

This program is the same as the one used for traditional DETECT
It could also have been created by DETECT/MR

REGRESSION MULTIPLE RELATIONSHIP ANALYSIS (MULTIVARIATE ANALYSIS)

13 1 1 2 2 3 0 3 4 4 3 0 1 0 0

STRUCTUR

CULTURE

PERFORMC

(3F2.0,1F1.0,1X,3F2.0)

| | | | | | |
|----------|----------|----------|----------|---------|----------|
| DDDDDDD | EEEEEEEE | TTTTTTTT | EEEEEEEE | CCCCC | TTTTTTTT |
| DDDDDDDD | EEEEEEEE | TTTTTTTT | EEEEEEEE | CCCCCCC | TTTTTTTT |
| DD DD | EE | TT | EE | CC | TT |
| DD DD | EE | TT | EE | CC | TT |
| DD DD | EEEE | TT | EEEE | CC | TT |
| DD DD | EEEE | TT | EEEE | CC | TT |
| DD DD | EE | TT | EE | CC | TT |
| DD DD | EE | TT | EE | CC | TT |
| DDDDDDDD | EEEEEEEE | TT | EEEEEEEE | CCCCCCC | TT |
| DDDDDDD | EEEEEEEE | TT | EEEEEEEE | CCCCC | TT |

DATA ENQUIRY THAT TESTS ENTITY AND
CORRELATIONAL/CAUSAL THEORIES
PROGRAM TITLE
REGRESSION MULTIPLE RELATIONSHIP ANALYSIS (MULTIVARIATE ANALYSIS)

TABLE I
GENERAL INFORMATION LINE

| ENTRY | MEANING | CODE |
|----------|--|------|
| ONE | DATA INPUT FROM FILE | 13, |
| TWO | OUTPUT TO FILE 8 ONLY. OPTION | 1, |
| THREE | REGULAR TABLES OUTPUT. OPTION | 1, |
| FOUR | SELECTED TABLES OUTPUT. OPTION | 2, |
| FIVE | POSITION OF FIRST CELL INDICATOR | 2, |
| SIX | POSITION OF SECOND CELL INDICATOR | 3, |
| SEVEN | NUMBER OF ADDITIONAL LEVELS OF ANALYSIS | 0, |
| EIGHT | MULTIPLE-VARIABLE ANALYSIS DELETED. OPTION | 0, |
| NINE | POSITION OF MULTIPLE-RELATIONSHIP ANALYSIS INDICATOR | 4, |
| TEN | NUMBER OF VARIABLES NOT TO BE ANALYZED | 4, |
| ELEVEN | NUMBER OF VARIABLES TO BE ANALYZED | 3, |
| TWELVE | LABELS INPUT WITH PROGRAM. OPTION | 0, |
| THIRTEEN | NUMBER OF LINES READ FOR FORMAT STATEMENT | 1, |
| FOURTEEN | NO MISSING VALUES. OPTION | 0, |
| FIFTEEN | DATA TRANSFORMATIONS DELETED. OPTION | 0 |

TABLE II
DETAILED INFORMATION LINE

| ENTRY | MEANING | CODE |
|----------|---|------|
| ONE | TOTAL NUMBER OF LINES PER PAGE | 61, |
| TWO | INFORMATION TABLES PRINTED (TABLES I,II AND III) OPTION | 1, |
| THREE | NUMBER OF ENTRIES FOR CELL FREQUENCIES (TABLE CF) | 23, |
| | NUMBER OF ENTRIES IN AVERAGE AND DISPERSION TABLES | |
| FOUR | ACROSS ALL CASES (TABLE AT) | 20, |
| FIVE | BY CELLS (TABLE AC) | 0, |
| SIX | BY VARIABLES (TABLE AV) | 0, |
| | NUMBER OF ENTRIES IN WABA TABLES | |
| SEVEN | WABA I (TABLE WI) | 15, |
| EIGHT | WABA II (TABLES WIID,WIIM AND WTC) | 15, |
| | NUMBER OF ENTRIES IN MULTIPLE-VARIABLE ANALYSIS | |
| NINE | WITHIN-CELL (TABLE MVAW) | 0, |
| TEN | BETWEEN-CELL (TABLE MVAB) | 0, |
| ELEVEN | CORRELATION MATRIX DELETED. OPTION | 0, |
| TWELVE | DEVIATIONS NOT OUTPUT. OPTION | 0, |
| THIRTEEN | ENTRIES IN MULTIPLE-RELATIONSHIP ANALYSIS (TABLE MRA) | 2, |
| FOURTEEN | SEQUENCING PACKAGE CALLED. OPTION | 1, |
| FIFTEEN | EXTRA ROUNDING DELETED. OPTION | 0 |

TABLE III
ADDITIONAL INFORMATION

ADDITIONAL CELL INDICATOR LINE(S) GIL ENTRY SEVEN = 0
NO LINES READ
LABEL LINE(S) GIL ENTRY TWELVE = 0
STRUCTUR
CULTURE
PERFORMC
FORMAT LINE(S) GIL ENTRY THIRTEEN = 1
(3F2.0,1F1.0,1X,3F2.0)

MISSING VALUES LINE(S) GIL ENTRY FOURTEEN = 0
NO LINES READ
DATA TRANSFORMATION LINE(S) GIL ENTRY FIFTEEN = 0
NO LINES READ
NUMBER OF CASES FOR ANALYSIS
80

VALUES FROM TRADITIONAL (OLS) MULTIPLE REGRESSION

UNSTANDARDIZED BETA WEIGHTS ARE REPORTED AFTER THE CONSTANT

| | |
|----------|------------------|
| CONSTANT | 11.511763123106 |
| STRUCTUR | -2.3265246434797 |
| CULTURE | 1.5121959779595 |

TRADITIONAL TOTAL MULTIPLE CORRELATION R = 0.93812
STANDARD DEVIATION OF RESIDUALS = 3.1750769515013

TABLE CF
(LEVEL = 1 CONDITION = 1)
CELL FREQUENCIES

| CELL ID NUMBER | CELL SIZE |
|----------------|-----------|
| 1 | 3 |
| 3 | 3 |
| 5 | 3 |
| 7 | 3 |
| 9 | 3 |
| 11 | 3 |
| 13 | 3 |
| 15 | 3 |
| 2 | 2 |
| 4 | 2 |
| 6 | 2 |
| 8 | 2 |
| 10 | 2 |
| 12 | 2 |
| 14 | 2 |
| 16 | 2 |

TABLE AT
 (LEVEL = 1 CONDITION = 1)
 AVERAGES AND DISPERSIONS ACROSS ALL CASES

| VARIABLE | AVERAGE | AVERAGE SUMS OF SQUARES | | |
|----------|-------------|-------------------------|----------|---------|
| | TOTAL SCORE | TOTAL | BETWEEN | WITHIN |
| IND.VAR. | 0.48824 | 68.42497 | 66.44654 | 1.97843 |
| PERFORMC | 12.00000 | 77.75000 | 77.75000 | 0.00000 |

TOTAL NUMBER OF CASES 40
 INDETERMINATE CORRELATION SET TO ZERO

TABLE WI
 (LEVEL = 1 CONDITION = 1)
 WITHIN AND BETWEEN ANALYSIS I

| | ETA CORRELATIONS | | E RATIO INDUCTION | F RATIOS | | |
|----------------------------|------------------|---------|--------------------|----------|---------|--------|
| | BETWEEN | WITHIN | | BETWEEN | WITHIN | PROB |
| IND.VAR. | 0.98544 | 0.17004 | 5.79530 WHOLES-30 | 57.57510 | | 0.0000 |
| E AND F SET EQUAL TO 99.00 | | | | | | |
| PERFORMC | 1.00000 | 0.00000 | 99.00000 WHOLES-30 | 99.00000 | | 0.0000 |
| AVERAGES | 0.99272 | 0.08502 | 52.39765 | 78.28755 | 0.00000 | |

PRACTICAL SIGNIFICANCE CRITERIA

| | | |
|-------------|----------|---------|
| WHOLES - 15 | E > OR = | 1.30323 |
| WHOLES - 30 | E > OR = | 1.73205 |
| PARTS - 15 | E < OR = | 0.76733 |
| PARTS - 30 | E < OR = | 0.57735 |

DEGREES OF FREEDOM FOR:

| | | |
|---|-----|----|
| VARIABLE PERFORMC (BETWEEN) F-RATIO = | 15, | 24 |
| VARIABLE PERFORMC (WITHIN) F-RATIO = | 24, | 15 |
| INDEPENDENT VARIABLES (BETWEEN) F-RATIO = | 14, | 24 |
| INDEPENDENT VARIABLES (WITHIN) F-RATIO = | 24, | 14 |

TABLE WIID
 (LEVEL = 1 CONDITION = 1)
 WITHIN AND BETWEEN ANALYSIS II (DIFFERENCE TESTS)

 CORRELATIONS

| | BETWEEN | WITHIN | A-VALUE | INDUCTION | Z-VALUE |
|-----------|---------|---------|---------|-----------|-----------|
| IND. VAR. | | | | | |
| PERFORMC | 0.95198 | 0.00000 | 1.25964 | WHOLES-30 | 5.11919** |
| AVERAGES | 0.95198 | 0.00000 | 1.25964 | | 5.11919 |

 PRACTICAL SIGNIFICANCE CRITERIA

| | | | | | |
|-------------|---|---|----|---|----------|
| WHOLES - 15 | A | > | OR | = | 0.26180 |
| WHOLES - 30 | A | > | OR | = | 0.52360 |
| PARTS - 15 | A | < | OR | = | -0.26180 |
| PARTS - 30 | A | < | OR | = | -0.52360 |

 *P < OR = .05

**P < OR = .01

TABLE WIIM
 (LEVEL = 1 CONDITION = 1)
 WITHIN AND BETWEEN ANALYSIS II (MAGNITUDE TESTS)

| | | BETWEEN | | | WITHIN | | | | |
|---------------------------------|----------------------------------|---------|-----------|----------|--------|-------------|------|---------|--------|
| | | R TEST | IND* | F RATIO | PROB | R TEST | IND* | F RATIO | PROB |
| ----- | | | | | | | | | |
| IND. VAR. | | | | | | | | | |
| | PERFORMC | 3.10945 | S-30 | 62.84637 | 0.0000 | 0.00000 | | 0.00000 | 1.0000 |
| | AVERAGES | 3.10945 | | 62.84637 | | 0.00000 | | 0.00000 | |
| ----- | | | | | | | | | |
| PRACTICAL SIGNIFICANCE CRITERIA | | | | | | | | | |
| | S - 15 | R > | OR = | 0.26795 | | 0.26795 | | | |
| | S - 30 | R > | OR = | 0.57735 | | 0.57735 | | | |
| ----- | | | | | | | | | |
| | DEGREES OF FREEDOM FOR (BETWEEN) | | F RATIO = | 2, | 13 | * INDICATES | | | |
| | DEGREES OF FREEDOM FOR (WITHIN) | | F RATIO = | 2, | 22 | INDUCTION | | | |

TABLE WTC
 (LEVEL = 1 CONDITION = 1)
 TOTAL CORRELATION AND COMPONENT ANALYSIS

| | TOTAL | | | | COMPONENTS | | |
|-----------|-------------|---------|-----------|--------|------------|---------|-----------|
| | CORRELATION | R TEST | F RATIO | PROB | BETWEEN | WITHIN | INDUCTION |
| IND. VAR. | | | | | | | |
| PERFORMC | 0.93812 | 2.70883 | 135.74883 | 0.0000 | 0.93812 | 0.00000 | WHOLES-30 |
| AVERAGES | 0.93812 | 2.70883 | 135.74883 | | 0.93812 | 0.00000 | |

PRACTICAL SIGNIFICANCE CRITERIA

| | | | | |
|-----------|---------------|----------------|------------|-----------------|
| WHOLES-15 | E(1) AND E(2) | > OR = 1.30323 | AND A(1+2) | > OR = 0.26180 |
| WHOLES-30 | E(1) AND E(2) | > OR = 1.73205 | AND A(1+2) | > OR = 0.52360 |
| PARTS-15 | E(1) AND E(2) | < OR = 0.76733 | AND A(1+2) | < OR = -0.26180 |
| PARTS-30 | E(1) AND E(2) | < OR = 0.57735 | AND A(1+2) | < OR = -0.52360 |

DEGREES OF FREEDOM FOR (TOTAL) F-RATIO = 2, 37

TABLE CF
(LEVEL = 2 CONDITION = 1)
CELL FREQUENCIES

| CELL ID NUMBER | CELL SIZE |
|----------------|-----------|
| 1 | 5 |
| 3 | 5 |
| 8 | 5 |
| 52 | 5 |
| 2 | 5 |
| 7 | 5 |
| 9 | 5 |
| 53 | 5 |

TABLE AT
 (LEVEL = 2 CONDITION = 1)
 AVERAGES AND DISPERSIONS ACROSS ALL CASES

| VARIABLE | AVERAGE | AVERAGE SUMS OF SQUARES | | |
|----------|-------------|-------------------------|----------|---------|
| | TOTAL SCORE | TOTAL | BETWEEN | WITHIN |
| IND.VAR. | 0.00000 | 66.44654 | 65.68483 | 0.76171 |
| PERFORMC | 0.00000 | 77.75000 | 77.75000 | 0.00000 |

TOTAL NUMBER OF CASES 40
 INDETERMINATE CORRELATION SET TO ZERO

TABLE WI
 (LEVEL = 2 CONDITION = 1)
 WITHIN AND BETWEEN ANALYSIS I

| | ETA CORRELATIONS | | E RATIO INDUCTION | F RATIOS | | |
|----------------------------|------------------|---------|--------------------|-----------|--------|---------|
| | BETWEEN | WITHIN | | BETWEEN | WITHIN | PROB |
| IND.VAR. | 0.99425 | 0.10707 | 9.28617 WHOLES-30 | 114.97734 | | 0.0000 |
| E AND F SET EQUAL TO 99.00 | | | | | | |
| PERFORMC | 1.00000 | 0.00000 | 99.00000 WHOLES-30 | 99.00000 | | 0.0000 |
| AVERAGES | 0.99713 | 0.05353 | 54.14309 | 106.98867 | | 0.00000 |

 PRACTICAL SIGNIFICANCE CRITERIA

| | | |
|-------------|----------|---------|
| WHOLES - 15 | E > OR = | 1.30323 |
| WHOLES - 30 | E > OR = | 1.73205 |
| PARTS - 15 | E < OR = | 0.76733 |
| PARTS - 30 | E < OR = | 0.57735 |

 DEGREES OF FREEDOM FOR:

| | | |
|---|----|---|
| VARIABLE PERFORMC (BETWEEN) F-RATIO = | 7, | 8 |
| VARIABLE PERFORMC (WITHIN) F-RATIO = | 8, | 7 |
| INDEPENDENT VARIABLES (BETWEEN) F-RATIO = | 6, | 8 |
| INDEPENDENT VARIABLES (WITHIN) F-RATIO = | 8, | 6 |

TABLE WIID
 (LEVEL = 2 CONDITION = 1)
 WITHIN AND BETWEEN ANALYSIS II (DIFFERENCE TESTS)

 CORRELATIONS

| | BETWEEN | WITHIN | A-VALUE | INDUCTION | Z-VALUE |
|-----------|---------|---------|---------|-----------|-----------|
| IND. VAR. | | | | | |
| PERFORMC | 0.95748 | 0.00000 | 1.27815 | WHOLES-30 | 2.85438** |
| AVERAGES | 0.95748 | 0.00000 | 1.27815 | | 2.85438 |

 PRACTICAL SIGNIFICANCE CRITERIA

| | | | | | |
|-------------|---|---|----|---|----------|
| WHOLES - 15 | A | > | OR | = | 0.26180 |
| WHOLES - 30 | A | > | OR | = | 0.52360 |
| PARTS - 15 | A | < | OR | = | -0.26180 |
| PARTS - 30 | A | < | OR | = | -0.52360 |

 *P < OR = .05
 **P < OR = .01

TABLE WIIM
 (LEVEL = 2 CONDITION = 1)
 WITHIN AND BETWEEN ANALYSIS II (MAGNITUDE TESTS)

| | BETWEEN | | | WITHIN | | |
|---|--------------|----------|--------|-------------|---------|--------|
| | R TEST IND* | F RATIO | PROB | R TEST IND* | F RATIO | PROB |
| IND. VAR. | | | | | | |
| PERFORMC | 3.31903 S-30 | 27.53983 | 0.0020 | 0.00000 | 0.00000 | 1.0000 |
| AVERAGES | 3.31903 | 27.53983 | | 0.00000 | 0.00000 | |
| PRACTICAL SIGNIFICANCE CRITERIA | | | | | | |
| S - 15 | R > OR = | 0.26795 | | 0.26795 | | |
| S - 30 | R > OR = | 0.57735 | | 0.57735 | | |
| DEGREES OF FREEDOM FOR (BETWEEN) F RATIO = 2, 5 * INDICATES | | | | | | |
| DEGREES OF FREEDOM FOR (WITHIN) F RATIO = 2, 6 INDUCTION | | | | | | |

TABLE WTC
 (LEVEL = 2 CONDITION = 1)
 TOTAL CORRELATION AND COMPONENT ANALYSIS

| | TOTAL | | | | COMPONENTS | | |
|-----------|-------------|---------|----------|--------|------------|---------|-----------|
| | CORRELATION | R TEST | F RATIO | PROB | BETWEEN | WITHIN | INDUCTION |
| IND. VAR. | | | | | | | |
| PERFORMC | 0.95198 | 3.10945 | 62.84637 | 0.0000 | 0.95198 | 0.00000 | WHOLES-30 |
| AVERAGES | 0.95198 | 3.10945 | 62.84637 | | 0.95198 | 0.00000 | |

PRACTICAL SIGNIFICANCE CRITERIA

| | | | | |
|-----------|---------------|----------------|------------|-----------------|
| WHOLES-15 | E(1) AND E(2) | > OR = 1.30323 | AND A(1+2) | > OR = 0.26180 |
| WHOLES-30 | E(1) AND E(2) | > OR = 1.73205 | AND A(1+2) | > OR = 0.52360 |
| PARTS-15 | E(1) AND E(2) | < OR = 0.76733 | AND A(1+2) | < OR = -0.26180 |
| PARTS-30 | E(1) AND E(2) | < OR = 0.57735 | AND A(1+2) | < OR = -0.52360 |

DEGREES OF FREEDOM FOR (TOTAL) F-RATIO = 2, 13
 VALUES FROM TRADITIONAL (OLS) MULTIPLE REGRESSION

UNSTANDARDIZED BETA WEIGHTS ARE REPORTED AFTER THE CONSTANT

| | |
|----------|------------------|
| CONSTANT | -5.2830810822789 |
| STRUCTUR | 0.59032065060828 |
| CULTURE | 1.2712389478583 |

TRADITIONAL TOTAL MULTIPLE CORRELATION R = 0.96989

STANDARD DEVIATION OF RESIDUALS = 1.1838317566241

TABLE CF
(LEVEL = 1 CONDITION = 2)
CELL FREQUENCIES

| CELL ID NUMBER | CELL SIZE |
|----------------|-----------|
| 17 | 3 |
| 20 | 2 |
| 21 | 2 |
| 23 | 3 |
| 25 | 2 |
| 27 | 2 |
| 29 | 3 |
| 32 | 2 |
| 18 | 2 |
| 19 | 3 |
| 22 | 3 |
| 24 | 2 |
| 26 | 3 |
| 28 | 3 |
| 30 | 2 |
| 31 | 3 |

TABLE AT
 (LEVEL = 1 CONDITION = 2)
 AVERAGES AND DISPERSIONS ACROSS ALL CASES

| VARIABLE | AVERAGE | AVERAGE SUMS OF SQUARES | | |
|---------------------------------------|-------------|-------------------------|----------|---------|
| | TOTAL SCORE | TOTAL | BETWEEN | WITHIN |
| IND.VAR. | 14.15808 | 20.56303 | 20.29627 | 0.26676 |
| PERFORMC | 8.87500 | 21.85937 | 21.85937 | 0.00000 |
| TOTAL NUMBER OF CASES | | 40 | | |
| INDETERMINATE CORRELATION SET TO ZERO | | | | |

TABLE WI
 (LEVEL = 1 CONDITION = 2)
 WITHIN AND BETWEEN ANALYSIS I

| | ETA CORRELATIONS | | E RATIO INDUCTION | F RATIOS | | |
|----------------------------|------------------|---------|--------------------|-----------|--------|---------|
| | BETWEEN | WITHIN | | BETWEEN | WITHIN | PROB |
| IND.VAR. | 0.99349 | 0.11390 | 8.72263 WHOLES-30 | 130.43014 | | 0.0000 |
| E AND F SET EQUAL TO 99.00 | | | | | | |
| PERFORMC | 1.00000 | 0.00000 | 99.00000 WHOLES-30 | 99.00000 | | 0.0000 |
| AVERAGES | 0.99675 | 0.05695 | 53.86131 | 114.71507 | | 0.00000 |

PRACTICAL SIGNIFICANCE CRITERIA

| | | |
|-------------|----------|---------|
| WHOLES - 15 | E > OR = | 1.30323 |
| WHOLES - 30 | E > OR = | 1.73205 |
| PARTS - 15 | E < OR = | 0.76733 |
| PARTS - 30 | E < OR = | 0.57735 |

DEGREES OF FREEDOM FOR:

| | | |
|---|-----|----|
| VARIABLE PERFORMC (BETWEEN) F-RATIO = | 15, | 24 |
| VARIABLE PERFORMC (WITHIN) F-RATIO = | 24, | 15 |
| INDEPENDENT VARIABLES (BETWEEN) F-RATIO = | 14, | 24 |
| INDEPENDENT VARIABLES (WITHIN) F-RATIO = | 24, | 14 |

TABLE WIID
 (LEVEL = 1 CONDITION = 2)
 WITHIN AND BETWEEN ANALYSIS II (DIFFERENCE TESTS)

 CORRELATIONS

| | BETWEEN | WITHIN | A-VALUE | INDUCTION | Z-VALUE |
|-----------|---------|---------|---------|-----------|-----------|
| IND. VAR. | | | | | |
| PERFORMC | 0.97625 | 0.00000 | 1.35241 | WHOLES-30 | 6.10888** |
| AVERAGES | 0.97625 | 0.00000 | 1.35241 | | 6.10888 |

 PRACTICAL SIGNIFICANCE CRITERIA

| | | | | | |
|-------------|---|---|----|---|----------|
| WHOLES - 15 | A | > | OR | = | 0.26180 |
| WHOLES - 30 | A | > | OR | = | 0.52360 |
| PARTS - 15 | A | < | OR | = | -0.26180 |
| PARTS - 30 | A | < | OR | = | -0.52360 |

 *P < OR = .05

**P < OR = .01

TABLE WIIM
 (LEVEL = 1 CONDITION = 2)
 WITHIN AND BETWEEN ANALYSIS II (MAGNITUDE TESTS)

| | BETWEEN | | | WITHIN | | |
|--|------------------|-----------|--------|-------------|---------|-------------|
| | R TEST IND* | F RATIO | PROB | R TEST IND* | F RATIO | PROB |
| IND. VAR. | | | | | | |
| PERFORMC | 4.50597 S-30 | 131.97429 | 0.0000 | 0.00000 | 0.00000 | 1.0000 |
| AVERAGES | 4.50597 | 131.97429 | | 0.00000 | 0.00000 | |
| PRACTICAL SIGNIFICANCE CRITERIA | | | | | | |
| S - 15 | R > OR = 0.26795 | | | 0.26795 | | |
| S - 30 | R > OR = 0.57735 | | | 0.57735 | | |
| DEGREES OF FREEDOM FOR (BETWEEN) F RATIO = | | | | | | |
| | | | | 2, | 13 | * INDICATES |
| DEGREES OF FREEDOM FOR (WITHIN) F RATIO = | | | | | | |
| | | | | 2, | 22 | INDUCTION |

TABLE WTC
 (LEVEL = 1 CONDITION = 2)
 TOTAL CORRELATION AND COMPONENT ANALYSIS

| | TOTAL | | | | COMPONENTS | | |
|-----------|-------------|---------|-----------|--------|------------|---------|-----------|
| | CORRELATION | R TEST | F RATIO | PROB | BETWEEN | WITHIN | INDUCTION |
| IND. VAR. | | | | | | | |
| PERFORMC | 0.96989 | 3.98275 | 293.45199 | 0.0000 | 0.96989 | 0.00000 | WHOLES-30 |
| AVERAGES | 0.96989 | 3.98275 | 293.45199 | | 0.96989 | 0.00000 | |

PRACTICAL SIGNIFICANCE CRITERIA

| | | | | | |
|-----------|------|----------|----------------|------------|-----------------|
| WHOLES-15 | E(1) | AND E(2) | > OR = 1.30323 | AND A(1+2) | > OR = 0.26180 |
| WHOLES-30 | E(1) | AND E(2) | > OR = 1.73205 | AND A(1+2) | > OR = 0.52360 |
| PARTS-15 | E(1) | AND E(2) | < OR = 0.76733 | AND A(1+2) | < OR = -0.26180 |
| PARTS-30 | E(1) | AND E(2) | < OR = 0.57735 | AND A(1+2) | < OR = -0.52360 |

DEGREES OF FREEDOM FOR (TOTAL) F-RATIO = 2, 37

TABLE CF
(LEVEL = 2 CONDITION = 2)
CELL FREQUENCIES

| CELL ID NUMBER | CELL SIZE |
|----------------|-----------|
| 4 | 5 |
| 6 | 5 |
| 11 | 5 |
| 14 | 5 |
| 5 | 5 |
| 10 | 5 |
| 12 | 5 |
| 15 | 5 |

TABLE AT
 (LEVEL = 2 CONDITION = 2)
 AVERAGES AND DISPERSIONS ACROSS ALL CASES

| VARIABLE | AVERAGE | AVERAGE SUMS OF SQUARES | | |
|----------|-------------|-------------------------|----------|---------|
| | TOTAL SCORE | TOTAL | BETWEEN | WITHIN |
| IND.VAR. | 0.00000 | 20.29627 | 20.04849 | 0.24778 |
| PERFORMC | 0.00000 | 21.85937 | 21.85937 | 0.00000 |

TOTAL NUMBER OF CASES 40
 INDETERMINATE CORRELATION SET TO ZERO

TABLE WI
 (LEVEL = 2 CONDITION = 2)
 WITHIN AND BETWEEN ANALYSIS I

| | ETA CORRELATIONS | | E RATIO INDUCTION | F RATIOS | | |
|----------------------------|------------------|---------|--------------------|-----------|---------|--------|
| | BETWEEN | WITHIN | | BETWEEN | WITHIN | PROB |
| IND.VAR. | 0.99388 | 0.11049 | 8.99519 WHOLES-30 | 107.88448 | | 0.0000 |
| E AND F SET EQUAL TO 99.00 | | | | | | |
| PERFORMC | 1.00000 | 0.00000 | 99.00000 WHOLES-30 | 99.00000 | | 0.0000 |
| AVERAGES | 0.99694 | 0.05524 | 53.99759 | 103.44224 | 0.00000 | |

PRACTICAL SIGNIFICANCE CRITERIA

| | | |
|-------------|----------|---------|
| WHOLES - 15 | E > OR = | 1.30323 |
| WHOLES - 30 | E > OR = | 1.73205 |
| PARTS - 15 | E < OR = | 0.76733 |
| PARTS - 30 | E < OR = | 0.57735 |

DEGREES OF FREEDOM FOR:

| | | |
|---|----|---|
| VARIABLE PERFORMC (BETWEEN) F-RATIO = | 7, | 8 |
| VARIABLE PERFORMC (WITHIN) F-RATIO = | 8, | 7 |
| INDEPENDENT VARIABLES (BETWEEN) F-RATIO = | 6, | 8 |
| INDEPENDENT VARIABLES (WITHIN) F-RATIO = | 8, | 6 |

TABLE WIID
 (LEVEL = 2 CONDITION = 2)
 WITHIN AND BETWEEN ANALYSIS II (DIFFERENCE TESTS)

 CORRELATIONS

| | BETWEEN | WITHIN | A-VALUE | INDUCTION | Z-VALUE |
|-----------|---------|---------|---------|-----------|-----------|
| IND. VAR. | | | | | |
| PERFORMC | 0.98226 | 0.00000 | 1.38217 | WHOLES-30 | 3.51531** |
| AVERAGES | 0.98226 | 0.00000 | 1.38217 | | 3.51531 |

 PRACTICAL SIGNIFICANCE CRITERIA

| | | | | | |
|-------------|---|---|----|---|----------|
| WHOLES - 15 | A | > | OR | = | 0.26180 |
| WHOLES - 30 | A | > | OR | = | 0.52360 |
| PARTS - 15 | A | < | OR | = | -0.26180 |
| PARTS - 30 | A | < | OR | = | -0.52360 |

 *P < OR = .05

**P < OR = .01

TABLE WIIM
 (LEVEL = 2 CONDITION = 2)
 WITHIN AND BETWEEN ANALYSIS II (MAGNITUDE TESTS)

| | BETWEEN | | | WITHIN | | | | |
|--|---------|------|----------|--------|---------|------|-------------|--------|
| | R TEST | IND* | F RATIO | PROB | R TEST | IND* | F RATIO | PROB |
| IND. VAR. | | | | | | | | |
| PERFORMC | 5.23835 | S-30 | 68.60079 | 0.0002 | 0.00000 | | 0.00000 | 1.0000 |
| AVERAGES | 5.23835 | | 68.60079 | | 0.00000 | | 0.00000 | |
| PRACTICAL SIGNIFICANCE CRITERIA | | | | | | | | |
| S - 15 | R > | OR = | 0.26795 | | 0.26795 | | | |
| S - 30 | R > | OR = | 0.57735 | | 0.57735 | | | |
| DEGREES OF FREEDOM FOR (BETWEEN) F RATIO = | | | | | | | | |
| | | | | | 2, | 5 | * INDICATES | |
| DEGREES OF FREEDOM FOR (WITHIN) F RATIO = | | | | | | | | |
| | | | | | 2, | 6 | INDUCTION | |

TABLE WTC
 (LEVEL = 2 CONDITION = 2)
 TOTAL CORRELATION AND COMPONENT ANALYSIS

| | TOTAL | | | | COMPONENTS | | |
|-----------|-------------|---------|-----------|--------|------------|---------|-----------|
| | CORRELATION | R TEST | F RATIO | PROB | BETWEEN | WITHIN | INDUCTION |
| IND. VAR. | | | | | | | |
| PERFORMC | 0.97625 | 4.50597 | 131.97429 | 0.0000 | 0.97625 | 0.00000 | WHOLES-30 |
| AVERAGES | 0.97625 | 4.50597 | 131.97429 | | 0.97625 | 0.00000 | |

PRACTICAL SIGNIFICANCE CRITERIA

| | | | | |
|-----------|---------------|----------------|------------|-----------------|
| WHOLES-15 | E(1) AND E(2) | > OR = 1.30323 | AND A(1+2) | > OR = 0.26180 |
| WHOLES-30 | E(1) AND E(2) | > OR = 1.73205 | AND A(1+2) | > OR = 0.52360 |
| PARTS-15 | E(1) AND E(2) | < OR = 0.76733 | AND A(1+2) | < OR = -0.26180 |
| PARTS-30 | E(1) AND E(2) | < OR = 0.57735 | AND A(1+2) | < OR = -0.52360 |

DEGREES OF FREEDOM FOR (TOTAL) F-RATIO = 2, 13

TABLE MRA
(LEVEL = 1)
MULTIPLE RELATIONSHIP ANALYSIS

| | CORRELATIONS | | DIFFERENCES | | |
|---------------------------------|--------------|-------------|-------------|-----------|-----------|
| | CONDITION | CONDITION | A | INDUCTION | Z |
| | 1 | 2 | | | |
| IND. VAR. | | | | | |
| PERFORMC | B = 0.95198 | B = 0.97625 | -0.09277 | | -0.87726 |
| PERFORMC | W = 0.00000 | W = 0.00000 | 0.00000 | | 0.00000 |
| PERFORMC | B = 0.95198 | W = 0.00000 | 1.25964 | WHOLES-30 | 5.11919** |
| PERFORMC | W = 0.00000 | B = 0.97625 | 1.35241 | WHOLES-30 | 6.10888** |
| DEGREES OF FREEDOM FOR Z | | | | | |
| BETWEEN-CELL | 12 | 12 | | | |
| WITHIN-CELL | 21 | 21 | | | |
| PRACTICAL SIGNIFICANCE CRITERIA | | | | | |
| S-15 | A > OR = | | 0.26180 | | |
| S-30 | A > OR = | | 0.52360 | | |
| WHOLES-15 | A > OR = | | 0.26180 | | |
| WHOLES-30 | A > OR = | | 0.52360 | | |
| PARTS-15 | A < OR = | | -0.26180 | | |
| PARTS-30 | A < OR = | | -0.52360 | | |

NOTE B INDICATES BETWEEN-CELL CORRELATION, W INDICATES WITHIN-CELL CORRELATION
*P<.05 **P <. 01

TABLE MRA
(LEVEL = 2)
MULTIPLE RELATIONSHIP ANALYSIS

| | CORRELATIONS | | DIFFERENCES | | |
|---------------------------------|--------------|-------------|-------------|-----------|-----------|
| | CONDITION | CONDITION | A | INDUCTION | Z |
| | 1 | 2 | | | |
| IND. VAR. | | | | | |
| PERFORMC | B = 0.95748 | B = 0.98226 | -0.10401 | | -0.62701 |
| PERFORMC | W = 0.00000 | W = 0.00000 | 0.00000 | | 0.00000 |
| PERFORMC | B = 0.95748 | W = 0.00000 | 1.27815 | WHOLES-30 | 2.85438** |
| PERFORMC | W = 0.00000 | B = 0.98226 | 1.38217 | WHOLES-30 | 3.51531** |
| DEGREES OF FREEDOM FOR Z | | | | | |
| BETWEEN-CELL | 4 | 4 | | | |
| WITHIN-CELL | 5 | 5 | | | |
| PRACTICAL SIGNIFICANCE CRITERIA | | | | | |
| S-15 | A > OR = | | 0.26180 | | |
| S-30 | A > OR = | | 0.52360 | | |
| WHOLES-15 | A > OR = | | 0.26180 | | |
| WHOLES-30 | A > OR = | | 0.52360 | | |
| PARTS-15 | A < OR = | | -0.26180 | | |
| PARTS-30 | A < OR = | | -0.52360 | | |

NOTE B INDICATES BETWEEN-CELL CORRELATION, W INDICATES WITHIN-CELL CORRELATION
*P<.05 **P <. 01