

PROPORTIONAL ODDS MODEL**The LOGISTIC Procedure**

| <i>Model Information</i> | |
|----------------------------------|------------------|
| <i>Data Set</i> | WORK.ONE |
| <i>Response Variable</i> | bwt_class |
| <i>Number of Response Levels</i> | 4 |
| <i>Model</i> | cumulative logit |
| <i>Optimization Technique</i> | Fisher's scoring |

Number of Observations Read 189
Number of Observations Used 189

| <i>Response Profile</i> | | |
|-------------------------|------------------|------------------------|
| <i>Ordered Value</i> | <i>bwt_class</i> | <i>Total Frequency</i> |
| 1 | 1 | 59 |
| 2 | 2 | 38 |
| 3 | 3 | 46 |
| 4 | 4 | 46 |

Probabilities modeled are cumulated over the lower Ordered Values.

| <i>Model Convergence Status</i> |
|---|
| Convergence criterion (GCONV=1E-8) satisfied. |

| <i>Score Test for the Proportional Odds Assumption</i> | | |
|--|-----------|----------------------|
| <i>Chi-Square</i> | <i>DF</i> | <i>Pr > ChiSq</i> |
| 0.8794 | 2 | 0.6442 |

| <i>Model Fit Statistics</i> | | |
|-----------------------------|-----------------------|---------------------------------|
| <i>Criterion</i> | <i>Intercept Only</i> | <i>Intercept and Covariates</i> |
| AIC | 525.304 | 518.295 |
| SC | 535.030 | 531.262 |
| -2 Log L | 519.304 | 510.295 |

| <i>Testing Global Null Hypothesis: BETA=0</i> | | | |
|---|-------------------|-----------|----------------------|
| <i>Test</i> | <i>Chi-Square</i> | <i>DF</i> | <i>Pr > ChiSq</i> |
| <i>Likelihood Ratio</i> | 9.0090 | 1 | 0.0027 |
| <i>Score</i> | 9.2318 | 1 | 0.0024 |
| <i>Wald</i> | 8.2081 | 1 | 0.0042 |

PROPORTIONAL ODDS MODEL**The LOGISTIC Procedure***Analysis of Maximum Likelihood Estimates*

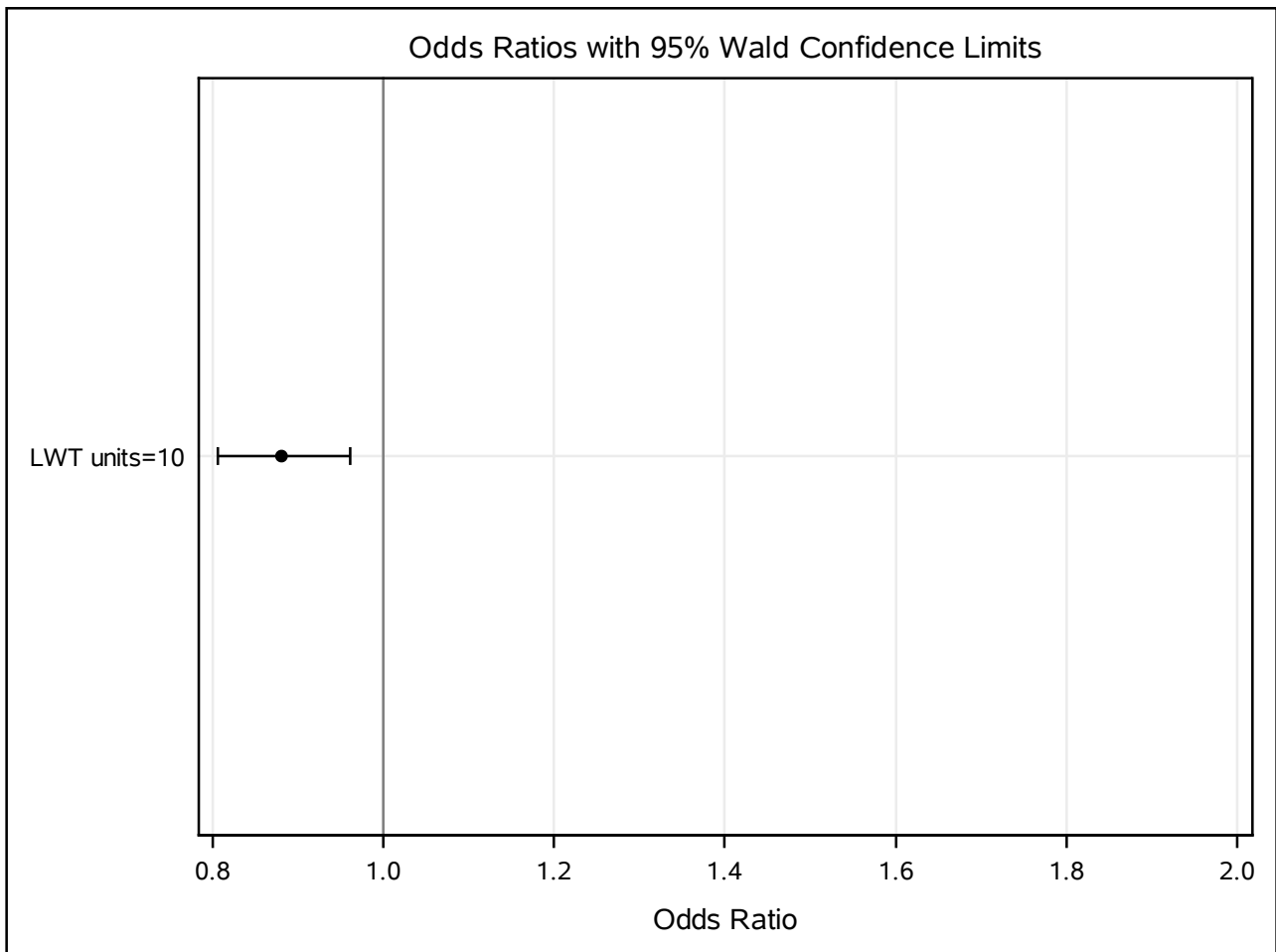
| <i>Parameter</i> | <i>DF</i> | <i>Estimate</i> | <i>Standard Error</i> | <i>Wald Chi-Square</i> | <i>Pr > ChiSq</i> |
|------------------|-----------|-----------------|-----------------------|------------------------|----------------------|
| <i>Intercept</i> | 1 | 0.8320 | 0.5857 | 2.0181 | 0.1554 |
| <i>Intercept</i> | 2 | 1.7073 | 0.5937 | 8.2707 | 0.0040 |
| <i>Intercept</i> | 3 | 2.8315 | 0.6176 | 21.0210 | <.0001 |
| <i>LWT</i> | 1 | -0.0127 | 0.00445 | 8.2081 | 0.0042 |

Association of Predicted Probabilities and Observed Responses

| | | | |
|---------------------------|-------|------------------|-------|
| <i>Percent Concordant</i> | 59.6 | <i>Somers' D</i> | 0.213 |
| <i>Percent Discordant</i> | 38.3 | <i>Gamma</i> | 0.218 |
| <i>Percent Tied</i> | 2.2 | <i>Tau-a</i> | 0.159 |
| <i>Pairs</i> | 13282 | <i>c</i> | 0.606 |

Odds Ratio Estimates and Wald Confidence Intervals

| <i>Effect</i> | <i>Unit</i> | <i>Estimate</i> | <i>95% Confidence Limits</i> | |
|---------------|-------------|-----------------|------------------------------|-------|
| <i>LWT</i> | 10.0000 | 0.880 | 0.807 | 0.961 |



PROPORTIONAL ODDS MODEL - REVERSE ORDER**The LOGISTIC Procedure**

| <i>Model Information</i> | |
|----------------------------------|------------------|
| <i>Data Set</i> | WORK.ONE |
| <i>Response Variable</i> | bwt_class |
| <i>Number of Response Levels</i> | 4 |
| <i>Model</i> | cumulative logit |
| <i>Optimization Technique</i> | Fisher's scoring |

| | |
|------------------------------------|-----|
| <i>Number of Observations Read</i> | 189 |
| <i>Number of Observations Used</i> | 189 |

| <i>Response Profile</i> | | |
|-------------------------|------------------|------------------------|
| <i>Ordered Value</i> | <i>bwt_class</i> | <i>Total Frequency</i> |
| 1 | 4 | 46 |
| 2 | 3 | 46 |
| 3 | 2 | 38 |
| 4 | 1 | 59 |

Probabilities modeled are cumulated over the lower Ordered Values.

| <i>Model Convergence Status</i> |
|---|
| Convergence criterion (GCONV=1E-8) satisfied. |

| <i>Score Test for the Proportional Odds Assumption</i> | | |
|--|-----------|----------------------|
| <i>Chi-Square</i> | <i>DF</i> | <i>Pr > ChiSq</i> |
| 0.8794 | 2 | 0.6442 |

| <i>Model Fit Statistics</i> | | |
|-----------------------------|-----------------------|---------------------------------|
| <i>Criterion</i> | <i>Intercept Only</i> | <i>Intercept and Covariates</i> |
| AIC | 525.304 | 518.295 |
| SC | 535.030 | 531.262 |
| -2 Log L | 519.304 | 510.295 |

| <i>Testing Global Null Hypothesis: BETA=0</i> | | | |
|---|-------------------|-----------|----------------------|
| <i>Test</i> | <i>Chi-Square</i> | <i>DF</i> | <i>Pr > ChiSq</i> |
| <i>Likelihood Ratio</i> | 9.0090 | 1 | 0.0027 |
| <i>Score</i> | 9.2318 | 1 | 0.0024 |
| <i>Wald</i> | 8.2081 | 1 | 0.0042 |

PROPORTIONAL ODDS MODEL - REVERSE ORDER**The LOGISTIC Procedure***Analysis of Maximum Likelihood Estimates*

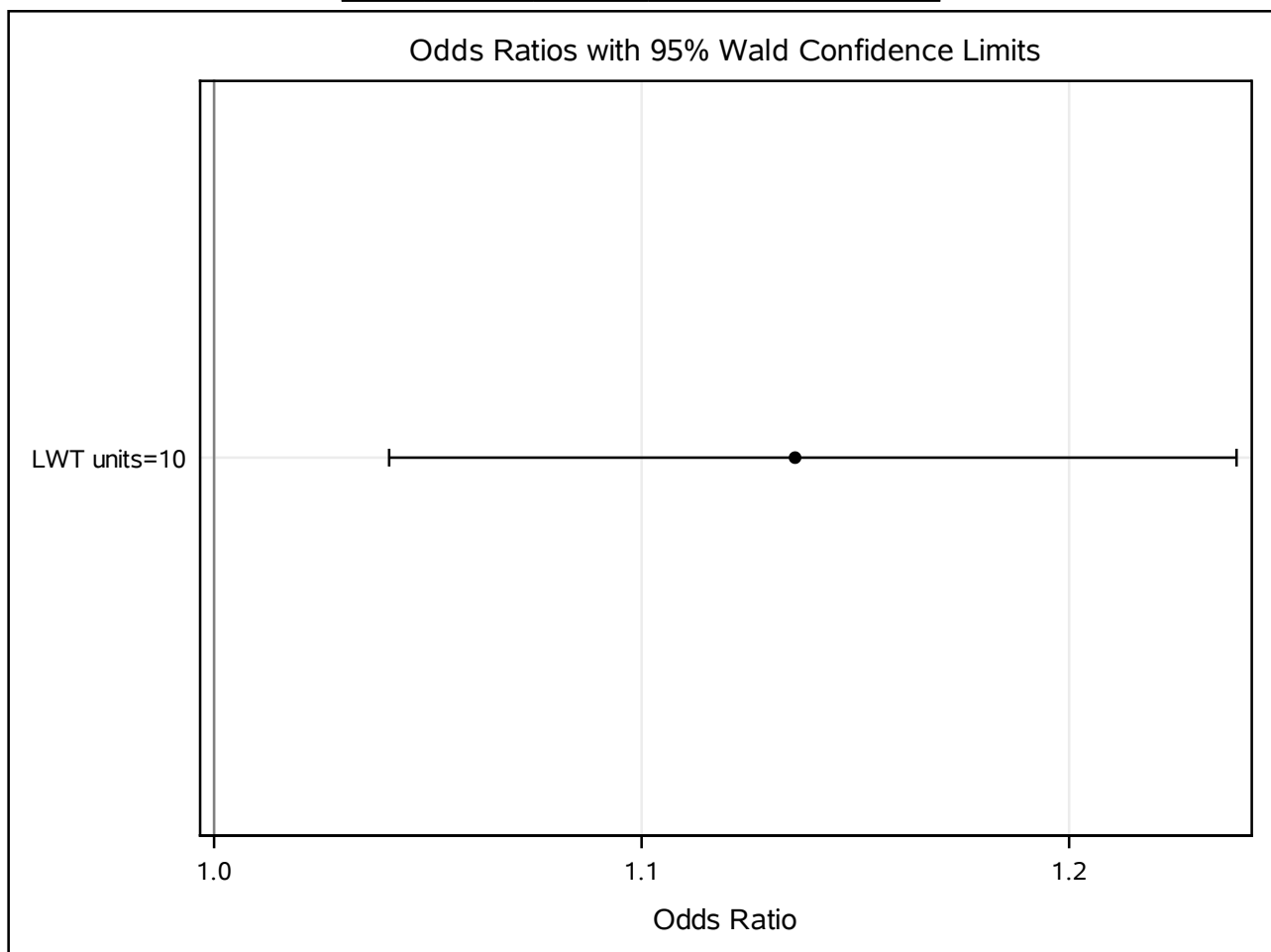
| Parameter | DF | Estimate | Standard Error | Wald Chi-Square | Pr > ChiSq |
|-----------|----|----------|----------------|-----------------|------------|
| Intercept | 4 | -2.8315 | 0.6176 | 21.0210 | <.0001 |
| Intercept | 3 | -1.7073 | 0.5937 | 8.2707 | 0.0040 |
| Intercept | 2 | -0.8320 | 0.5857 | 2.0181 | 0.1554 |
| LWT | 1 | 0.0127 | 0.00445 | 8.2081 | 0.0042 |

Association of Predicted Probabilities and Observed Responses

| | | | |
|--------------------|-------|-----------|-------|
| Percent Concordant | 59.6 | Somers' D | 0.213 |
| Percent Discordant | 38.3 | Gamma | 0.218 |
| Percent Tied | 2.2 | Tau-a | 0.159 |
| Pairs | 13282 | c | 0.606 |

Odds Ratio Estimates and Wald Confidence Intervals

| Effect | Unit | Estimate | 95% Confidence Limits | |
|--------|---------|----------|-----------------------|-------|
| LWT | 10.0000 | 1.136 | 1.041 | 1.239 |



PROPORTIONAL ODDS MODEL WITH CATEGORICAL PREDICTOR**The LOGISTIC Procedure**

| <i>Model Information</i> | |
|----------------------------------|------------------|
| <i>Data Set</i> | WORK.ONE |
| <i>Response Variable</i> | bwt_class |
| <i>Number of Response Levels</i> | 4 |
| <i>Model</i> | cumulative logit |
| <i>Optimization Technique</i> | Fisher's scoring |

| | |
|------------------------------------|-----|
| <i>Number of Observations Read</i> | 189 |
| <i>Number of Observations Used</i> | 189 |

| <i>Response Profile</i> | | |
|-------------------------|------------------|------------------------|
| <i>Ordered Value</i> | <i>bwt_class</i> | <i>Total Frequency</i> |
| 1 | 1 | 59 |
| 2 | 2 | 38 |
| 3 | 3 | 46 |
| 4 | 4 | 46 |

Probabilities modeled are cumulated over the lower Ordered Values.

| <i>Class Level Information</i> | | |
|--------------------------------|--------------|-------------------------|
| <i>Class</i> | <i>Value</i> | <i>Design Variables</i> |
| HT | 0 | 0 |
| | 1 | 1 |

| <i>Model Convergence Status</i> |
|---|
| Convergence criterion (GCONV=1E-8) satisfied. |

| <i>Score Test for the Proportional Odds Assumption</i> | | |
|--|-----------|----------------------|
| <i>Chi-Square</i> | <i>DF</i> | <i>Pr > ChiSq</i> |
| 4.5448 | 4 | 0.3373 |

| <i>Model Fit Statistics</i> | | |
|-----------------------------|-----------------------|---------------------------------|
| <i>Criterion</i> | <i>Intercept Only</i> | <i>Intercept and Covariates</i> |
| AIC | 525.304 | 516.558 |
| SC | 535.030 | 532.766 |
| -2 Log L | 519.304 | 506.558 |

| <i>Testing Global Null Hypothesis: BETA=0</i> | | | |
|---|-------------------|-----------|----------------------|
| <i>Test</i> | <i>Chi-Square</i> | <i>DF</i> | <i>Pr > ChiSq</i> |
| <i>Likelihood Ratio</i> | 12.7468 | 2 | 0.0017 |
| <i>Score</i> | 13.5914 | 2 | 0.0011 |
| <i>Wald</i> | 10.9545 | 2 | 0.0042 |

PROPORTIONAL ODDS MODEL WITH CATEGORICAL PREDICTOR**The LOGISTIC Procedure**

Type 3 Analysis of Effects

| <i>Effect</i> | <i>DF</i> | <i>Wald</i> | |
|---------------|-----------|-------------------|----------------------|
| | | <i>Chi-Square</i> | <i>Pr > ChiSq</i> |
| <i>LWT</i> | 1 | 9.5417 | 0.0020 |
| <i>HT</i> | 1 | 3.9716 | 0.0463 |

Analysis of Maximum Likelihood Estimates

| <i>Parameter</i> | <i>DF</i> | <i>Estimate</i> | <i>Standard Error</i> | <i>Wald</i> | |
|------------------|-----------|-----------------|-----------------------|-------------------|----------------------|
| | | | | <i>Chi-Square</i> | <i>Pr > ChiSq</i> |
| <i>Intercept</i> | 1 | 0.9535 | 0.5981 | 2.5413 | 0.1109 |
| <i>Intercept</i> | 2 | 1.8479 | 0.6072 | 9.2616 | 0.0023 |
| <i>Intercept</i> | 3 | 2.9791 | 0.6316 | 22.2511 | <.0001 |
| <i>LWT</i> | 1 | -0.0143 | 0.00462 | 9.5417 | 0.0020 |
| <i>HT</i> | 1 | 1.1663 | 0.5852 | 3.9716 | 0.0463 |

Association of Predicted Probabilities and Observed Responses

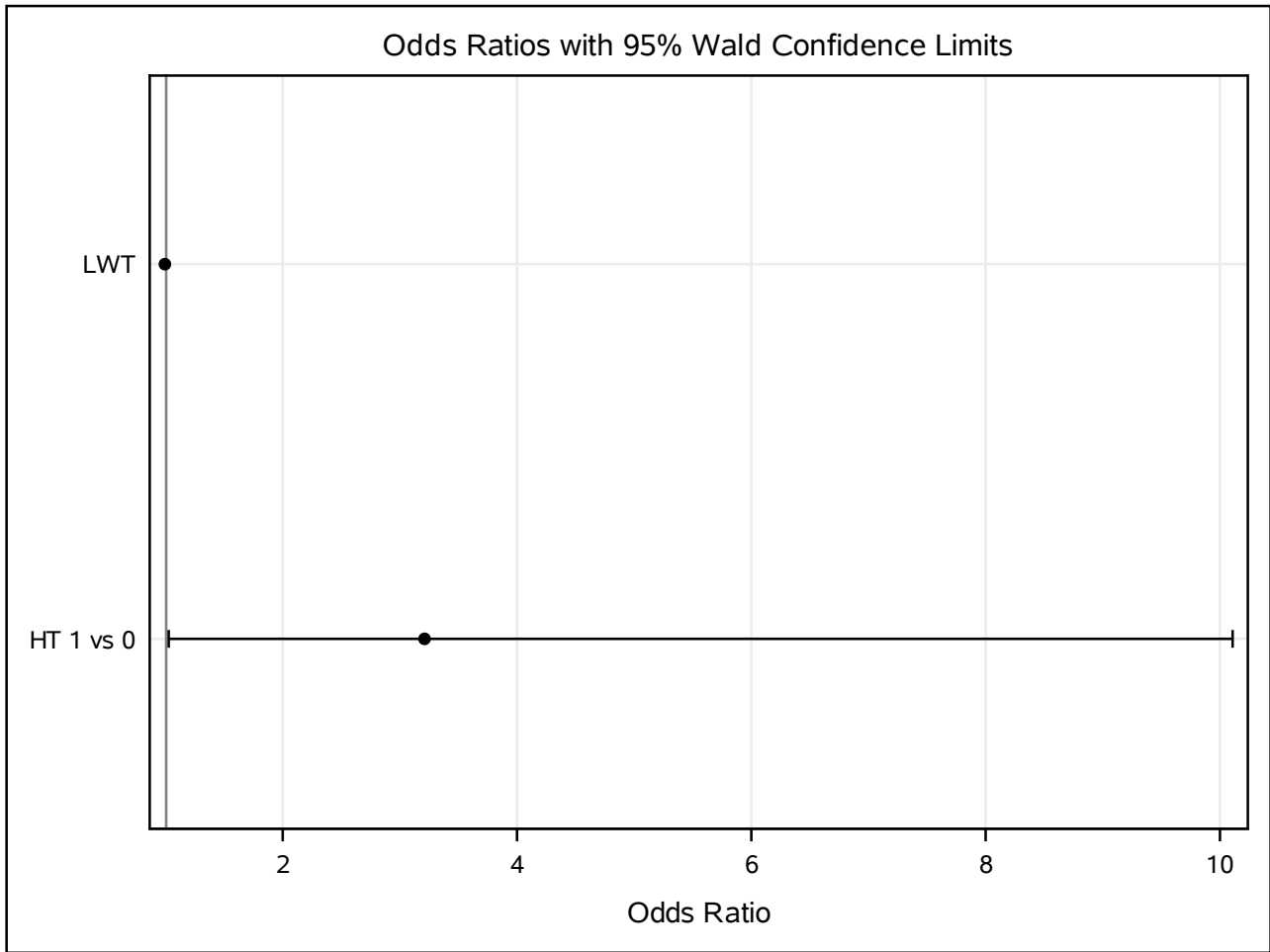
| | | | |
|---------------------------|-------|------------------|-------|
| <i>Percent Concordant</i> | 62.7 | <i>Somers' D</i> | 0.273 |
| <i>Percent Discordant</i> | 35.4 | <i>Gamma</i> | 0.278 |
| <i>Percent Tied</i> | 2.0 | <i>Tau-a</i> | 0.204 |
| <i>Pairs</i> | 13282 | <i>c</i> | 0.637 |

Odds Ratio Estimates and Wald Confidence Intervals

| <i>Effect</i> | <i>Unit</i> | <i>Estimate</i> | <i>95% Confidence Limits</i> | |
|------------------|-------------|-----------------|------------------------------|--------|
| <i>LWT</i> | 1.0000 | 0.986 | 0.977 | 0.995 |
| <i>HT 1 vs 0</i> | 1.0000 | 3.210 | 1.019 | 10.109 |

PROPORTIONAL ODDS MODEL WITH CATEGORICAL PREDICTOR

The LOGISTIC Procedure



CUMULATIVE LOGIT MODEL - UNEQUAL SLOPES**The LOGISTIC Procedure**

| <i>Model Information</i> | |
|----------------------------------|---|
| <i>Data Set</i> | WORK.ONE |
| <i>Response Variable</i> | bwt_class |
| <i>Number of Response Levels</i> | 4 |
| <i>Model</i> | cumulative logit non-proportional odds |
| <i>Optimization Technique</i> | Newton-Raphson |

| | |
|------------------------------------|-----|
| <i>Number of Observations Read</i> | 189 |
| <i>Number of Observations Used</i> | 189 |

| <i>Response Profile</i> | | |
|-------------------------|------------------|------------------------|
| <i>Ordered Value</i> | <i>bwt_class</i> | <i>Total Frequency</i> |
| 1 | 1 | 59 |
| 2 | 2 | 38 |
| 3 | 3 | 46 |
| 4 | 4 | 46 |

Probabilities modeled are cumulated over the lower Ordered Values.

| <i>Class Level Information</i> | | |
|--------------------------------|--------------|-------------------------|
| <i>Class</i> | <i>Value</i> | <i>Design Variables</i> |
| HT | 0 | 0 |
| | 1 | 1 |

Warning: The LOGISTIC procedure continues in spite of the above warning. Results shown are based on the last maximum likelihood iteration. Validity of the model fit is questionable.

| <i>Model Convergence Status</i> |
|--|
| Convergence criterion (ABSXCONV=1E-8) satisfied. |

| <i>Model Fit Statistics</i> | | |
|-----------------------------|-----------------------|---------------------------------|
| <i>Criterion</i> | <i>Intercept Only</i> | <i>Intercept and Covariates</i> |
| AIC | 525.304 | 521.042 |
| SC | 535.030 | 550.218 |
| -2 Log L | 519.304 | 503.042 |

| <i>Testing Global Null Hypothesis: BETA=0</i> | | | |
|---|-------------------|-----------|----------------------|
| <i>Test</i> | <i>Chi-Square</i> | <i>DF</i> | <i>Pr > ChiSq</i> |
| <i>Likelihood Ratio</i> | 16.2625 | 6 | 0.0124 |
| <i>Score</i> | 17.2166 | 6 | 0.0085 |
| <i>Wald</i> | 15.9502 | 6 | 0.0140 |

CUMULATIVE LOGIT MODEL - UNEQUAL SLOPES**The LOGISTIC Procedure**

| <i>Type 3 Analysis of Effects</i> | | | |
|-----------------------------------|-----------|------------------------|----------------------|
| <i>Effect</i> | <i>DF</i> | <i>Wald Chi-Square</i> | <i>Pr > ChiSq</i> |
| LWT | 3 | 10.1228 | 0.0176 |
| HT | 3 | 7.5305 | 0.0568 |

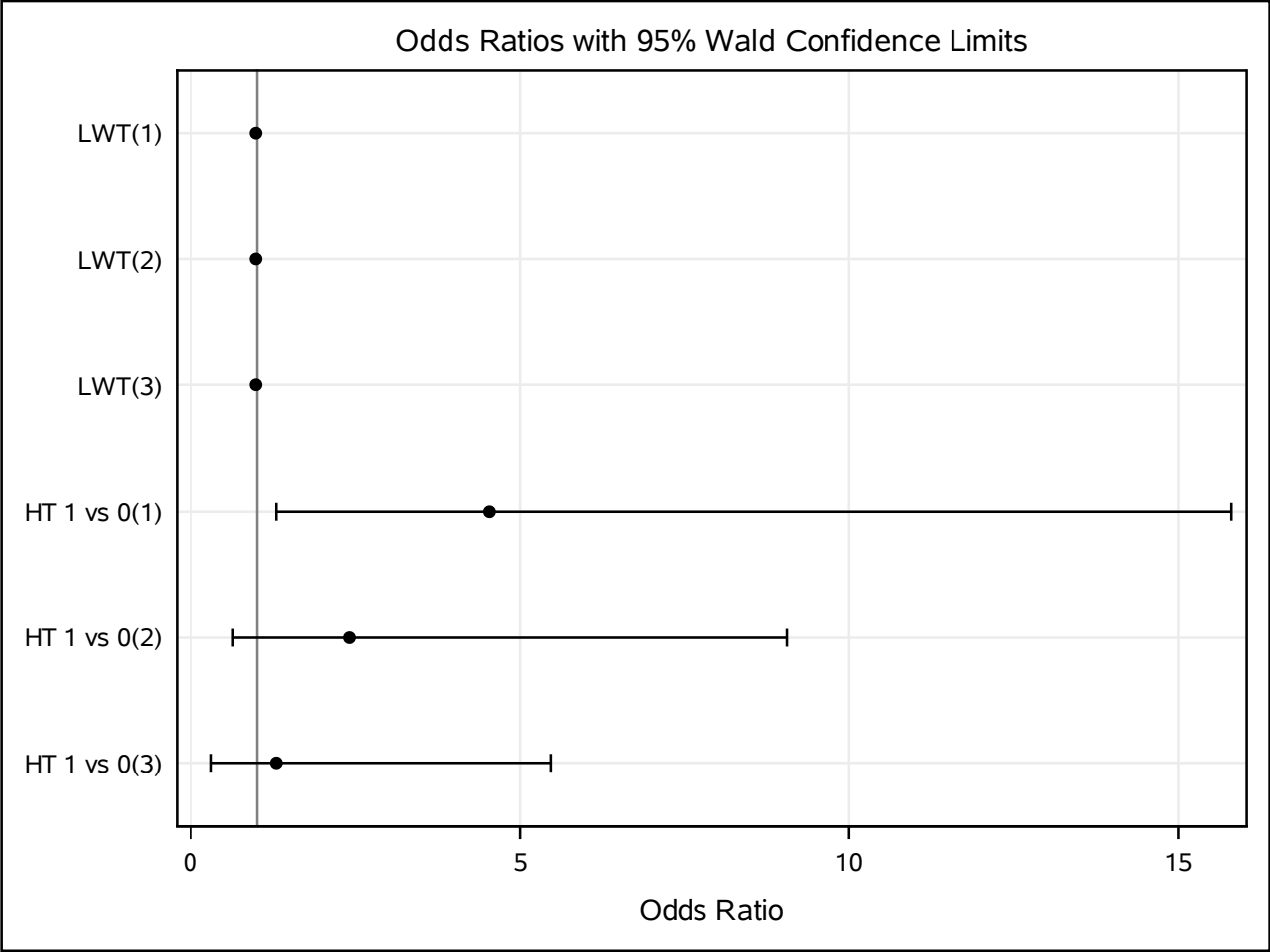
| <i>Analysis of Maximum Likelihood Estimates</i> | | | | | | |
|---|------------------|-----------|-----------------|-----------------------|------------------------|----------------------|
| <i>Parameter</i> | <i>bwt_class</i> | <i>DF</i> | <i>Estimate</i> | <i>Standard Error</i> | <i>Wald Chi-Square</i> | <i>Pr > ChiSq</i> |
| Intercept | 1 | 1 | 0.8120 | 0.7721 | 1.1061 | 0.2929 |
| Intercept | 2 | 1 | 2.1004 | 0.6867 | 9.3549 | 0.0022 |
| Intercept | 3 | 1 | 2.6942 | 0.7299 | 13.6251 | 0.0002 |
| LWT | 1 | 1 | -0.0134 | 0.00608 | 4.8434 | 0.0278 |
| LWT | 2 | 1 | -0.0162 | 0.00523 | 9.5891 | 0.0020 |
| LWT | 3 | 1 | -0.0119 | 0.00533 | 4.9756 | 0.0257 |
| HT | 1 1 | 1 | 1.5103 | 0.6377 | 5.6082 | 0.0179 |
| HT | 1 2 | 1 | 0.8790 | 0.6755 | 1.6932 | 0.1932 |
| HT | 1 3 | 1 | 0.2614 | 0.7331 | 0.1271 | 0.7215 |

| <i>Association of Predicted Probabilities and Observed Responses</i> | | | |
|--|-------|------------------|-------|
| <i>Percent Concordant</i> | 62.7 | <i>Somers' D</i> | 0.273 |
| <i>Percent Discordant</i> | 35.4 | <i>Gamma</i> | 0.278 |
| <i>Percent Tied</i> | 2.0 | <i>Tau-a</i> | 0.204 |
| <i>Pairs</i> | 13282 | <i>c</i> | 0.636 |

| <i>Odds Ratio Estimates and Wald Confidence Intervals</i> | | | | | |
|---|------------------|-------------|-----------------|------------------------------|--------|
| <i>Effect</i> | <i>bwt_class</i> | <i>Unit</i> | <i>Estimate</i> | <i>95% Confidence Limits</i> | |
| LWT | 1 | 1.0000 | 0.987 | 0.975 | 0.999 |
| LWT | 2 | 1.0000 | 0.984 | 0.974 | 0.994 |
| LWT | 3 | 1.0000 | 0.988 | 0.978 | 0.999 |
| HT 1 vs 0 | 1 | 1.0000 | 4.528 | 1.297 | 15.803 |
| HT 1 vs 0 | 2 | 1.0000 | 2.408 | 0.641 | 9.052 |
| HT 1 vs 0 | 3 | 1.0000 | 1.299 | 0.309 | 5.464 |

CUMULATIVE LOGIT MODEL - UNEQUAL SLOPES

The LOGISTIC Procedure



PARTIAL PROPORTIONAL ODDS MODEL WITH TESTS FOR EQUALITY OF SLOPES**The LOGISTIC Procedure**

| <i>Model Information</i> | |
|----------------------------------|---|
| <i>Data Set</i> | WORK.ONE |
| <i>Response Variable</i> | bwt_class |
| <i>Number of Response Levels</i> | 4 |
| <i>Model</i> | cumulative logit partial proportional odds |
| <i>Optimization Technique</i> | Newton-Raphson |

| | |
|------------------------------------|-----|
| <i>Number of Observations Read</i> | 189 |
| <i>Number of Observations Used</i> | 189 |

| <i>Response Profile</i> | | |
|-------------------------|------------------|------------------------|
| <i>Ordered Value</i> | <i>bwt_class</i> | <i>Total Frequency</i> |
| 1 | 1 | 59 |
| 2 | 2 | 38 |
| 3 | 3 | 46 |
| 4 | 4 | 46 |

Probabilities modeled are cumulated over the lower Ordered Values.

| <i>Class Level Information</i> | | |
|--------------------------------|--------------|-------------------------|
| <i>Class</i> | <i>Value</i> | <i>Design Variables</i> |
| HT | 0 | 0 |
| | 1 | 1 |

| <i>Model Convergence Status</i> |
|---|
| Convergence criterion (GCONV=1E-8) satisfied. |

| <i>Model Fit Statistics</i> | | |
|-----------------------------|-----------------------|---------------------------------|
| <i>Criterion</i> | <i>Intercept Only</i> | <i>Intercept and Covariates</i> |
| AIC | 525.304 | 518.004 |
| SC | 535.030 | 540.696 |
| -2 Log L | 519.304 | 504.004 |

| <i>Testing Global Null Hypothesis: BETA=0</i> | | | |
|---|-------------------|-----------|----------------------|
| <i>Test</i> | <i>Chi-Square</i> | <i>DF</i> | <i>Pr > ChiSq</i> |
| <i>Likelihood Ratio</i> | 15.3005 | 4 | 0.0041 |
| <i>Score</i> | 16.5312 | 4 | 0.0024 |
| <i>Wald</i> | 15.3267 | 4 | 0.0041 |

PARTIAL PROPORTIONAL ODDS MODEL WITH TESTS FOR EQUALITY OF SLOPES**The LOGISTIC Procedure**

| <i>Type 3 Analysis of Effects</i> | | | |
|-----------------------------------|-----------|------------------------|----------------------|
| <i>Effect</i> | <i>DF</i> | <i>Wald Chi-Square</i> | <i>Pr > ChiSq</i> |
| LWT | 1 | 9.4897 | 0.0021 |
| HT | 3 | 7.3305 | 0.0621 |

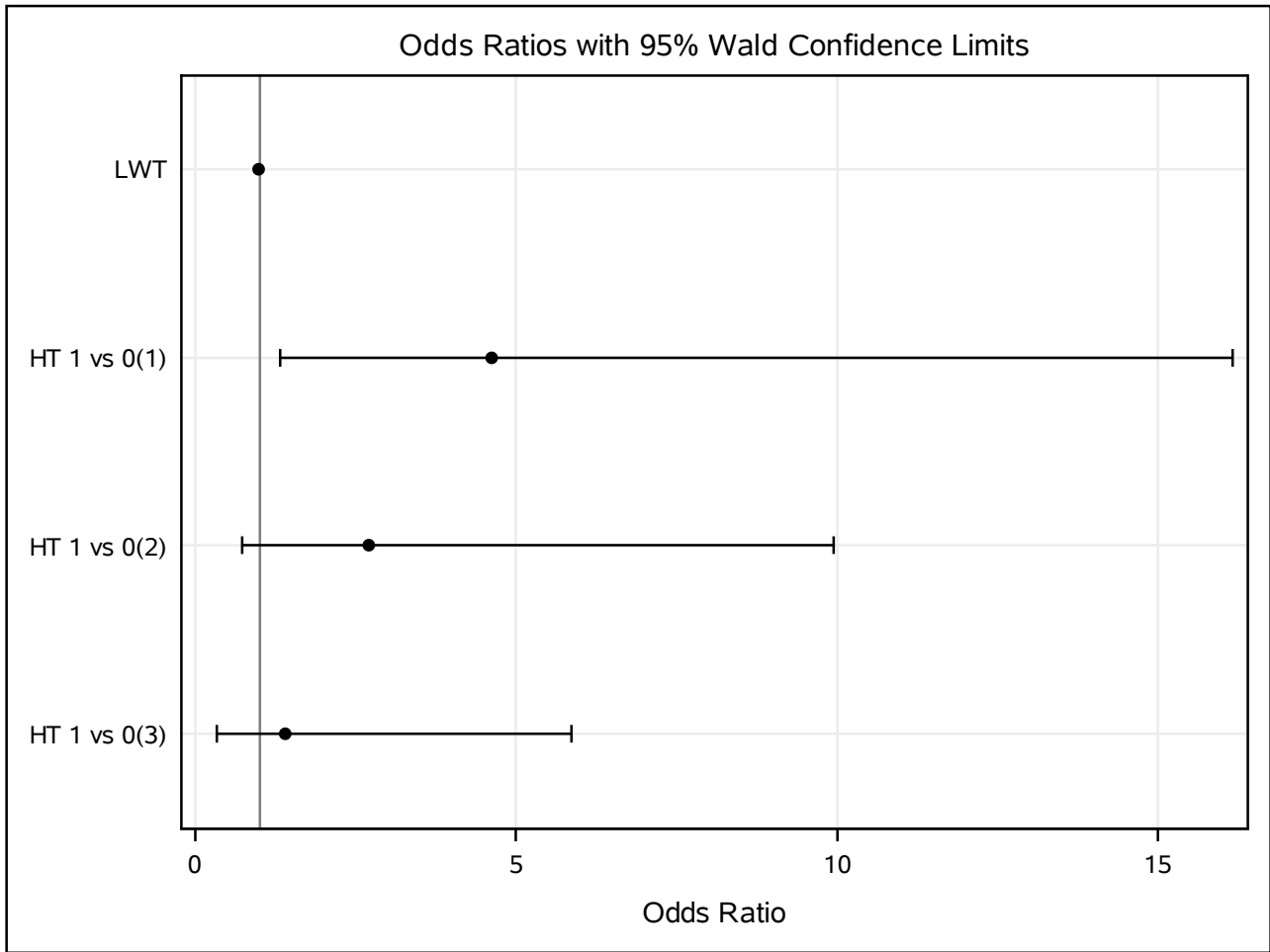
| <i>Analysis of Maximum Likelihood Estimates</i> | | | | | | |
|---|------------------|-----------|-----------------|-----------------------|------------------------|----------------------|
| <i>Parameter</i> | <i>bwt_class</i> | <i>DF</i> | <i>Estimate</i> | <i>Standard Error</i> | <i>Wald Chi-Square</i> | <i>Pr > ChiSq</i> |
| Intercept | 1 | 1 | 0.8538 | 0.5817 | 2.1543 | 0.1422 |
| Intercept | 2 | 1 | 1.7807 | 0.5918 | 9.0524 | 0.0026 |
| Intercept | 3 | 1 | 2.9439 | 0.6146 | 22.9426 | <.0001 |
| LWT | | 1 | -0.0137 | 0.00445 | 9.4897 | 0.0021 |
| HT | 1 1 | 1 | 1.5289 | 0.6396 | 5.7137 | 0.0168 |
| HT | 1 2 | 1 | 0.9928 | 0.6658 | 2.2236 | 0.1359 |
| HT | 1 3 | 1 | 0.3344 | 0.7325 | 0.2084 | 0.6480 |

| <i>Association of Predicted Probabilities and Observed Responses</i> | | | |
|--|-------|------------------|-------|
| <i>Percent Concordant</i> | 62.8 | <i>Somers' D</i> | 0.275 |
| <i>Percent Discordant</i> | 35.3 | <i>Gamma</i> | 0.281 |
| <i>Percent Tied</i> | 2.0 | <i>Tau-a</i> | 0.206 |
| <i>Pairs</i> | 13282 | <i>c</i> | 0.638 |

| <i>Odds Ratio Estimates and Wald Confidence Intervals</i> | | | | | |
|---|------------------|-------------|-----------------|------------------------------|--------|
| <i>Effect</i> | <i>bwt_class</i> | <i>Unit</i> | <i>Estimate</i> | <i>95% Confidence Limits</i> | |
| LWT | | 1.0000 | 0.986 | 0.978 | 0.995 |
| HT 1 vs 0 | 1 | 1.0000 | 4.613 | 1.317 | 16.160 |
| HT 1 vs 0 | 2 | 1.0000 | 2.699 | 0.732 | 9.952 |
| HT 1 vs 0 | 3 | 1.0000 | 1.397 | 0.332 | 5.872 |

PARTIAL PROPORTIONAL ODDS MODEL WITH TESTS FOR EQUALITY OF SLOPES

The LOGISTIC Procedure



Linear Hypotheses Testing Results

| <i>Label</i> | <i>Wald Chi-Square</i> | <i>DF</i> | <i>Pr > ChiSq</i> |
|----------------------------|----------------------------|-----------|----------------------|
| <i>PropOdds_HT_bwt1VS2</i> | 1.7995 | 1 | 0.1798 |
| <i>PropOdds_HT_bwt1VS3</i> | 3.8207 | 1 | 0.0506 |
| <i>PropOdds_HT_bwt2VS3</i> | 1.7229 | 1 | 0.1893 |

PARTIAL PROPORTIONAL ODDS MODEL**The LOGISTIC Procedure**

| <i>Model Information</i> | |
|----------------------------------|---|
| <i>Data Set</i> | WORK.ONE |
| <i>Response Variable</i> | bwt_class |
| <i>Number of Response Levels</i> | 4 |
| <i>Model</i> | cumulative logit partial proportional odds |
| <i>Optimization Technique</i> | Newton-Raphson |

| | |
|------------------------------------|-----|
| <i>Number of Observations Read</i> | 189 |
| <i>Number of Observations Used</i> | 189 |

| <i>Response Profile</i> | | |
|-------------------------|------------------|------------------------|
| <i>Ordered Value</i> | <i>bwt_class</i> | <i>Total Frequency</i> |
| 1 | 1 | 59 |
| 2 | 2 | 38 |
| 3 | 3 | 46 |
| 4 | 4 | 46 |

Probabilities modeled are cumulated over the lower Ordered Values.

| <i>Class Level Information</i> | | |
|--------------------------------|--------------|-------------------------|
| <i>Class</i> | <i>Value</i> | <i>Design Variables</i> |
| HT | 0 | 0 |
| | 1 | 1 |

| <i>Model Convergence Status</i> |
|---|
| Convergence criterion (GCONV=1E-8) satisfied. |

| <i>Model Fit Statistics</i> | | |
|-----------------------------|-----------------------|---------------------------------|
| <i>Criterion</i> | <i>Intercept Only</i> | <i>Intercept and Covariates</i> |
| AIC | 525.304 | 518.004 |
| SC | 535.030 | 540.696 |
| -2 Log L | 519.304 | 504.004 |

| <i>Testing Global Null Hypothesis: BETA=0</i> | | | |
|---|-------------------|-----------|----------------------|
| <i>Test</i> | <i>Chi-Square</i> | <i>DF</i> | <i>Pr > ChiSq</i> |
| <i>Likelihood Ratio</i> | 15.3005 | 4 | 0.0041 |
| <i>Score</i> | 16.5312 | 4 | 0.0024 |
| <i>Wald</i> | 15.3267 | 4 | 0.0041 |

PARTIAL PROPORTIONAL ODDS MODEL**The LOGISTIC Procedure**

Type 3 Analysis of Effects

| Effect | DF | Wald | |
|--------|----|------------|------------|
| | | Chi-Square | Pr > ChiSq |
| LWT | 1 | 9.4897 | 0.0021 |
| HT | 3 | 7.3305 | 0.0621 |

Analysis of Maximum Likelihood Estimates

| Parameter | bwt_class | DF | Estimate | Standard Error | Wald Chi-Square | Pr > ChiSq |
|-----------|-----------|----|----------|----------------|-----------------|------------|
| Intercept | 1 | 1 | 0.8538 | 0.5817 | 2.1543 | 0.1422 |
| Intercept | 2 | 1 | 1.7807 | 0.5918 | 9.0524 | 0.0026 |
| Intercept | 3 | 1 | 2.9439 | 0.6146 | 22.9426 | <.0001 |
| LWT | | 1 | -0.0137 | 0.00445 | 9.4897 | 0.0021 |
| HT | 1 1 | 1 | 1.5289 | 0.6396 | 5.7137 | 0.0168 |
| HT | 1 2 | 1 | 0.9928 | 0.6658 | 2.2236 | 0.1359 |
| HT | 1 3 | 1 | 0.3344 | 0.7325 | 0.2084 | 0.6480 |

Association of Predicted Probabilities and Observed Responses

| | | | |
|--------------------|-------|-----------|-------|
| Percent Concordant | 62.8 | Somers' D | 0.275 |
| Percent Discordant | 35.3 | Gamma | 0.281 |
| Percent Tied | 2.0 | Tau-a | 0.206 |
| Pairs | 13282 | c | 0.638 |

Odds Ratio Estimates and Wald Confidence Intervals

| Effect | bwt_class | Unit | Estimate | 95% Confidence Limits | |
|-----------|-----------|---------|----------|-----------------------|--------|
| LWT | | 10.0000 | 0.872 | 0.799 | 0.951 |
| HT 1 vs 0 | 1 | 1.0000 | 4.613 | 1.317 | 16.160 |
| HT 1 vs 0 | 2 | 1.0000 | 2.699 | 0.732 | 9.952 |
| HT 1 vs 0 | 3 | 1.0000 | 1.397 | 0.332 | 5.872 |

PARTIAL PROPORTIONAL ODDS MODEL

The LOGISTIC Procedure

