

## *The SAS System*

### *The GLM Procedure*

| Class Level Information |        |        |
|-------------------------|--------|--------|
| Class                   | Levels | Values |
| culture                 | 2      | 1 2    |

|                             |    |
|-----------------------------|----|
| Number of Observations Read | 20 |
| Number of Observations Used | 20 |

# The SAS System

## The GLM Procedure

*Dependent Variable: gain*

| Source          | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|-----------------|----|----------------|-------------|---------|--------|
| Model           | 2  | 1313.172361    | 656.586180  | 21.49   | <.0001 |
| Error           | 17 | 519.377639     | 30.551626   |         |        |
| Corrected Total | 19 | 1832.550000    |             |         |        |

| R-Square | Coeff Var | Root MSE | gain Mean |
|----------|-----------|----------|-----------|
| 0.716582 | 53.40437  | 5.527353 | 10.35000  |

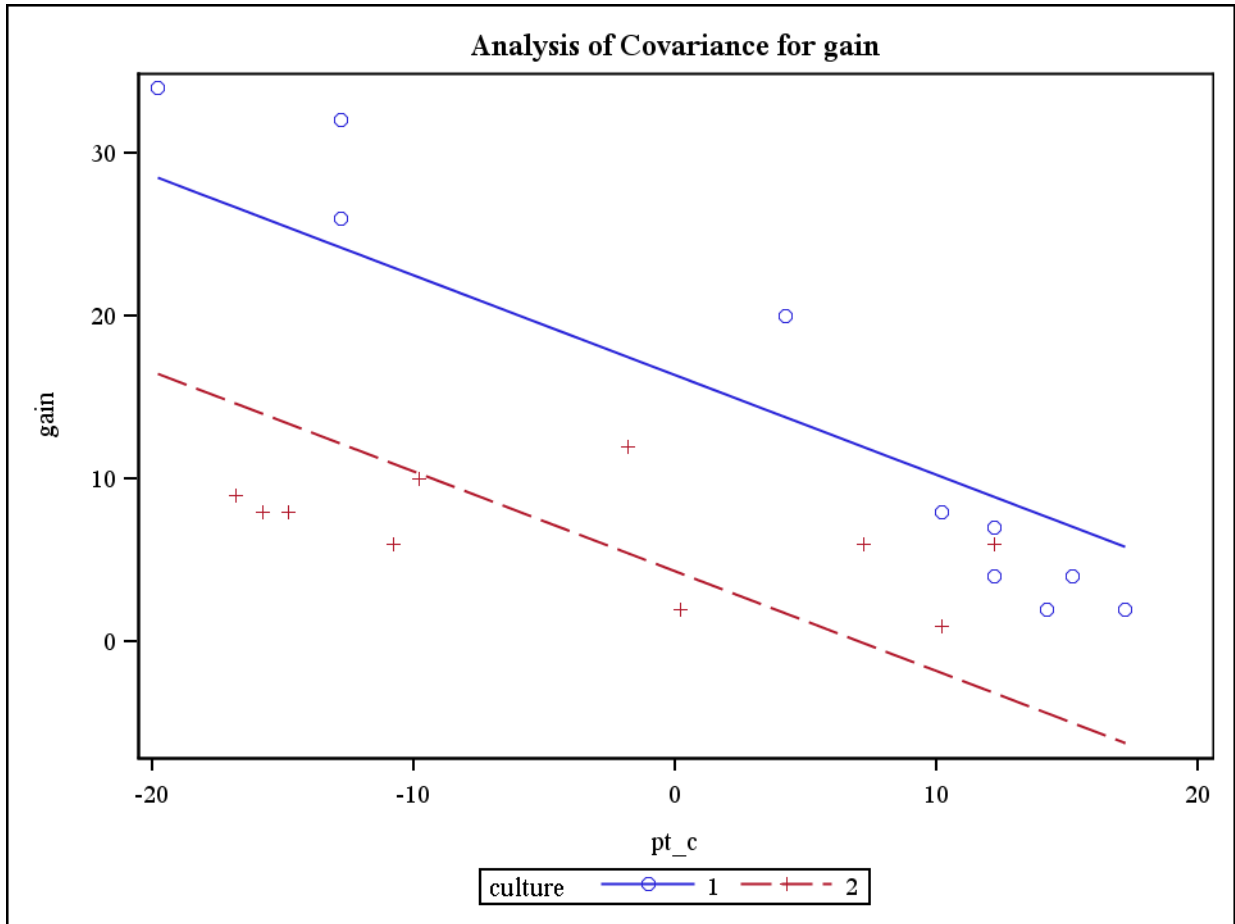
| Source  | DF | Type I SS   | Mean Square | F Value | Pr > F |
|---------|----|-------------|-------------|---------|--------|
| pt_c    | 1  | 665.6980632 | 665.6980632 | 21.79   | 0.0002 |
| culture | 1  | 647.4742978 | 647.4742978 | 21.19   | 0.0003 |

| Source  | DF | Type III SS | Mean Square | F Value | Pr > F |
|---------|----|-------------|-------------|---------|--------|
| pt_c    | 1  | 1061.122361 | 1061.122361 | 34.73   | <.0001 |
| culture | 1  | 647.474298  | 647.474298  | 21.19   | 0.0003 |

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*The GLM Procedure*

*Dependent Variable: gain*



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culture=1

|                             |    |
|-----------------------------|----|
| Number of Observations Read | 10 |
| Number of Observations Used | 10 |

# The SAS System

## The GLM Procedure

Dependent Variable: gain

culture=1

| Source          | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|-----------------|----|----------------|-------------|---------|--------|
| Model           | 1  | 1403.679574    | 1403.679574 | 153.36  | <.0001 |
| Error           | 8  | 73.220426      | 9.152553    |         |        |
| Corrected Total | 9  | 1476.900000    |             |         |        |

| R-Square | Coeff Var | Root MSE | gain Mean |
|----------|-----------|----------|-----------|
| 0.950423 | 21.76488  | 3.025319 | 13.90000  |

| Source | DF | Type I SS   | Mean Square | F Value | Pr > F |
|--------|----|-------------|-------------|---------|--------|
| pt_c   | 1  | 1403.679574 | 1403.679574 | 153.36  | <.0001 |

| Source | DF | Type III SS | Mean Square | F Value | Pr > F |
|--------|----|-------------|-------------|---------|--------|
| pt_c   | 1  | 1403.679574 | 1403.679574 | 153.36  | <.0001 |

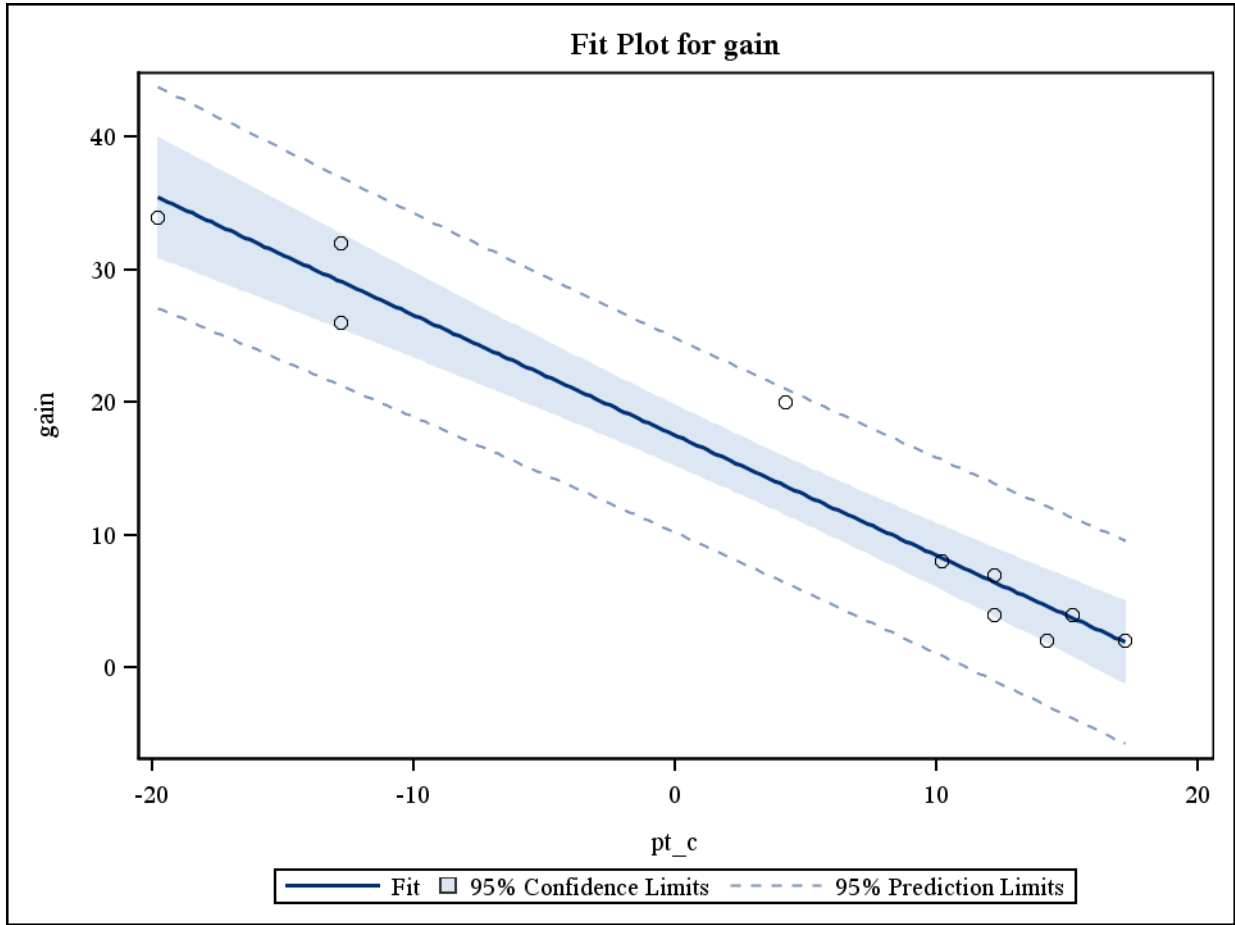
| Parameter | Estimate    | Standard Error | t Value | Pr >  t |
|-----------|-------------|----------------|---------|---------|
| Intercept | 17.52661045 | 1.00050668     | 17.52   | <.0001  |
| pt_c      | -0.90665261 | 0.07321129     | -12.38  | <.0001  |

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*Dependent Variable: gain*

**culture=1**



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culture=2

|                             |    |
|-----------------------------|----|
| Number of Observations Read | 10 |
| Number of Observations Used | 10 |

# The SAS System

## The GLM Procedure

Dependent Variable: gain

culture=2

| Source          | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|-----------------|----|----------------|-------------|---------|--------|
| Model           | 1  | 29.6023390     | 29.6023390  | 3.20    | 0.1114 |
| Error           | 8  | 73.9976610     | 9.2497076   |         |        |
| Corrected Total | 9  | 103.6000000    |             |         |        |

| R-Square | Coeff Var | Root MSE | gain Mean |
|----------|-----------|----------|-----------|
| 0.285737 | 44.72549  | 3.041333 | 6.800000  |

| Source | DF | Type I SS   | Mean Square | F Value | Pr > F |
|--------|----|-------------|-------------|---------|--------|
| pt_c   | 1  | 29.60233897 | 29.60233897 | 3.20    | 0.1114 |

| Source | DF | Type III SS | Mean Square | F Value | Pr > F |
|--------|----|-------------|-------------|---------|--------|
| pt_c   | 1  | 29.60233897 | 29.60233897 | 3.20    | 0.1114 |

| Parameter | Estimate     | Standard Error | t Value | Pr >  t |
|-----------|--------------|----------------|---------|---------|
| Intercept | 6.147247211  | 1.02864375     | 5.98    | 0.0003  |
| pt_c      | -0.163188197 | 0.09121993     | -1.79   | 0.1114  |

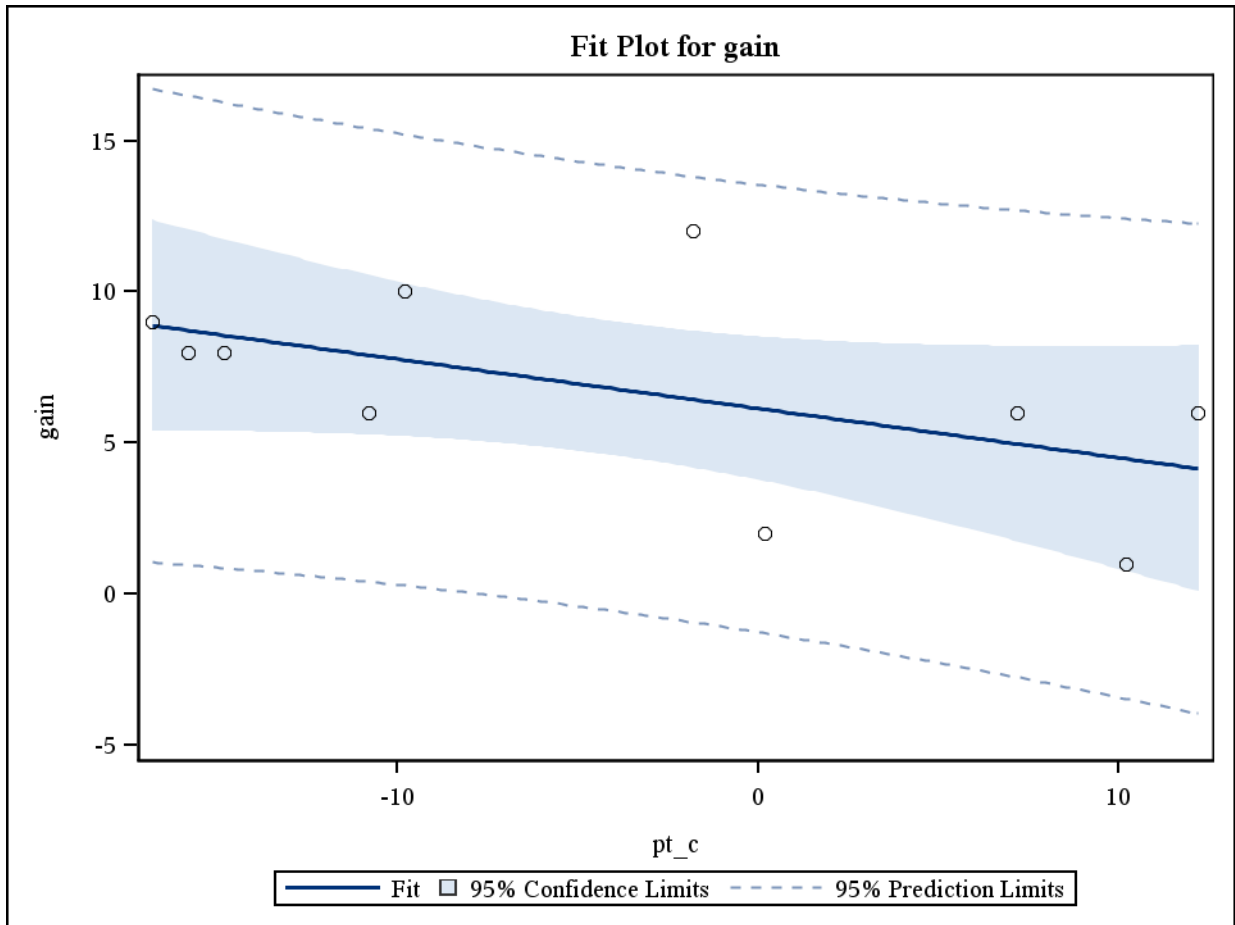


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*Dependent Variable: gain*

culture=2



## *The SAS System*

### *The GLM Procedure*

| Class Level Information |        |        |
|-------------------------|--------|--------|
| Class                   | Levels | Values |
| culture                 | 2      | 1 2    |

|                             |    |
|-----------------------------|----|
| Number of Observations Read | 20 |
| Number of Observations Used | 20 |

# The SAS System

## The GLM Procedure

*Dependent Variable: gain*

| Source                 | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|------------------------|----|----------------|-------------|---------|--------|
| <b>Model</b>           | 3  | 1685.331913    | 561.777304  | 61.06   | <.0001 |
| <b>Error</b>           | 16 | 147.218087     | 9.201130    |         |        |
| <b>Corrected Total</b> | 19 | 1832.550000    |             |         |        |

| R-Square | Coeff Var | Root MSE | gain Mean |
|----------|-----------|----------|-----------|
| 0.919665 | 29.30760  | 3.033337 | 10.35000  |

| Source              | DF | Type I SS   | Mean Square | F Value | Pr > F |
|---------------------|----|-------------|-------------|---------|--------|
| <b>pt_c</b>         | 1  | 665.6980632 | 665.6980632 | 72.35   | <.0001 |
| <b>culture</b>      | 1  | 647.4742978 | 647.4742978 | 70.37   | <.0001 |
| <b>pt_c*culture</b> | 1  | 372.1595517 | 372.1595517 | 40.45   | <.0001 |

| Source              | DF | Type III SS | Mean Square | F Value | Pr > F |
|---------------------|----|-------------|-------------|---------|--------|
| <b>pt_c</b>         | 1  | 770.6321397 | 770.6321397 | 83.75   | <.0001 |
| <b>culture</b>      | 1  | 578.6908186 | 578.6908186 | 62.89   | <.0001 |
| <b>pt_c*culture</b> | 1  | 372.1595517 | 372.1595517 | 40.45   | <.0001 |

| Parameter             | Estimate    |   | Standard Error | t Value | Pr >  t |
|-----------------------|-------------|---|----------------|---------|---------|
| <b>Intercept</b>      | 6.14724721  | B | 1.02593911     | 5.99    | <.0001  |
| <b>pt_c</b>           | -0.16318820 | B | 0.09098008     | -1.79   | 0.0918  |
| <b>culture 1</b>      | 11.37936324 | B | 1.43487893     | 7.93    | <.0001  |
| <b>culture 2</b>      | 0.00000000  | B | .              | .       | .       |
| <b>pt_c*culture 1</b> | -0.74346441 | B | 0.11690045     | -6.36   | <.0001  |
| <b>pt_c*culture 2</b> | 0.00000000  | B | .              | .       | .       |

**Note:** The X'X matrix has been found to be singular, and a generalized inverse was used to solve the normal equations. Terms whose estimates are followed by the letter 'B' are not uniquely estimable.

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*Dependent Variable: gain*

