |  |
| var36         | 1.0000                                      | 0.821           | 0.802       | 0.839       |  |  |  |  |
| var37         | 1.0000                                      | 0.924           | 0.901       | 0.947       |  |  |  |  |
| var38         | 1.0000                                      | 0.782           | 0.773       | 0.790       |  |  |  |  |
| var39         | 1.0000                                      | 0.956           | 0.953       | 0.958       |  |  |  |  |
| var40         | 1.0000                                      | 0.987           | 0.983       | 0.991       |  |  |  |  |





The LOGISTIC Procedure



| Partition for the Hosmer and Lemeshow Test |       |          |          |          |          |  |  |  |  |
|--|-------|----------|----------|----------|----------|--|--|--|--|
|  |       | dv       | = 1      | dv       | = 0      |  |  |  |  |
| Group                                      | Total | Observed | Expected | Observed | Expected |  |  |  |  |
| 1  | 4046  | 6        | 9.38     | 4040     | 4036.62  |  |  |  |  |
| 2  | 4046  | 18       | 27.36    | 4028     | 4018.64  |  |  |  |  |
| 3  | 4046  | 19       | 45.68    | 4027     | 4000.32  |  |  |  |  |
| 4  | 4046  | 39       | 69.76    | 4007     | 3976.24  |  |  |  |  |
| 5  | 4046  | 108      | 115.83   | 3938     | 3930.17  |  |  |  |  |
| 6  | 4047  | 251      | 217.67   | 3796     | 3829.33  |  |  |  |  |
| 7  | 4046  | 475      | 447.84   | 3571     | 3598.16  |  |  |  |  |
| 8  | 4046  | 1154     | 1017.09  | 2892     | 3028.91  |  |  |  |  |
| 9  | 4046  | 2128     | 2220.61  | 1918     | 1825.39  |  |  |  |  |
| 10   | 4044  | 3540     | 3566.85  | 504      | 477.15   |  |  |  |  |

| Hosmer and Lemeshow Goodness-of-Fit |    |            |  |  |  |
|-------------------------------------|----|------------|--|--|--|
| Test                                |    |            |  |  |  |
| Chi-Square                          | DF | Pr > ChiSq |  |  |  |
| 76.6903                             | 8  | <.0001     |  |  |  |

| Classification Table |       |       |       |       |         |        |           |       |       |
|----------------------|-------|-------|-------|-------|---------|--------|-----------|-------|-------|
|                      | Cor   | rect  | Inco  | rrect |         | Pei    | rcentages | 6     |       |
| Prob                 |       | Non-  |       | Non-  |         | Sensi- | Speci-    | False | False |
| Level                | Event | Event | Event | Event | Correct | tivity | ficity    | POS   | NEG   |
| 0.000                | 7738  | 0     | 32721 | 0     | 19.1    | 100.0  | 0.0       | 80.9  |       |
| 0.020                | 7668  | 15484 | 17237 | 70    | 57.2    | 99.1   | 47.3      | 69.2  | 0.5   |
| 0.040                | 7532  | 20402 | 12319 | 206   | 69.0    | 97.3   | 62.4      | 62.1  | 1.0   |
| 0.060                | 7405  | 22696 | 10025 | 333   | 74.4    | 95.7   | 69.4      | 57.5  | 1.4   |
| 0.080                | 7267  | 24238 | 8483  | 471   | 77.9    | 93.9   | 74.1      | 53.9  | 1.9   |
| 0.100                | 7158  | 25386 | 7335  | 580   | 80.4    | 92.5   | 77.6      | 50.6  | 2.2   |
| 0.120                | 7036  | 26185 | 6536  | 702   | 82.1    | 90.9   | 80.0      | 48.2  | 2.6   |
| 0.140                | 6940  | 26826 | 5895  | 798   | 83.5    | 89.7   | 82.0      | 45.9  | 2.9   |
| 0.160                | 6826  | 27348 | 5373  | 912   | 84.5    | 88.2   | 83.6      | 44.0  | 3.2   |
| 0.180                | 6713  | 27840 | 4881  | 1025  | 85.4    | 86.8   | 85.1      | 42.1  | 3.6   |
| 0.200                | 6610  | 28258 | 4463  | 1128  | 86.2    | 85.4   | 86.4      | 40.3  | 3.8   |
| 0.220                | 6501  | 28615 | 4106  | 1237  | 86.8    | 84.0   | 87.5      | 38.7  | 4.1   |
| 0.240                | 6395  | 28934 | 3787  | 1343  | 87.3    | 82.6   | 88.4      | 37.2  | 4.4   |
| 0.260                | 6267  | 29204 | 3517  | 1471  | 87.7    | 81.0   | 89.3      | 35.9  | 4.8   |
| 0.280                | 6165  | 29455 | 3266  | 1573  | 88.0    | 79.7   | 90.0      | 34.6  | 5.1   |
| 0.300                | 6072  | 29694 | 3027  | 1666  | 88.4    | 78.5   | 90.7      | 33.3  | 5.3   |
| 0.320                | 5960  | 29881 | 2840  | 1778  | 88.6    | 77.0   | 91.3      | 32.3  | 5.6   |
| 0.340                | 5857  | 30053 | 2668  | 1881  | 88.88   | 75.7   | 91.8      | 31.3  | 5.9   |
| 0.360                | 5762  | 30189 | 2532  | 1976  | 88.9    | 74.5   | 92.3      | 30.5  | 6.1   |
| 0.380                | 5632  | 30342 | 2379  | 2106  | 88.9    | 72.8   | 92.7      | 29.7  | 6.5   |
| 0.400                | 5534  | 30531 | 2190  | 2204  | 89.1    | 71.5   | 93.3      | 28.4  | 6.7   |
| 0.420                | 5433  | 30679 | 2042  | 2305  | 89.3    | 70.2   | 93.8      | 27.3  | 7.0   |
| 0.440                | 5342  | 30810 | 1911  | 2396  | 89.4    | 69.0   | 94.2      | 26.3  | 7.2   |
| 0.460                | 5241  | 30944 | 1777  | 2497  | 89.4    | 67.7   | 94.6      | 25.3  | 7.5   |
| 0.480                | 5134  | 31053 | 1668  | 2604  | 89.4    | 66.3   | 94.9      | 24.5  | 7.7   |
| 0.500                | 5018  | 31183 | 1538  | 2720  | 89.5    | 64.8   | 95.3      | 23.5  | 8.0   |
| 0.520                | 4891  | 31285 | 1436  | 2847  | 89.4    | 63.2   | 95.6      | 22.7  | 8.3   |
| 0.540                | 4784  | 31392 | 1329  | 2954  | 89.4    | 61.8   | 95.9      | 21.7  | 8.6   |
| 0.560                | 4676  | 31487 | 1234  | 3062  | 89.4    | 60.4   | 96.2      | 20.9  | 8.9   |
| 0.580                | 4550  | 31579 | 1142  | 3188  | 89.3    | 58.8   | 96.5      | 20.1  | 9.2   |
| 0.600                | 4430  | 31674 | 1047  | 3308  | 89.2    | 57.2   | 96.8      | 19.1  | 9.5   |
| 0.620                | 4327  | 31749 | 972   | 3411  | 89.2    | 55.9   | 97.0      | 18.3  | 9.7   |
| 0.640                |       | 31833 |       |       | 89.1    |        | 97.3      | 17.4  |       |
| 0.660                | 4075  | 31903 | 818   | 3663  | 88.9    | 52.7   | 97.5      | 16.7  | 10.3  |
| 0.680                | 3943  | 32005 | 716   | 3795  | 88.9    | 51.0   | 97.8      | 15.4  | 10.6  |
| 0.700                | 3800  | 32086 | 635   | 3938  | 88.7    | 49.1   | 98.1      | 14.3  | 10.9  |
| 0.720                | 3684  | 32158 | 563   | 4054  | 88.6    | 47.6   | 98.3      | 13.3  | 11.2  |
| 0.740                | 3532  | 32220 | 501   | 4206  | 88.4    | 45.6   | 98.5      | 12.4  | 11.5  |
| 0.760                | 3358  | 32275 | 446   | 4380  | 88.1    | 43.4   | 98.6      | 11.7  | 11.9  |
| 0.780                | 3189  | 32332 | 389   | 4549  | 87.8    | 41.2   | 98.8      | 10.9  | 12.3  |
| 0.800                | 2987  | 32382 | 339   | 4751  | 87.4    | 38.6   | 99.0      | 10.2  | 12.8  |

The LOGISTIC Procedure

| Classification Table |         |       |           |       |             |        |        |       |       |
|----------------------|---------|-------|-----------|-------|-------------|--------|--------|-------|-------|
|                      | Correct |       | Incorrect |       | Percentages |        |        |       |       |
| Prob                 |         | Non-  |           | Non-  |             | Sensi- | Speci- | False | False |
| Level                | Event   | Event | Event     | Event | Correct     | tivity | ficity | POS   | NEG   |
| 0.820                | 2791    | 32447 | 274       | 4947  | 87.1        | 36.1   | 99.2   | 8.9   | 13.2  |
| 0.840                | 2570    | 32502 | 219       | 5168  | 86.7        | 33.2   | 99.3   | 7.9   | 13.7  |
| 0.860                | 2342    | 32545 | 176       | 5396  | 86.2        | 30.3   | 99.5   | 7.0   | 14.2  |
| 0.880                | 2081    | 32588 | 133       | 5657  | 85.7        | 26.9   | 99.6   | 6.0   | 14.8  |
| 0.900                | 1793    | 32632 | 89        | 5945  | 85.1        | 23.2   | 99.7   | 4.7   | 15.4  |
| 0.920                | 1475    | 32658 | 63        | 6263  | 84.4        | 19.1   | 99.8   | 4.1   | 16.1  |
| 0.940                | 1108    | 32686 | 35        | 6630  | 83.5        | 14.3   | 99.9   | 3.1   | 16.9  |
| 0.960                | 645     | 32706 | 15        | 7093  | 82.4        | 8.3    | 100.0  | 2.3   | 17.8  |
| 0.980                | 183     | 32718 | 3         | 7555  | 81.3        | 2.4    | 100.0  | 1.6   | 18.8  |
| 1.000                | 0       | 32721 | 0         | 7738  | 80.9        | 0.0    | 100.0  |       | 19.1  |

