## The LOGISTIC Procedure

| Model Information | |
|---|---|
| Data Set | WORK.TRAINSET |
| Response Variable | TARGET1 |
| Number of Response Levels | 2 |
| Model | binary logit |
| Optimization Technique | Fisher's scoring |

| Number of Observations Read | 53414 |
|---|---|
| Number of Observations Used | 53414 |

| Response Profile | | |
|---|---|---|
| Ordered Value | TARGET1 | Total Frequency |
| 1 | 0 | 45757 |
| 2 | 1 | 7657 |

Probability modeled is TARGET1='1'.

| Class Level Information | | |
|---|---|---|
| Class | Value | Design Variables |
| 출산여부_6개월내 | N | 1 |
| | Y | −1 |
| 농가구분 | 농가소 | −1 |
| | 우시장 | 1 |

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

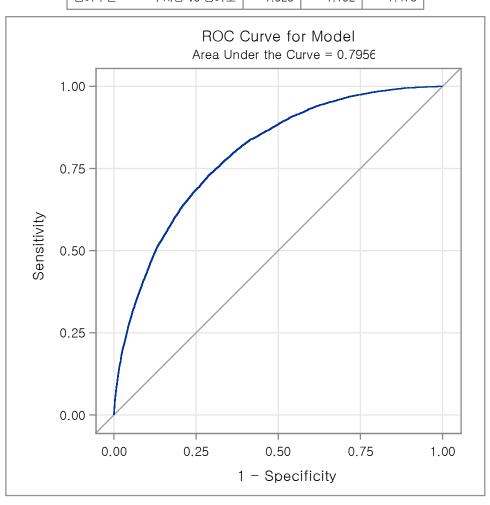| Model Fit Statistics | | |
|---|---|---|
| Criterion | Intercept Only | Intercept and Covariates |
| AIC | 43908.507 | 36015.783 |
| SC | 43917.392 | 36157.957 |
| −2 Log L | 43906.507 | 35983.783 |

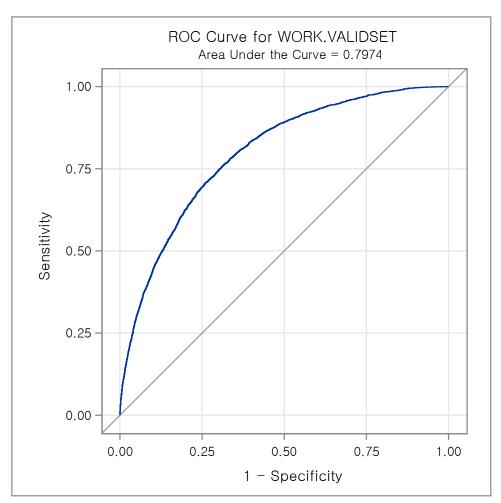| Testing Global Null Hypothesis: BETA=0 | | | |
|---|---|---|---|
| Test | Chi-Square | DF | Pr > ChiSq |
| Likelihood Ratio | 7922.7232 | 15 | <.0001 |
| Score | 7112.4093 | 15 | <.0001 |
| Wald | 5850.9844 | 15 | <.0001 |

## The LOGISTIC Procedure

| Type 3 Analysis of Effects | | | |
|---|---|---|---|
| Effect | DF | Wald Chi-Square | Pr > ChiSq |
| 개월령 | 1 | 0.1113 | 0.7386 |
| 생시체중 | 1 | 13.8813 | 0.0002 |
| 근내평균 | 1 | 18.1268 | <.0001 |
| 도체범위근내평균 | 1 | 654.5418 | <.0001 |
| 체고 | 1 | 2.6025 | 0.1067 |
| 체장 | 1 | 1.3339 | 0.2481 |
| 형매도축수 | 1 | 0.8591 | 0.3540 |
| 형매도체평균 | 1 | 6.4501 | 0.0111 |
| 형매근내평균 | 1 | 3.6280 | 0.0568 |
| 형매근내평균가산 | 1 | 20.8338 | <.0001 |
| 출산여부_6개월내 | 1 | 140.0836 | <.0001 |
| 농가근내평균 | 1 | 3.0748 | 0.0795 |
| 농가근내평균가산 | 1 | 345.3397 | <.0001 |
| 근내EPD | 1 | 76.3839 | <.0001 |
| 농가구분 | 1 | 27.3644 | <.0001 |

| Analysis of Maximum Likelihood Estimates | | | | | | |
|---|---|---|---|---|---|---|
| Parameter | | DF | Estimate | Standard Error | Wald Chi-Square | Pr > ChiSq |
| Intercept | | 1 | -6.2053 | 0.7667 | 65.5005 | <.0001 |
| 개월령 | | 1 | -0.00064 | 0.00192 | 0.1113 | 0.7386 |
| 생시체중 | | 1 | 0.000848 | 0.000228 | 13.8813 | 0.0002 |
| 근내평균 | | 1 | 0.1639 | 0.0385 | 18.1268 | <.0001 |
| 도체범위근내평균 | | 1 | 0.7457 | 0.0291 | 654.5418 | <.0001 |
| 체고 | | 1 | -0.0124 | 0.00768 | 2.6025 | 0.1067 |
| 체장 | | 1 | 0.00453 | 0.00392 | 1.3339 | 0.2481 |
| 형매도축수 | | 1 | -0.0174 | 0.0188 | 0.8591 | 0.3540 |
| 형매도체평균 | | 1 | -0.00157 | 0.000618 | 6.4501 | 0.0111 |
| 형매근내평균 | | 1 | 0.0894 | 0.0469 | 3.6280 | 0.0568 |
| 형매근내평균가산 | | 1 | 0.2261 | 0.0495 | 20.8338 | <.0001 |
| 출산여부_6개월내 | N | 1 | 0.1975 | 0.0167 | 140.0836 | <.0001 |
| 농가근내평균 | | 1 | 0.0364 | 0.0208 | 3.0748 | 0.0795 |
| 농가근내평균가산 | | 1 | 0.4706 | 0.0253 | 345.3397 | <.0001 |
| 근내EPD | | 1 | 0.6127 | 0.0701 | 76.3839 | <.0001 |
| 농가구분 | 우시장 | 1 | 0.1408 | 0.0269 | 27.3644 | <.0001 |

## The LOGISTIC Procedure

| Odds Ratio Estimates | | | |
|---|---|---|---|
| Effect | Point Estimate | 95% Wald Confidence Limits | |
| 개월령 | 0.999 | 0.996 | 1.003 |
| 생시체중 | 1.001 | 1.000 | 1.001 |
| 근내평균 | 1.178 | 1.092 | 1.270 |
| 도체범위근내평균 | 2.108 | 1.991 | 2.232 |
| 체고 | 0.988 | 0.973 | 1.003 |
| 체장 | 1.005 | 0.997 | 1.012 |
| 형매도축수 | 0.983 | 0.947 | 1.020 |
| 형매도체평균 | 0.998 | 0.997 | 1.000 |
| 형매근내평균 | 1.093 | 0.997 | 1.199 |
| 형매근내평균가산 | 1.254 | 1.138 | 1.382 |
| 출산여부_6개월내 N vs Y | 1.484 | 1.390 | 1.585 |
| 농가근내평균 | 1.037 | 0.996 | 1.080 |
| 농가근내평균가산 | 1.601 | 1.523 | 1.682 |
| 근내EPD | 1.845 | 1.609 | 2.117 |
| 농가구분          우시장 vs 농가소 | 1.325 | 1.192 | 1.473 |



ROC Curve for Model
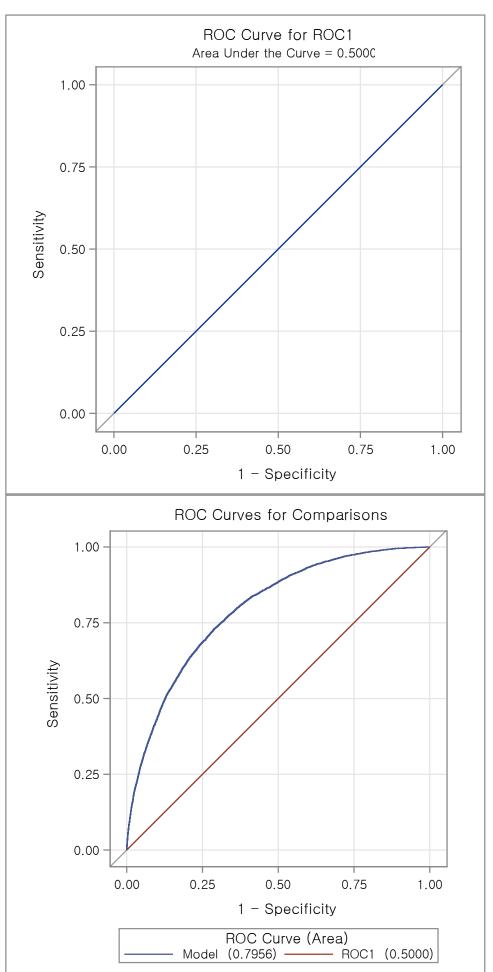Area Under the Curve = 0.7956

## The LOGISTIC Procedure

### ROC Curve for WORK.VALIDSET
#### Area Under the Curve = 0.7974



ROC Model: ROC1

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

| −2 Log L | = | 43906.507 |
| --- | --- | --- |

| Analysis of Maximum Likelihood Estimates | | | | | |
| --- | --- | --- | --- | --- | --- |
| Parameter | DF | Estimate | Standard Error | Wald Chi-Square | Pr > ChiSq |
| Intercept | 1 | −1.7877 | 0.0123 | 20963.4271 | <.0001 |

The LOGISTIC Procedure

ROC Model: ROC1



ROC Curve for ROC1
Area Under the Curve = 0.5000

ROC Curves for Comparisons

ROC Curve (Area)
Model (0.7956)          ROC1  (0.5000)

## The LOGISTIC Procedure

| ROC Association Statistics | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | Mann-Whitney | | | | | |
| ROC Model | Area | Standard Error | 95% Wald Confidence Limits | | Somers' D | Gamma | Tau-a |
| Model | 0.7956 | 0.00262 | 0.7905 | 0.8007 | 0.5912 | 0.5912 | 0.1452 |
| ROC1 | 0.5000 | 0 | 0.5000 | 0.5000 | 0 | . | 0 |

| ROC Contrast Test Results | | | |
|---|---|---|---|
| Contrast | DF | Chi-Square | Pr > ChiSq |
| Reference = Model | 1 | 12691.3395 | <.0001 |