**ภาคผนวก ค**

**การวิเคราะห์ความสัมพันธ์ของตัวแปร**

**การวิเคราะห์ข้อมูลด้วยสถิติ Multiple Linear RegressionAnalysis**

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| --- | --- | --- | --- | --- | --- |
|  | N | Mean | Std. Deviation | Skewness | Kurtosis |
| Statistic | Statistic | Statistic | Statistic | Std. Error | Statistic | Std. Error |
| KN | 400 | 16.0500 | 2.58150 | -1.022 | .122 | -.112 | .243 |
| INF | 400 | 34.3500 | 4.35602 | -.995 | .122 | .559 | .243 |
| AITI | 400 | 56.3000 | 5.83052 | .331 | .122 | .272 | .243 |
| AWA | 400 | 36.7500 | 5.16276 | .814 | .122 | -.056 | .243 |
| PAR | 400 | 37.0800 | 6.49763 | .209 | .122 | -1.020 | .243 |
| BEHA | 400 | 27.7500 | 3.70430 | .413 | .122 | -.263 | .243 |
| Valid N (listwise) | 400 |  |  |  |  |  |  |

**Regression**

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| **Descriptive Statistics** |
|  | Mean | Std. Deviation | N |
| BEHA | 27.7500 | 3.70430 | 400 |
| KN | 16.0500 | 2.58150 | 400 |
| INF | 34.3500 | 4.35602 | 400 |
| AITI | 36.7500 | 5.16276 | 400 |
| AWA | 37.0800 | 6.49763 | 400 |
| PAR | 56.3000 | 5.83052 | 400 |

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| **Variables Entered/Removeda** |
| Model | Variables Entered | Variables Removed | Method |
| 1 | PAR, INF, KN, AWA, AITIb | . | Enter |
| a. Dependent Variable: BEHA |
| b. All requested variables entered. |

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| **Model Summary** |
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .819a | .769 | .760 | 3.18627 |
| a. Predictors: (Constant), PAR, INF, KN, AWA, AITI |

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| **ANOVAa** |
| Model | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 1474.991 | 5 | 294.998 | 29.057 | .000b |
| Residual | 4000.009 | 394 | 10.152 |  |  |
| Total | 5475.000 | 399 |  |  |  |
| a. Dependent Variable: BEHA |
| b. Predictors: (Constant), PAR, INF, KN, AWA, AITI |

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| **Coefficientsa** |
| Model | Unstandardized Coefficients | Standardized Coefficients | t | Sig. |
| B | Std. Error | Beta |
| 1 | (Constant) | 22.901 | 2.671 |  | 8.575 | .000 |
| KN | .279 | .037 | .328 | 7.454 | .000 |
| INF | .270  | .033  | .425  | 8.102 | .000 |
| AITI | .227 | .039 | .317 | 5.840 | .000 |
| AWA | .112 | .028 | .197 | 4.000 | .000 |
| PAR | .462 | .071 | .322 | 6.468 | .000 |
| a. Dependent Variable: BEHA |

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| **Correlations** |
|  | BEHA | KN | INF | AITI | AWA | PAR |
| Pearson Correlation | BEHA | 1.000 | . |  |  |  |  |
| KN | .249 | 1.000 |  |  |  |  |
| INF | .257 | .092 | 1.000 |  |  |  |
| AITI | .248 | .405 | .230 | 1.000 |  |  |
| AWA | .235 | .385 | .117 | .341 | 1.000 |  |
| PAR | .256 | .284 | .038 | .542 | .339 | 1.000 |
| Sig. (1-tailed) | BEHA | . | .000 | .000 | .352 | .464 | .000 |
| KN | .000 | . | .033 | .000 | .000 | .000 |
| INF | .000 | .033 | . | .451 | .009 | .226 |
| AITI | .352 | .000 | .451 | . | .000 | .000 |
| AWA | .464 | .000 | .009 | .000 | . | .000 |
| PAR | .000 | .000 | .226 | .000 | .000 | . |
| N | BEHA | 400 | 400 | 400 | 400 | 400 | 400 |
| KN | 400 | 400 | 400 | 400 | 400 | 400 |
| INF | 400 | 400 | 400 | 400 | 400 | 400 |
| AITI | 400 | 400 | 400 | 400 | 400 | 400 |
| AWA | 400 | 400 | 400 | 400 | 400 | 400 |
| PAR | 400 | 400 | 400 | 400 | 400 | 400 |

 **วิเคราะห์ด้วยสถิติ MANOVA**

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|  **Descriptive Statistics** |
|  | N | Mean | Std. Deviation | Skewness | Kurtosis |
| Statistic | Statistic | Statistic | Statistic | Std. Error | Statistic | Std. Error |
| KN1 | 30 | 15.6333 | 2.67148 | -.821 | .427 | -.371 | .833 |
| KN2 | 30 | 18.3667 | 1.73172 | -.698 | .427 | -.751 | .833 |
| INF1 | 30 | 34.8000 | 4.60435 | -1.275 | .427 | 1.406 | .833 |
| INF2 | 30 | 45.2333 | 2.07918 | .061 | .427 | -1.104 | .833 |
| ATTI1 | 30 | 57.0333 | 5.82790 | .542 | .427 | .768 | .833 |
| ATTI2 | 30 | 70.2667 | 3.41329 | -.356 | .427 | -1.498 | .833 |
| AWA1 | 30 | 37.5000 | 5.53204 | .623 | .427 | -.268 | .833 |
| AWA2 | 30 | 47.3333 | 2.38289 | -.835 | .427 | .101 | .833 |
| PAR1 | 30 | 37.5000 | 5.53204 | .623 | .427 | -.268 | .833 |
| PAR2 | 30 | 45.4667 | 2.88556 | .023 | .427 | -.790 | .833 |
| BEHA1 | 30 | 28.4333 | 3.84782 | .209 | .427 | -.397 | .833 |
| BEHA2 | 30 | 36.8667 | 1.88887 | -.222 | .427 | -.980 | .833 |
| Valid N (listwise) | 30 |  |  |  |  |  |  |

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| **Within-Subjects Factors** |
| Measure | time | Dependent Variable |
| KN | 1 | KN1 |
| 2 | KN2 |
| INF | 1 | INF1 |
| 2 | INF2 |
| ATTI | 1 | ATTI1 |
| 2 | ATTI2 |
| AWA | 1 | AWA1 |
| 2 | AWA2 |
| PAR | 1 | PAR1 |
| 2 | PAR2 |
| BEHA | 1 | BEHA1 |
| 2 | BEHA2 |

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| **Descriptive Statistics** |
|  | Mean | Std. Deviation | N |
| KN1 | 15.6333 | 2.67148 | 30 |
| KN2 | 18.3667 | 1.73172 | 30 |
| INF1 | 34.8000 | 4.60435 | 30 |
| INF2 | 45.2333 | 2.07918 | 30 |
| ATTI1 | 57.0333 | 5.82790 | 30 |
| ATTI2 | 70.2667 | 3.41329 | 30 |
| AWA1 | 37.5000 | 5.53204 | 30 |
| AWA2 | 47.3333 | 2.38289 | 30 |
| PAR1 | 37.5000 | 5.53204 | 30 |
| PAR2 | 45.4667 | 2.88556 | 30 |
| BEHA1 | 28.4333 | 3.84782 | 30 |
| BEHA2 | 36.8667 | 1.88887 | 30 |

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| **Multivariate Testsa** |
| Effect | Value | F | Hypothesis df | Error df | Sig. |
| Between Subjects | Intercept | Pillai's Trace | .999 | 2968.865b | 6.000 | 24.000 | .000 |
| Wilks' Lambda | .001 | 2968.865b | 6.000 | 24.000 | .000 |
| Hotelling's Trace | 742.216 | 2968.865b | 6.000 | 24.000 | .000 |
| Roy's Largest Root | 742.216 | 2968.865b | 6.000 | 24.000 | .000 |
| Within Subjects | time | Pillai's Trace | .940 | 63.222b | 6.000 | 24.000 | .000 |
| Wilks' Lambda | .060 | 63.222b | 6.000 | 24.000 | .000 |
| Hotelling's Trace | 15.805 | 63.222b | 6.000 | 24.000 | .000 |
| Roy's Largest Root | 15.805 | 63.222b | 6.000 | 24.000 | .000 |
| a. Design: Intercept  Within Subjects Design: time |
| b. Exact statistic |

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| **Multivariatea,b** |
| Within Subjects Effect | Value | F | Hypothesis df | Error df | Sig. |
| time | Pillai's Trace | .940 | 63.222c | 6.000 | 24.000 | .000 |
| Wilks' Lambda | .060 | 63.222c | 6.000 | 24.000 | .000 |
| Hotelling's Trace | 15.805 | 63.222c | 6.000 | 24.000 | .000 |
| Roy's Largest Root | 15.805 | 63.222c | 6.000 | 24.000 | .000 |
| a. Design: Intercept  Within Subjects Design: time |
| b. Tests are based on averaged variables. |
| c. Exact statistic |

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| **Tests of Within-Subjects Contrasts** |
| Source | Measure | time | Type III Sum of Squares | df | Mean Square | F | Sig. |
| time | KN | Linear | 112.067 | 1 | 112.067 | 22.579 | .000 |
| INF | Linear | 1632.817 | 1 | 1632.817 | 107.207 | .000 |
| ATTI | Linear | 2626.817 | 1 | 2626.817 | 128.098 | .000 |
| AWA | Linear | 1450.417 | 1 | 1450.417 | 117.465 | .000 |
| PAR | Linear | 952.017 | 1 | 952.017 | 83.540 | .000 |
| BEHA | Linear | 1066.817 | 1 | 1066.817 | 113.042 | .000 |
| Error(time) | KN | Linear | 143.933 | 29 | 4.963 |  |  |
| INF | Linear | 441.683 | 29 | 15.230 |  |  |
| ATTI | Linear | 594.683 | 29 | 20.506 |  |  |
| AWA | Linear | 358.083 | 29 | 12.348 |  |  |
| PAR | Linear | 330.483 | 29 | 11.396 |  |  |
| BEHA | Linear | 273.683 | 29 | 9.437 |  |  |

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| **Tests of Between-Subjects Effects** |
| Transformed Variable: Average |
| Source | Measure | Type III Sum of Squares | df | Mean Square | F | Sig. |
| Intercept | KN | 17340.000 | 1 | 17340.000 | 3352.400 | .000 |
| INF | 96080.017 | 1 | 96080.017 | 9334.928 | .000 |
| ATTI | 243079.350 | 1 | 243079.350 | 9681.111 | .000 |
| AWA | 107950.417 | 1 | 107950.417 | 4510.355 | .000 |
| PAR | 103252.017 | 1 | 103252.017 | 3749.995 | .000 |
| BEHA | 63961.350 | 1 | 63961.350 | 7157.550 | .000 |
| Error | KN | 150.000 | 29 | 5.172 |  |  |
| INF | 298.483 | 29 | 10.293 |  |  |
| ATTI | 728.150 | 29 | 25.109 |  |  |
| AWA | 694.083 | 29 | 23.934 |  |  |
| PAR | 798.483 | 29 | 27.534 |  |  |
| BEHA | 259.150 | 29 | 8.936 |  |  |