

## **Lampiran 1** **Kuisisioner**

|     |
|-----|
| NO: |
|-----|

Dengan Hormat,

Dalam rangka untuk melakukan penelitian pengembangan teori, bersama ini saya mohon bantuan Ibu/Bapak/Sdr bersedia menjadi responden dalam penelitian yang saya lakukan (angket terlampir).

Penelitian ini dilakukan dengan tujuan menganalisis pengaruh *Product Quality*, *Service Quality*, *Store Image*, *Promotion*, dan *Brand Experience* terhadap *Trust* dan *Commitment* pada Kentucky Fried Chicken jalan raya darmo di Surabaya. Demikian surat pengantar ini disampaikan, atas perhatian serta partisipasi yang diberikan, saya ucapkan terima kasih.

Hormat saya,

(Tan Fuk Jiang )

Mahasiswa S1 Bisnis Manajemen Universitas Widya Mandala

### **I. Identifikasi Responden**

1. Apakah anda sudah pernah mengkonsumsi KFC?  
A. Ya    B. Tidak
2. Apakah anda berdomisili di Surabaya?  
A. Ya    B. Tidak
3. Jenis Kelamin?  
A. Laki-Laki                                  B. Perempuan
4. Berapakah usia anda saat ini?  
A. < 18 thn                                  B. ≥ 18 thn

### Keterangan Alternatif Jawaban

STS = Sangat Tidak Setuju

TS = Tidak Setuju

N = Netral

S = Setuju

SS = Sangat Setuju

### II. Berilah Tanda Silang (X) pada Jawaban yang Anda Pilih

| No.                                    | Pernyataan  | Alternatif Jawaban |    |   |   |    |
|--|---|--------------------|----|---|---|----|
|  |   | STS                | TS | N | S | SS |
| <b>Product Quality (X<sub>1</sub>)</b> |   |                    |    |   |   |    |
| 1                                      | KFC menawarkan makanan dan minuman yang menyehatkan.                |                    |    |   |   |    |
| 2                                      | KFC menghadirkan makanan dan minuman yang lezat.                    |                    |    |   |   |    |
| 3                                      | KFC menawarkan makanan dan minuman yang segar/tidak basi.           |                    |    |   |   |    |
| <b>Service Quality (X<sub>2</sub>)</b> |   |                    |    |   |   |    |
| 1                                      | Staf selalu bersedia untuk membantu saya.                           |                    |    |   |   |    |
| 2                                      | Perilaku staf menanamkan rasa kepercayaan.                          |                    |    |   |   |    |
| 3                                      | Layanan yang efisien di KFC menyenangkan hati saya.                 |                    |    |   |   |    |
| <b>Store Image (X<sub>3</sub>)</b>     |   |                    |    |   |   |    |
| 1                                      | Suasana restoran KFC membuat saya tenang.                           |                    |    |   |   |    |
| 2                                      | Merchandise KFC ini tersedia bila diperlukan.                       |                    |    |   |   |    |
| 3                                      | Tata letak fasilitas memungkinkan saya untuk bergerak dengan mudah. |                    |    |   |   |    |

|                                  |   |  |  |  |  |  |
|----------------------------------|---|--|--|--|--|--|
| 4                                | Restoran bersih dan rapi.                 |  |  |  |  |  |
| <b>Promotion (X<sub>4</sub>)</b> |   |  |  |  |  |  |
| 1                                | Promosi yang ada di KFC dapat di percaya. |  |  |  |  |  |
| 2                                | Promosi yang dilakukan KFC jujur.         |  |  |  |  |  |
| 3                                | Promosi yang dilakukan sudah kredibel.    |  |  |  |  |  |

III. Berilah Tanda Silang (X) pada Jawaban yang Anda Pilih (Angka 1 paling mendekati pernyataan sebelah kiri dan 5 paling mendekati pernyataan sebelah kanan)

| No                                     | Pernyataan  |
|--|---|
| <b>Brand Experience(Y<sub>1</sub>)</b> |   |
| 1                                      | Kecewa = 1, 2, 3, 4, 5 = Puas                               |
| 2                                      | Tidak Menyenangkan = 1, 2, 3, 4, 5 = Menyenangkan           |
| 3                                      | Buruk = 1, 2, 3, 4, 5 = Baik                                |
| 4                                      | Biasa = 1, 2, 3, 4, 5 = Tertarik                            |
| 5                                      | Tenang = 1, 2, 3, 4, 5 = Bersemangat                        |
| 6                                      | Tidak Tergiuir = 1, 2, 3, 4, 5 = Tergiuir                   |
| 7                                      | Tidak Terpengaruh = 1, 2, 3, 4, 5 = Terpengaruh             |
| 8                                      | Tidak Meyakinkan = 1, 2, 3, 4, 5 = Meyakinkan               |
| 9                                      | Tidak menggairahkan = 1, 2, 3, 4, 5 = Menggairahkan         |
| 10                                     | Tidak Memikat = 1, 2, 3, 4, 5 = Memikat                     |
| 11                                     | Tidak Berharga = 1, 2, 3, 4, 5 = Berharga                   |
| 12                                     | Tidak Membuat Penasaran = 1, 2, 3, 4, 5 = Membuat Penasaran |
| 13                                     | Tidak Informatif = 1, 2, 3, 4, 5 = Informatif               |
| 14                                     | Tidak Mudah Diingat = 1, 2, 3, 4, 5 = Mudah Diingat         |

**VI. Berilah Tanda Silang (X) pada Jawaban yang Anda Pilih**

| No.                               | Pernyataan   | Alternatif Jawaban |    |   |   |    |
|-----------------------------------|--|--------------------|----|---|---|----|
|                                   |  | STS                | TS | N | S | SS |
| <b>Trust (Y<sub>2</sub>)</b>      |  |                    |    |   |   |    |
| 1                                 | Saya percaya KFC dapat di andalkan                 |                    |    |   |   |    |
| 2                                 | Saya percaya KFC jujur pada saya                   |                    |    |   |   |    |
| 3                                 | Saya percaya KFC peduli kepada saya                |                    |    |   |   |    |
| 4                                 | KFC memiliki kredibilitas yang baik                |                    |    |   |   |    |
| <b>Commitment (Y<sub>3</sub>)</b> |  |                    |    |   |   |    |
| 1                                 | Saya bangga menjadi konsumen KFC                   |                    |    |   |   |    |
| 2                                 | Saya merasa memiliki KFC                           |                    |    |   |   |    |
| 3                                 | Saya memperhatikan pengembangan KFC jangka panjang |                    |    |   |   |    |
| 4                                 | Saya selalu setia mendukung KFC                    |                    |    |   |   |    |

**-Atas Perhatiannya Saya Ucapkan Terima Kasih-**

## Lampiran 2 Tabulasi

| No | PQ1 | PQ2 | PQ3 | SQ1 | SQ2 | SQ3 | SI1 | SI2 | SI3 |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1  | 3   | 2   | 2   | 2   | 3   | 4   | 3   | 4   | 5   |
| 2  | 3   | 3   | 4   | 3   | 4   | 5   | 3   | 2   | 4   |
| 3  | 2   | 2   | 3   | 2   | 3   | 2   | 2   | 3   | 2   |
| 4  | 2   | 3   | 2   | 3   | 3   | 2   | 4   | 2   | 3   |
| 5  | 2   | 2   | 3   | 2   | 2   | 2   | 2   | 3   | 4   |
| 6  | 5   | 3   | 4   | 3   | 3   | 3   | 4   | 5   | 2   |
| 7  | 5   | 3   | 4   | 2   | 3   | 4   | 5   | 4   | 3   |
| 8  | 3   | 4   | 2   | 4   | 5   | 3   | 5   | 4   | 5   |
| 9  | 3   | 2   | 4   | 3   | 3   | 2   | 1   | 2   | 4   |
| 10 | 4   | 3   | 3   | 3   | 4   | 4   | 4   | 5   | 3   |
| 11 | 3   | 2   | 2   | 2   | 3   | 3   | 3   | 4   | 5   |
| 12 | 2   | 3   | 2   | 3   | 3   | 2   | 5   | 4   | 4   |
| 13 | 4   | 3   | 4   | 4   | 4   | 3   | 4   | 3   | 5   |
| 14 | 3   | 4   | 3   | 4   | 5   | 3   | 5   | 3   | 4   |
| 15 | 3   | 2   | 3   | 2   | 4   | 3   | 4   | 3   | 4   |
| 16 | 2   | 3   | 2   | 3   | 4   | 4   | 3   | 5   | 4   |
| 17 | 3   | 3   | 4   | 4   | 4   | 2   | 5   | 4   | 3   |
| 18 | 3   | 2   | 3   | 2   | 3   | 2   | 2   | 3   | 4   |
| 19 | 3   | 3   | 4   | 3   | 4   | 3   | 4   | 3   | 4   |
| 20 | 5   | 4   | 5   | 4   | 5   | 3   | 4   | 5   | 5   |
| 21 | 3   | 2   | 3   | 2   | 2   | 2   | 3   | 1   | 2   |
| 22 | 4   | 3   | 4   | 4   | 5   | 3   | 3   | 5   | 2   |
| 23 | 3   | 3   | 4   | 3   | 4   | 4   | 5   | 4   | 3   |
| 24 | 4   | 3   | 4   | 4   | 5   | 2   | 3   | 5   | 3   |
| 25 | 2   | 2   | 3   | 2   | 3   | 3   | 2   | 1   | 2   |
| 26 | 4   | 3   | 4   | 4   | 5   | 5   | 3   | 5   | 5   |
| 27 | 2   | 1   | 2   | 2   | 3   | 2   | 3   | 2   | 3   |
| 28 | 4   | 4   | 3   | 4   | 5   | 2   | 5   | 2   | 5   |
| 29 | 3   | 5   | 4   | 3   | 4   | 3   | 4   | 3   | 4   |
| 30 | 3   | 4   | 5   | 4   | 3   | 2   | 2   | 3   | 4   |
| 31 | 3   | 5   | 4   | 3   | 4   | 4   | 4   | 4   | 3   |
| 32 | 3   | 4   | 5   | 3   | 4   | 2   | 4   | 2   | 2   |
| 33 | 2   | 2   | 3   | 2   | 1   | 3   | 2   | 1   | 3   |
| 34 | 3   | 4   | 3   | 3   | 4   | 4   | 4   | 4   | 5   |
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| 36 | 3   | 3   | 4   | 3   | 4   | 3   | 4   | 3   | 3   |
| 37 | 2   | 4   | 3   | 2   | 3   | 2   | 3   | 2   | 2   |
| 38 | 4   | 3   | 4   | 4   | 5   | 3   | 5   | 3   | 4   |

|    |   |   |   |   |   |   |   |   |   |
|----|---|---|---|---|---|---|---|---|---|
| 39 | 2 | 4 | 3 | 2 | 3 | 1 | 3 | 1 | 3 |
| 40 | 4 | 5 | 4 | 4 | 5 | 4 | 3 | 4 | 5 |
| 41 | 2 | 2 | 3 | 2 | 3 | 1 | 3 | 1 | 2 |
| 42 | 2 | 3 | 2 | 2 | 3 | 3 | 5 | 3 | 4 |
| 43 | 3 | 2 | 4 | 3 | 4 | 2 | 4 | 2 | 3 |
| 44 | 3 | 4 | 5 | 2 | 3 | 1 | 3 | 2 | 2 |
| 45 | 2 | 3 | 2 | 2 | 3 | 2 | 3 | 2 | 1 |
| 46 | 3 | 4 | 5 | 3 | 4 | 5 | 4 | 5 | 5 |
| 47 | 2 | 4 | 3 | 2 | 3 | 2 | 3 | 2 | 1 |
| 48 | 2 | 3 | 2 | 3 | 3 | 2 | 3 | 2 | 3 |
| 49 | 2 | 3 | 2 | 2 | 2 | 1 | 2 | 1 | 1 |
| 50 | 3 | 4 | 3 | 3 | 4 | 4 | 4 | 3 | 5 |
| 51 | 2 | 2 | 3 | 2 | 3 | 1 | 3 | 2 | 4 |
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| 53 | 2 | 2 | 3 | 2 | 1 | 3 | 3 | 4 | 2 |
| 54 | 4 | 4 | 5 | 3 | 4 | 3 | 3 | 4 | 3 |
| 55 | 5 | 3 | 3 | 4 | 1 | 2 | 4 | 2 | 4 |
| 56 | 2 | 4 | 3 | 4 | 5 | 4 | 4 | 5 | 4 |
| 57 | 2 | 3 | 4 | 3 | 3 | 1 | 3 | 2 | 3 |
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| 59 | 2 | 4 | 3 | 3 | 3 | 3 | 3 | 2 | 3 |
| 60 | 3 | 4 | 4 | 5 | 2 | 4 | 5 | 4 | 5 |
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| 75 | 3 | 2 | 3 | 4 | 2 | 2 | 4 | 3 | 4 |
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| 77 | 3 | 2 | 3 | 4 | 2 | 2 | 4 | 3 | 4 |
| 78 | 3 | 2 | 4 | 4 | 3 | 3 | 4 | 2 | 4 |
| 79 | 1 | 2 | 3 | 2 | 2 | 4 | 2 | 1 | 2 |
| 80 | 3 | 5 | 3 | 4 | 3 | 2 | 4 | 5 | 4 |

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| 81  | 3 | 3 | 4 | 4 | 3 | 2 | 4 | 3 | 4 |
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| 85  | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 2 | 3 |
| 86  | 3 | 3 | 4 | 3 | 3 | 2 | 3 | 5 | 3 |
| 87  | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 2 | 4 |
| 88  | 4 | 4 | 5 | 5 | 3 | 3 | 5 | 4 | 5 |
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| 90  | 5 | 5 | 3 | 5 | 5 | 4 | 5 | 3 | 5 |
| 91  | 3 | 3 | 3 | 4 | 4 | 5 | 4 | 3 | 4 |
| 92  | 4 | 4 | 5 | 5 | 5 | 3 | 5 | 4 | 5 |
| 93  | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 3 |
| 94  | 4 | 4 | 4 | 5 | 4 | 4 | 5 | 4 | 5 |
| 95  | 2 | 3 | 2 | 3 | 2 | 2 | 3 | 2 | 3 |
| 96  | 4 | 3 | 4 | 5 | 4 | 3 | 5 | 4 | 5 |
| 97  | 3 | 4 | 5 | 4 | 4 | 2 | 4 | 3 | 4 |
| 98  | 4 | 3 | 4 | 5 | 4 | 4 | 5 | 4 | 5 |
| 99  | 3 | 4 | 5 | 4 | 3 | 4 | 4 | 3 | 4 |
| 100 | 4 | 3 | 4 | 5 | 4 | 4 | 5 | 4 | 5 |
| 101 | 4 | 3 | 3 | 4 | 5 | 5 | 5 | 3 | 3 |
| 102 | 4 | 4 | 5 | 5 | 4 | 3 | 4 | 4 | 5 |
| 103 | 4 | 5 | 5 | 4 | 4 | 4 | 5 | 3 | 5 |
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| 105 | 4 | 5 | 5 | 3 | 5 | 4 | 5 | 3 | 5 |
| 106 | 4 | 5 | 5 | 5 | 3 | 5 | 4 | 4 | 4 |
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| 108 | 4 | 5 | 5 | 5 | 5 | 4 | 3 | 4 | 4 |
| 109 | 4 | 3 | 3 | 5 | 4 | 5 | 5 | 3 | 5 |
| 110 | 4 | 3 | 3 | 5 | 5 | 3 | 4 | 4 | 3 |
| 111 | 4 | 4 | 4 | 4 | 3 | 5 | 5 | 3 | 5 |
| 112 | 4 | 4 | 4 | 5 | 5 | 3 | 4 | 4 | 3 |
| 113 | 4 | 4 | 4 | 3 | 4 | 4 | 4 | 3 | 5 |
| 114 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 1 | 2 |
| 115 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 3 |
| 116 | 3 | 4 | 4 | 3 | 3 | 3 | 3 | 2 | 4 |
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| 119 | 4 | 4 | 4 | 5 | 3 | 3 | 4 | 3 | 4 |
| 120 | 3 | 2 | 2 | 3 | 4 | 4 | 3 | 2 | 3 |
| 121 | 4 | 5 | 5 | 3 | 4 | 4 | 5 | 3 | 5 |
| 122 | 4 | 4 | 4 | 5 | 5 | 5 | 4 | 4 | 3 |

|     |   |   |   |   |   |   |   |   |   |
|-----|---|---|---|---|---|---|---|---|---|
| 123 | 4 | 4 | 4 | 5 | 3 | 3 | 5 | 3 | 5 |
| 124 | 4 | 5 | 5 | 5 | 5 | 5 | 3 | 4 | 4 |
| 125 | 4 | 4 | 4 | 5 | 5 | 5 | 4 | 3 | 5 |
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| 127 | 3 | 4 | 4 | 5 | 5 | 5 | 5 | 3 | 5 |
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| 137 | 3 | 3 | 3 | 5 | 5 | 5 | 5 | 4 | 5 |
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| 142 | 3 | 3 | 3 | 5 | 5 | 5 | 5 | 4 | 5 |
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| 145 | 3 | 3 | 3 | 5 | 5 | 5 | 5 | 4 | 5 |
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| 164 | 4 | 4 | 4 | 2 | 2 | 2 | 5 | 4 | 4 |



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|-----|---|---|---|---|---|---|---|---|---|
| 165 | 4 | 3 | 3 | 4 | 5 | 4 | 3 | 4 | 5 |
| 166 | 4 | 3 | 3 | 5 | 4 | 5 | 5 | 4 | 3 |
| 167 | 4 | 5 | 5 | 4 | 4 | 4 | 4 | 4 | 5 |
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| 170 | 4 | 4 | 4 | 3 | 3 | 3 | 5 | 4 | 3 |
| 171 | 4 | 4 | 4 | 3 | 2 | 3 | 4 | 4 | 5 |
| 172 | 4 | 4 | 4 | 3 | 2 | 3 | 5 | 4 | 4 |
| 173 | 4 | 3 | 3 | 2 | 2 | 2 | 4 | 4 | 5 |
| 174 | 4 | 4 | 4 | 3 | 2 | 3 | 3 | 4 | 5 |
| 175 | 4 | 4 | 4 | 2 | 2 | 2 | 4 | 4 | 5 |
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| 181 | 2 | 2 | 2 | 4 | 4 | 4 | 3 | 4 | 3 |
| 182 | 4 | 2 | 4 | 2 | 4 | 2 | 4 | 4 | 5 |
| 183 | 4 | 4 | 4 | 2 | 2 | 2 | 5 | 3 | 5 |
| 184 | 4 | 3 | 4 | 2 | 3 | 2 | 5 | 3 | 5 |
| 185 | 4 | 4 | 4 | 2 | 2 | 2 | 4 | 3 | 4 |
| 186 | 2 | 2 | 2 | 4 | 4 | 4 | 5 | 3 | 5 |
| 187 | 4 | 3 | 4 | 2 | 3 | 2 | 5 | 3 | 5 |
| 188 | 2 | 3 | 2 | 4 | 3 | 4 | 3 | 4 | 5 |
| 189 | 3 | 2 | 3 | 3 | 4 | 3 | 5 | 4 | 3 |
| 190 | 2 | 3 | 2 | 4 | 3 | 4 | 3 | 4 | 5 |
| 191 | 3 | 2 | 3 | 3 | 4 | 3 | 3 | 3 | 2 |
| 192 | 4 | 3 | 4 | 2 | 3 | 2 | 4 | 4 | 3 |
| 193 | 1 | 2 | 1 | 5 | 4 | 5 | 1 | 1 | 2 |
| 194 | 2 | 1 | 2 | 4 | 5 | 4 | 2 | 2 | 1 |
| 195 | 2 | 2 | 2 | 4 | 4 | 4 | 2 | 2 | 2 |
| 196 | 1 | 2 | 1 | 5 | 4 | 5 | 1 | 1 | 2 |
| 197 | 1 | 2 | 1 | 5 | 4 | 5 | 1 | 1 | 2 |
| 198 | 4 | 4 | 4 | 2 | 2 | 2 | 4 | 4 | 4 |
| 199 | 2 | 1 | 2 | 4 | 5 | 4 | 2 | 2 | 1 |
| 200 | 1 | 2 | 1 | 5 | 4 | 5 | 1 | 1 | 2 |

| No | SI4 | P1 | P2 | P3 | BE1 | BE2 | BE3 | BE4 | BE5 |
|----|-----|----|----|----|-----|-----|-----|-----|-----|
| 1  | 2   | 3  | 3  | 3  | 4   | 4   | 4   | 2   | 3   |
| 2  | 3   | 3  | 4  | 3  | 5   | 3   | 5   | 3   | 4   |
| 3  | 4   | 3  | 3  | 3  | 2   | 2   | 2   | 2   | 3   |
| 4  | 5   | 3  | 3  | 2  | 4   | 3   | 3   | 4   | 3   |

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|----|---|---|---|---|---|---|---|---|---|
| 5  | 2 | 3 | 2 | 3 | 2 | 4 | 3 | 4 | 2 |
| 6  | 3 | 3 | 3 | 3 | 5 | 5 | 5 | 4 | 3 |
| 7  | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 2 | 3 |
| 8  | 3 | 5 | 5 | 4 | 5 | 5 | 5 | 4 | 3 |
| 9  | 3 | 4 | 3 | 3 | 1 | 2 | 2 | 3 | 3 |
| 10 | 4 | 3 | 4 | 3 | 5 | 5 | 5 | 3 | 4 |
| 11 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 2 | 3 |
| 12 | 3 | 3 | 3 | 2 | 5 | 3 | 4 | 5 | 3 |
| 13 | 4 | 5 | 4 | 5 | 4 | 5 | 4 | 4 | 4 |
| 14 | 5 | 5 | 5 | 4 | 5 | 4 | 5 | 3 | 5 |
| 15 | 2 | 3 | 4 | 4 | 4 | 4 | 4 | 2 | 4 |
| 16 | 3 | 3 | 4 | 3 | 5 | 5 | 5 | 3 | 4 |
| 17 | 2 | 5 | 4 | 4 | 4 | 4 | 4 | 3 | 5 |
| 18 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 2 | 3 |
| 19 | 5 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 4 |
| 20 | 4 | 4 | 5 | 4 | 5 | 4 | 5 | 4 | 5 |
| 21 | 2 | 3 | 2 | 3 | 1 | 3 | 1 | 2 | 2 |
| 22 | 4 | 4 | 5 | 4 | 5 | 5 | 5 | 4 | 5 |
| 23 | 3 | 4 | 4 | 4 | 4 | 5 | 4 | 3 | 4 |
| 24 | 4 | 4 | 5 | 4 | 3 | 4 | 4 | 4 | 5 |
| 25 | 3 | 3 | 3 | 3 | 2 | 3 | 1 | 2 | 3 |
| 26 | 4 | 4 | 5 | 4 | 3 | 4 | 3 | 4 | 5 |
| 27 | 2 | 4 | 3 | 4 | 3 | 2 | 2 | 2 | 3 |
| 28 | 4 | 1 | 1 | 2 | 5 | 4 | 5 | 4 | 5 |
| 29 | 3 | 1 | 2 | 3 | 4 | 5 | 4 | 3 | 4 |
| 30 | 2 | 1 | 3 | 3 | 4 | 3 | 3 | 4 | 5 |
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| 199 | 2 | 3 | 1 | 2 | 2 | 1 | 2 | 3 | 1 |
| 200 | 1 | 1 | 3 | 2 | 1 | 2 | 1 | 1 | 2 |

| No | BE6 | BE7 | BE8 | BE9 | BE10 | BE11 | BE12 | BE13 | BE14 |
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| 163 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 |
| 164 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 165 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 |
| 166 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 |
| 167 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 168 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 169 | 3 | 3 | 3 | 4 | 3 | 3 | 4 | 3 | 3 |
| 170 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 171 | 3 | 3 | 3 | 4 | 3 | 3 | 4 | 3 | 3 |
| 172 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 3 |
| 173 | 4 | 4 | 4 | 5 | 4 | 4 | 4 | 4 | 4 |
| 174 | 3 | 3 | 3 | 4 | 3 | 3 | 4 | 3 | 3 |
| 175 | 4 | 4 | 4 | 5 | 4 | 4 | 4 | 4 | 4 |
| 176 | 3 | 3 | 3 | 4 | 3 | 3 | 4 | 3 | 3 |
| 177 | 4 | 4 | 4 | 3 | 4 | 4 | 3 | 4 | 4 |
| 178 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 179 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 180 | 4 | 4 | 4 | 3 | 4 | 4 | 3 | 4 | 4 |

|     |   |   |   |   |   |   |   |   |   |
|-----|---|---|---|---|---|---|---|---|---|
| 181 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 182 | 4 | 4 | 4 | 2 | 4 | 4 | 2 | 4 | 4 |
| 183 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 184 | 4 | 4 | 4 | 3 | 4 | 4 | 3 | 4 | 4 |
| 185 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 186 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 187 | 4 | 4 | 4 | 3 | 4 | 4 | 3 | 4 | 4 |
| 188 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 2 |
| 189 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 3 |
| 190 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 2 |
| 191 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 3 |
| 192 | 4 | 4 | 4 | 3 | 4 | 4 | 3 | 4 | 4 |
| 193 | 3 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 |
| 194 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 |
| 195 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 196 | 3 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 |
| 197 | 3 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 |
| 198 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 199 | 3 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 |
| 200 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 |

| No | T1 | T2 | T3 | T4 | C1 | C2 | C3 | C4 |
|----|----|----|----|----|----|----|----|----|
| 1  | 3  | 4  | 5  | 4  | 4  | 3  | 3  | 5  |
| 2  | 4  | 5  | 3  | 4  | 5  | 5  | 4  | 4  |
| 3  | 2  | 1  | 3  | 2  | 2  | 1  | 3  | 2  |
| 4  | 3  | 2  | 3  | 1  | 3  | 5  | 4  | 1  |
| 5  | 3  | 4  | 3  | 2  | 2  | 3  | 2  | 5  |
| 6  | 4  | 3  | 3  | 2  | 3  | 4  | 5  | 2  |
| 7  | 2  | 3  | 2  | 4  | 4  | 3  | 3  | 4  |
| 8  | 4  | 5  | 4  | 4  | 5  | 4  | 5  | 4  |
| 9  | 4  | 3  | 4  | 2  | 2  | 3  | 3  | 4  |
| 10 | 3  | 4  | 3  | 3  | 4  | 3  | 4  | 3  |
| 11 | 3  | 4  | 3  | 3  | 3  | 4  | 3  | 5  |
| 12 | 4  | 3  | 3  | 2  | 3  | 3  | 3  | 2  |
| 13 | 4  | 3  | 4  | 3  | 3  | 4  | 4  | 4  |
| 14 | 4  | 5  | 4  | 3  | 4  | 3  | 5  | 4  |
| 15 | 3  | 3  | 3  | 3  | 3  | 4  | 4  | 4  |
| 16 | 5  | 4  | 5  | 3  | 4  | 3  | 5  | 3  |
| 17 | 3  | 4  | 3  | 4  | 4  | 3  | 4  | 5  |
| 18 | 2  | 3  | 2  | 1  | 2  | 4  | 3  | 2  |
| 19 | 3  | 4  | 3  | 3  | 3  | 4  | 5  | 5  |
| 20 | 4  | 5  | 4  | 4  | 5  | 4  | 3  | 4  |

|    |   |   |   |   |   |   |   |   |
|----|---|---|---|---|---|---|---|---|
| 21 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 |
| 22 | 4 | 5 | 5 | 3 | 4 | 3 | 5 | 4 |
| 23 | 3 | 4 | 3 | 4 | 4 | 5 | 3 | 5 |
| 24 | 4 | 5 | 4 | 4 | 5 | 4 | 5 | 4 |
| 25 | 3 | 4 | 3 | 3 | 3 | 5 | 4 | 5 |
| 26 | 5 | 5 | 5 | 4 | 5 | 3 | 4 | 4 |
| 27 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | 4 |
| 28 | 4 | 3 | 4 | 1 | 2 | 5 | 5 | 2 |
| 29 | 3 | 4 | 3 | 3 | 3 | 4 | 4 | 5 |
| 30 | 4 | 5 | 5 | 2 | 3 | 3 | 3 | 4 |
| 31 | 3 | 4 | 3 | 4 | 4 | 3 | 4 | 5 |
| 32 | 5 | 3 | 5 | 1 | 2 | 2 | 4 | 2 |
| 33 | 2 | 2 | 2 | 1 | 1 | 3 | 1 | 3 |
| 34 | 5 | 5 | 5 | 3 | 4 | 5 | 4 | 4 |
| 35 | 4 | 3 | 4 | 3 | 3 | 4 | 3 | 4 |
| 36 | 4 | 3 | 3 | 2 | 3 | 3 | 4 | 2 |
| 37 | 3 | 2 | 3 | 2 | 4 | 2 | 3 | 3 |
| 38 | 5 | 4 | 5 | 2 | 3 | 4 | 5 | 3 |
| 39 | 4 | 3 | 5 | 3 | 1 | 3 | 3 | 4 |
| 40 | 5 | 5 | 4 | 3 | 4 | 5 | 5 | 4 |
| 41 | 2 | 1 | 2 | 3 | 1 | 2 | 3 | 2 |
| 42 | 2 | 3 | 2 | 2 | 3 | 4 | 3 | 2 |
| 43 | 2 | 1 | 2 | 2 | 2 | 3 | 4 | 2 |
| 44 | 3 | 3 | 1 | 2 | 2 | 2 | 3 | 2 |
| 45 | 3 | 1 | 1 | 2 | 2 | 1 | 3 | 2 |
| 46 | 4 | 5 | 4 | 4 | 5 | 5 | 4 | 4 |
| 47 | 1 | 2 | 1 | 2 | 2 | 1 | 3 | 3 |
| 48 | 3 | 3 | 3 | 1 | 2 | 3 | 3 | 2 |
| 49 | 2 | 1 | 1 | 1 | 3 | 1 | 2 | 2 |
| 50 | 2 | 4 | 2 | 3 | 4 | 4 | 4 | 3 |
| 51 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 2 |
| 52 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 |
| 53 | 2 | 2 | 2 | 2 | 3 | 2 | 1 | 1 |
| 54 | 3 | 3 | 3 | 3 | 4 | 3 | 4 | 4 |
| 55 | 2 | 3 | 2 | 2 | 1 | 2 | 1 | 1 |
| 56 | 4 | 5 | 3 | 4 | 5 | 5 | 5 | 5 |
| 57 | 3 | 4 | 4 | 5 | 4 | 3 | 3 | 3 |
| 58 | 5 | 4 | 5 | 5 | 5 | 3 | 3 | 3 |
| 59 | 4 | 3 | 4 | 4 | 4 | 3 | 3 | 3 |
| 60 | 3 | 4 | 5 | 4 | 3 | 4 | 2 | 2 |
| 61 | 2 | 4 | 2 | 3 | 2 | 3 | 2 | 2 |
| 62 | 4 | 3 | 4 | 3 | 3 | 4 | 5 | 5 |

|     |   |   |   |   |   |   |   |   |
|-----|---|---|---|---|---|---|---|---|
| 63  | 4 | 5 | 4 | 5 | 3 | 5 | 3 | 3 |
| 64  | 5 | 4 | 5 | 4 | 4 | 5 | 3 | 5 |
| 65  | 4 | 5 | 4 | 5 | 5 | 4 | 4 | 4 |
| 66  | 5 | 4 | 5 | 4 | 4 | 5 | 5 | 5 |
| 67  | 2 | 3 | 2 | 3 | 3 | 2 | 2 | 2 |
| 68  | 2 | 4 | 2 | 3 | 4 | 5 | 5 | 5 |
| 69  | 3 | 2 | 2 | 3 | 4 | 3 | 4 | 4 |
| 70  | 5 | 3 | 5 | 4 | 4 | 5 | 5 | 5 |
| 71  | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 3 |
| 72  | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 5 |
| 73  | 4 | 3 | 4 | 4 | 2 | 4 | 2 | 2 |
| 74  | 4 | 3 | 4 | 4 | 3 | 3 | 3 | 3 |
| 75  | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 2 |
| 76  | 2 | 3 | 2 | 2 | 2 | 3 | 2 | 2 |
| 77  | 2 | 4 | 2 | 2 | 3 | 2 | 2 | 2 |
| 78  | 4 | 3 | 3 | 3 | 4 | 3 | 3 | 3 |
| 79  | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 2 |
| 80  | 4 | 3 | 4 | 4 | 4 | 3 | 3 | 3 |
| 81  | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 |
| 82  | 4 | 5 | 4 | 4 | 3 | 5 | 4 | 4 |
| 83  | 3 | 4 | 4 | 4 | 5 | 4 | 4 | 4 |
| 84  | 5 | 4 | 5 | 5 | 3 | 4 | 5 | 5 |
| 85  | 3 | 2 | 3 | 3 | 2 | 3 | 2 | 2 |
| 86  | 4 | 3 | 3 | 3 | 3 | 2 | 3 | 3 |
| 87  | 1 | 2 | 1 | 1 | 2 | 2 | 2 | 2 |
| 88  | 4 | 5 | 4 | 4 | 3 | 3 | 3 | 3 |
| 89  | 2 | 3 | 2 | 3 | 3 | 2 | 3 | 3 |
| 90  | 4 | 5 | 4 | 5 | 5 | 5 | 5 | 5 |
| 91  | 4 | 3 | 4 | 3 | 4 | 4 | 4 | 4 |
| 92  | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 5 |
| 93  | 3 | 4 | 3 | 3 | 3 | 3 | 3 | 3 |
| 94  | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 |
| 95  | 2 | 3 | 4 | 2 | 2 | 2 | 2 | 2 |
| 96  | 5 | 3 | 5 | 4 | 4 | 4 | 4 | 4 |
| 97  | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 4 |
| 98  | 3 | 5 | 3 | 4 | 4 | 4 | 4 | 4 |
| 99  | 4 | 3 | 4 | 4 | 4 | 4 | 4 | 4 |
| 100 | 4 | 5 | 4 | 4 | 4 | 4 | 4 | 4 |
| 101 | 2 | 3 | 4 | 3 | 4 | 5 | 5 | 4 |
| 102 | 4 | 4 | 3 | 5 | 5 | 5 | 5 | 5 |
| 103 | 2 | 4 | 5 | 4 | 4 | 4 | 4 | 4 |
| 104 | 5 | 4 | 4 | 4 | 5 | 5 | 5 | 5 |

|     |   |   |   |   |   |   |   |   |
|-----|---|---|---|---|---|---|---|---|
| 105 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 |
| 106 | 5 | 4 | 4 | 4 | 5 | 5 | 5 | 5 |
| 107 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 |
| 108 | 5 | 4 | 4 | 4 | 5 | 5 | 5 | 5 |
| 109 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 |
| 110 | 5 | 4 | 4 | 4 | 5 | 5 | 5 | 5 |
| 111 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 4 |
| 112 | 5 | 4 | 3 | 3 | 5 | 5 | 5 | 5 |
| 113 | 4 | 3 | 3 | 3 | 4 | 4 | 4 | 4 |
| 114 | 5 | 4 | 3 | 3 | 3 | 3 | 3 | 3 |
| 115 | 4 | 3 | 3 | 3 | 3 | 2 | 2 | 3 |
| 116 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 3 |
| 117 | 3 | 2 | 2 | 2 | 5 | 5 | 5 | 5 |
| 118 | 4 | 3 | 3 | 3 | 3 | 5 | 5 | 3 |
| 119 | 4 | 3 | 3 | 3 | 5 | 3 | 3 | 5 |
| 120 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 3 |
| 121 | 2 | 3 | 4 | 3 | 3 | 4 | 4 | 3 |
| 122 | 3 | 4 | 4 | 4 | 5 | 5 | 5 | 5 |
| 123 | 4 | 3 | 3 | 4 | 5 | 3 | 3 | 5 |
| 124 | 3 | 4 | 4 | 3 | 5 | 5 | 5 | 5 |
| 125 | 2 | 4 | 3 | 4 | 5 | 5 | 5 | 5 |
| 126 | 4 | 4 | 4 | 3 | 5 | 4 | 4 | 5 |
| 127 | 4 | 4 | 3 | 4 | 5 | 5 | 5 | 5 |
| 128 | 4 | 4 | 4 | 3 | 5 | 5 | 5 | 5 |
| 129 | 4 | 2 | 3 | 2 | 5 | 4 | 4 | 5 |
| 130 | 4 | 4 | 4 | 3 | 5 | 5 | 5 | 5 |
| 131 | 3 | 4 | 3 | 4 | 5 | 3 | 3 | 5 |
| 132 | 3 | 3 | 3 | 4 | 5 | 3 | 3 | 5 |
| 133 | 2 | 2 | 3 | 2 | 5 | 4 | 4 | 5 |
| 134 | 4 | 3 | 3 | 4 | 5 | 4 | 4 | 5 |
| 135 | 3 | 4 | 4 | 4 | 5 | 4 | 4 | 5 |
| 136 | 3 | 4 | 4 | 3 | 4 | 5 | 5 | 4 |
| 137 | 3 | 2 | 3 | 2 | 5 | 4 | 4 | 5 |
| 138 | 3 | 3 | 3 | 4 | 5 | 4 | 4 | 5 |
| 139 | 4 | 4 | 3 | 4 | 4 | 5 | 5 | 4 |
| 140 | 4 | 4 | 4 | 3 | 5 | 4 | 4 | 5 |
| 141 | 4 | 3 | 3 | 3 | 3 | 4 | 4 | 3 |
| 142 | 4 | 2 | 3 | 2 | 4 | 5 | 5 | 4 |
| 143 | 4 | 4 | 4 | 3 | 5 | 4 | 4 | 5 |
| 144 | 4 | 3 | 3 | 3 | 5 | 4 | 4 | 5 |
| 145 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 4 |
| 146 | 4 | 3 | 3 | 4 | 5 | 4 | 4 | 5 |

|     |   |   |   |   |   |   |   |   |
|-----|---|---|---|---|---|---|---|---|
| 147 | 4 | 4 | 3 | 4 | 5 | 3 | 4 | 5 |
| 148 | 3 | 4 | 4 | 3 | 3 | 4 | 3 | 5 |
| 149 | 4 | 4 | 3 | 4 | 5 | 4 | 4 | 5 |
| 150 | 5 | 4 | 4 | 3 | 5 | 3 | 4 | 5 |
| 151 | 5 | 5 | 4 | 5 | 5 | 4 | 3 | 5 |
| 152 | 3 | 3 | 3 | 4 | 3 | 3 | 4 | 3 |
| 153 | 3 | 4 | 4 | 3 | 4 | 3 | 4 | 3 |
| 154 | 4 | 4 | 3 | 4 | 5 | 4 | 3 | 4 |
| 155 | 4 | 5 | 5 | 4 | 2 | 3 | 3 | 3 |
| 156 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 |
| 157 | 4 | 5 | 5 | 4 | 5 | 4 | 5 | 5 |
| 158 | 5 | 5 | 4 | 5 | 5 | 5 | 4 | 5 |
| 159 | 4 | 5 | 5 | 4 | 4 | 5 | 5 | 5 |
| 160 | 5 | 5 | 5 | 4 | 4 | 5 | 5 | 5 |
| 161 | 5 | 5 | 4 | 5 | 5 | 3 | 4 | 5 |
| 162 | 5 | 5 | 5 | 4 | 4 | 4 | 3 | 5 |
| 163 | 5 | 3 | 3 | 5 | 5 | 3 | 4 | 5 |
| 164 | 5 | 5 | 4 | 5 | 4 | 4 | 3 | 5 |
| 165 | 5 | 5 | 5 | 4 | 5 | 3 | 4 | 5 |
| 166 | 5 | 5 | 4 | 5 | 4 | 3 | 4 | 5 |
| 167 | 4 | 5 | 5 | 4 | 5 | 4 | 3 | 4 |
| 168 | 5 | 4 | 4 | 5 | 4 | 4 | 5 | 5 |
| 169 | 5 | 5 | 3 | 5 | 5 | 4 | 3 | 4 |
| 170 | 5 | 5 | 4 | 5 | 4 | 3 | 4 | 3 |
| 171 | 5 | 4 | 4 | 5 | 5 | 4 | 4 | 4 |
| 172 | 5 | 5 | 3 | 5 | 5 | 4 | 4 | 3 |
| 173 | 5 | 4 | 4 | 5 | 4 | 5 | 5 | 3 |
| 174 | 4 | 4 | 3 | 4 | 5 | 4 | 4 | 4 |
| 175 | 4 | 5 | 5 | 4 | 5 | 3 | 3 | 3 |
| 176 | 5 | 4 | 4 | 5 | 5 | 4 | 4 | 3 |
| 177 | 5 | 3 | 3 | 5 | 4 | 2 | 2 | 3 |
| 178 | 4 | 5 | 5 | 4 | 3 | 4 | 4 | 4 |
| 179 | 5 | 5 | 5 | 5 | 4 | 5 | 4 | 5 |
| 180 | 5 | 4 | 4 | 5 | 5 | 4 | 4 | 5 |
| 181 | 5 | 5 | 3 | 5 | 4 | 5 | 5 | 4 |
| 182 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | 4 |
| 183 | 5 | 5 | 3 | 5 | 4 | 3 | 3 | 3 |
| 184 | 4 | 5 | 5 | 4 | 5 | 4 | 4 | 4 |
| 185 | 2 | 3 | 3 | 2 | 3 | 2 | 3 | 2 |
| 186 | 3 | 2 | 2 | 3 | 4 | 2 | 2 | 3 |
| 187 | 5 | 5 | 5 | 5 | 3 | 2 | 3 | 2 |
| 188 | 4 | 3 | 4 | 4 | 4 | 3 | 2 | 3 |

|     |   |   |   |   |   |   |   |   |
|-----|---|---|---|---|---|---|---|---|
| 189 | 3 | 3 | 5 | 4 | 4 | 2 | 3 | 2 |
| 190 | 3 | 3 | 4 | 5 | 2 | 4 | 4 | 3 |
| 191 | 4 | 4 | 3 | 4 | 4 | 3 | 5 | 3 |
| 192 | 5 | 5 | 4 | 5 | 3 | 4 | 5 | 4 |
| 193 | 5 | 4 | 4 | 5 | 5 | 3 | 4 | 3 |
| 194 | 5 | 5 | 4 | 5 | 3 | 4 | 5 | 4 |
| 195 | 5 | 5 | 5 | 4 | 4 | 3 | 5 | 4 |
| 196 | 3 | 3 | 4 | 3 | 3 | 2 | 4 | 3 |
| 197 | 4 | 4 | 4 | 5 | 4 | 5 | 4 | 5 |
| 198 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | 4 |
| 199 | 3 | 3 | 3 | 4 | 2 | 3 | 2 | 4 |
| 200 | 2 | 3 | 3 | 2 | 4 | 2 | 3 | 2 |



**Lampiran 3**  
**Karakteristik Responden**

| <b>No</b> | <b>Usia Responden</b> | <b>Jumlah Responden</b> | <b>(Persentase %)</b> |
|-----------|-----------------------|-------------------------|-----------------------|
| 1         | Diatas 18 tahun       | 200                     | 100                   |
| 2         | Dibawah 18 tahun      | 0                       | 0                     |
| Total     |                       | 200                     | 100                   |

| <b>No</b> | <b>Pernah Mengkonsumsi KFC</b> | <b>Jumlah Responden</b> | <b>Persentase (%)</b> |
|-----------|--------------------------------|-------------------------|-----------------------|
| 1         | 1                              | 0                       | 0                     |
| 2         | > 1                            | 200                     | 100                   |
| Total     |                                | 200                     | 100                   |

| <b>No</b> | <b>Domisili</b> | <b>Jumlah Responden</b> | <b>Persentase (%)</b> |
|-----------|-----------------|-------------------------|-----------------------|
| 1         | Surabaya        | 200                     | 200                   |
| 2         | Luar Surabaya   | 0                       | 0                     |
| Total     |                 | 200                     | 100                   |

| <b>No</b> | <b>Jenis Kelamin</b> | <b>Jumlah Responden</b> | <b>Persentase (%)</b> |
|-----------|----------------------|-------------------------|-----------------------|
| 1         | Laki-laki            | 106                     | 53                    |
| 2         | Perempuan            | 94                      | 47                    |
| Total     |                      | 200                     | 100                   |

**Lampiran 4**  
**Statistik Deskriptif**

Means

|  | PQ1   | PQ2   | PQ3   | SQ1   | SQ2   | SQ3   |
|--|-------|-------|-------|-------|-------|-------|
|  | 3.225 | 3.260 | 3.410 | 3.600 | 3.615 | 3.280 |

Means

|  | SI1   | SI2   | SI3   | SI4   | P1    | P2    |
|--|-------|-------|-------|-------|-------|-------|
|  | 3.940 | 3.310 | 4.005 | 3.695 | 2.695 | 2.285 |

Means

|  | P3    | BE1   | BE2   | BE3   | BE4   | BE5   |
|--|-------|-------|-------|-------|-------|-------|
|  | 2.680 | 3.225 | 3.435 | 3.350 | 3.485 | 3.495 |

Means

|  | BE6   | BE7   | BE8   | BE9   | BE10  | BE11  |
|--|-------|-------|-------|-------|-------|-------|
|  | 3.460 | 3.175 | 3.095 | 3.260 | 3.525 | 3.320 |

Means

|  | BE12  | BE13  | BE14  | T1    | T2    | T3    |
|--|-------|-------|-------|-------|-------|-------|
|  | 3.305 | 3.230 | 3.135 | 3.685 | 3.675 | 3.505 |

Means

|  | T4    | C1    | C2    | C3    | C4    |
|--|-------|-------|-------|-------|-------|
|  | 3.465 | 3.800 | 3.635 | 3.755 | 3.770 |

Standard Deviations

|  | PQ1   | PQ2   | PQ3   | SQ1   | SQ2   | SQ3   |
|--|-------|-------|-------|-------|-------|-------|
|  | 0.865 | 0.926 | 0.973 | 1.125 | 1.069 | 1.139 |

Standard Deviations

|  | SI1   | SI2   | SI3   | SI4   | P1    | P2    |
|--|-------|-------|-------|-------|-------|-------|
|  | 1.050 | 1.009 | 1.119 | 1.187 | 0.840 | 1.044 |

Standard Deviations

|  | P3 | BE1 | BE2 | BE3 | BE4 | BE5 |
|--|----|-----|-----|-----|-----|-----|
|  |    |     |     |     |     |     |

|                     |       |       |       |       |       |       |
|---------------------|-------|-------|-------|-------|-------|-------|
|                     | 0.861 | 1.242 | 1.159 | 1.210 | 1.070 | 1.084 |
| Standard Deviations | BE6   | BE7   | BE8   | BE9   | BE10  | BE11  |
|                     | ----- | ----- | ----- | ----- | ----- | ----- |
|                     | 1.102 | 0.979 | 0.900 | 1.004 | 1.102 | 1.065 |
| Standard Deviations | BE12  | BE13  | BE14  | T1    | T2    | T3    |
|                     | ----- | ----- | ----- | ----- | ----- | ----- |
|                     | 1.085 | 0.901 | 0.912 | 1.030 | 1.017 | 0.982 |
| Standard Deviations | T4    | C1    | C2    | C3    | C4    |       |
|                     | ----- | ----- | ----- | ----- | ----- |       |
|                     | 1.079 | 1.075 | 1.048 | 1.005 | 1.124 |       |

**Lampiran 5**  
**Uji validitas**

| Indikator               | Standardized Loading | Cut Off | Keterangan |
|-------------------------|----------------------|---------|------------|
| <b>Innovation</b>       |                      |         |            |
| PQ1                     | 0.78                 | > 0,7   | Valid      |
| PQ2                     | 0.72                 | > 0,7   | Valid      |
| PQ3                     | 0.77                 | > 0,7   | Valid      |
| <b>Advertising</b>      |                      |         |            |
| SQ1                     | 0.79                 | > 0,7   | Valid      |
| SQ2                     | 0.74                 | > 0,7   | Valid      |
| SQ3                     | 0.76                 | > 0,7   | Valid      |
| <b>Perceived Fit</b>    |                      |         |            |
| SI1                     | 0.78                 | > 0,7   | Valid      |
| SI2                     | 0.73                 | > 0,7   | Valid      |
| SI3                     | 0.76                 | > 0,7   | Valid      |
| SI4                     | 0.76                 | > 0,7   | Valid      |
| <b>Promotion</b>        |                      |         |            |
| P1                      | 0.77                 | > 0,7   | Valid      |
| P2                      | 0.75                 | > 0,7   | Valid      |
| P3                      | 0.72                 | > 0,7   | Valid      |
| <b>Brand Experience</b> |                      |         |            |
| BE1                     | 0.75                 | > 0,7   | Valid      |
| BE2                     | 0.79                 | > 0,7   | Valid      |
| BE3                     | 0.73                 | > 0,7   | Valid      |
| BE4                     | 0.81                 | > 0,7   | Valid      |
| BE5                     | 0.80                 | > 0,7   | Valid      |
| BE6                     | 0.79                 | > 0,7   | Valid      |
| BE7                     | 0.74                 | > 0,7   | Valid      |
| BE8                     | 0.79                 | > 0,7   | Valid      |
| BE9                     | 0.70                 | > 0,7   | Valid      |
| BE10                    | 0.88                 | > 0,7   | Valid      |
| BE11                    | 0.84                 | > 0,7   | Valid      |
| BE12                    | 0.79                 | > 0,7   | Valid      |
| BE13                    | 0.71                 | > 0,7   | Valid      |

|            |      |       |       |
|------------|------|-------|-------|
| BE14       | 0.76 | > 0,7 | Valid |
| Trust      |      |       |       |
| T1         | 0.77 | > 0,7 | Valid |
| T2         | 0.80 | > 0,7 | Valid |
| T3         | 0.73 | > 0,7 | Valid |
| T4         | 0.76 | > 0,7 | Valid |
| Commitment |      |       |       |
| C1         | 0.72 | > 0,7 | Valid |
| C2         | 0.78 | > 0,7 | Valid |
| C3         | 0.76 | > 0,7 | Valid |
| C4         | 0.77 | > 0,7 | Valid |

## Lampiran 6 Uji Reliabilitas

### Rumus Construct Reliability

$$\text{Construct reliability} = \frac{\sum \text{std loading}^2}{\sum \text{std loading}^2 + \sum e_j}$$

Contoh perhitungan :

$$\begin{aligned} \text{CR Variabel PQ} &= \frac{(2.27)^2}{(2.27)^2 + 1.28} \\ &= \frac{5.15}{5.15+1.28} \\ &= \frac{5.15}{6.43} \\ &= 0.80 \end{aligned}$$

Untuk perhitungan indikator lainnya di sajikan dalam bentuk tabel di bawah ini :

| Variabel <i>Product Quality</i> |   |             |                                |
|---------------------------------|---|-------------|--------------------------------|
| Sub Indikator                   | <i>Standardized Loading</i> ( $\lambda$ ) | $\lambda^2$ | $1 - \lambda^2$ ( $\epsilon$ ) |
| PQ1                             | 0.78                                      | 0.61        | 0.39                           |
| PQ2                             | 0.72                                      | 0.52        | 0.48                           |
| PQ3                             | 0.77                                      | 0.59        | 0.41                           |
| $\sum$                          | <b>2.27</b>                               |             | <b>1.28</b>                    |
| $(\sum \lambda)^2$              | <b>5.15</b>                               |             |                                |
| $(\sum \lambda)^2 + \epsilon$   | <b>6.43</b>                               |             |                                |
| <b>CR</b>                       | <b>0.80</b>                               |             |                                |
| Variabel <i>Service Quality</i> |   |             |                                |
| Sub Indikator                   | <i>Standardized Loading</i> ( $\lambda$ ) | $\lambda^2$ | $1 - \lambda^2$ ( $\epsilon$ ) |
| SQ1                             | 0.79                                      | 0.62        | 0.38                           |
| SQ2                             | 0.74                                      | 0.55        | 0.45                           |
| SQ3                             | 0.76                                      | 0.58        | 0.42                           |

|                                    |  |             |   |
|------------------------------------|--|-------------|---|
| $\Sigma$                           | <b>2.29</b>  |             | <b>1.25</b>   |
| $(\Sigma \lambda)^2$               | <b>5.24</b>  |             |   |
| $(\Sigma \lambda)^2 + \varepsilon$ | <b>6.49</b>  |             |   |
| <b>CR</b>                          | <b>0.81</b>  |             |   |
| <i>Variabel Store Image</i>        |  |             |   |
| <b>Sub Indikator</b>               | <b>Standardized Loading (<math>\lambda</math>)</b> | $\lambda^2$ | <b>1- <math>\lambda^2</math> (<math>\varepsilon</math>)</b> |
| SI1                                | 0.78   | 0.61        | 0.39  |
| SI2                                | 0.73   | 0.53        | 0.47  |
| SI3                                | 0.76   | 0.58        | 0.42  |
| $\Sigma$                           | <b>3.03</b>  |             | <b>1.70</b>   |
| $(\Sigma \lambda)^2$               | <b>9.18</b>  |             |   |
| $(\Sigma \lambda)^2 + \varepsilon$ | <b>10.88</b>                                       |             |   |
| <b>CR</b>                          | <b>0.84</b>  |             |   |
| <i>Variabel Promotion</i>          |  |             |   |
| <b>Sub Indikator</b>               | <b>Standardized Loading (<math>\lambda</math>)</b> | $\lambda^2$ | <b>1- <math>\lambda^2</math> (<math>\varepsilon</math>)</b> |
| P1                                 | 0.77   | 0.59        | 0.41  |
| P2                                 | 0.75   | 0.56        | 0.44  |
| P3                                 | 0.72   | 0.52        | 0.48  |
| $\Sigma$                           | <b>2.24</b>  |             | <b>1.33</b>   |
| $(\Sigma \lambda)^2$               | <b>5.02</b>  |             |   |
| $(\Sigma \lambda)^2 + \varepsilon$ | <b>6.35</b>  |             |   |
| <b>CR</b>                          | <b>0.79</b>  |             |   |
| <i>Variabel Brand Experience</i>   |  |             |   |
| <b>Sub Indikator</b>               | <b>Standardized Loading (<math>\lambda</math>)</b> | $\lambda^2$ | <b>1- <math>\lambda^2</math> (<math>\varepsilon</math>)</b> |
| BE1                                | 0.75   | 0.56        | 0.44  |
| BE2                                | 0.79   | 0.62        | 0.38  |
| BE3                                | 0.73   | 0.53        | 0.47  |
| BE4                                | 0.81   | 0.66        | 0.34  |
| BE5                                | 0.80   | 0.64        | 0.36  |
| BE6                                | 0.79   | 0.62        | 0.38  |
| BE7                                | 0.74   | 0.55        | 0.45  |
| BE8                                | 0.79   | 0.62        | 0.38  |
| BE9                                | 0.70   | 0.49        | 0.51  |
| BE10                               | 0.88   | 0.77        | 0.23  |
| BE11                               | 0.84   | 0.71        | 0.29  |
| BE12                               | 0.79   | 0.62        | 0.38  |

|                                    |               |      |             |
|------------------------------------|---------------|------|-------------|
| BE13                               | 0.71          | 0.50 | 0.50        |
| BE14                               | 0.76          | 0.58 | 0.42        |
| $\Sigma$                           | <b>10.88</b>  |      | <b>5.51</b> |
| $(\Sigma \lambda)^2$               | <b>118.37</b> |      |             |
| $(\Sigma \lambda)^2 + \varepsilon$ | <b>123.88</b> |      |             |
| <b>CR</b>                          | <b>0.95</b>   |      |             |

Variabel *Store Image*

| <b>Sub Indikator</b>               | <b><i>Standardized Loading (<math>\lambda</math>)</i></b> | <b><math>\lambda^2</math></b> | <b><math>1 - \lambda^2 (\varepsilon)</math></b> |
|------------------------------------|---|-------------------------------|---|
| T1                                 | 0.77  | 0.59                          | 0.41  |
| T2                                 | 0.80  | 0.64                          | 0.36  |
| T3                                 | 0.73  | 0.53                          | 0.47  |
| T4                                 | 0.76  | 0.58                          | 0.42  |
| $\Sigma$                           | <b>3.06</b>   |                               | <b>1.66</b>                                     |
| $(\Sigma \lambda)^2$               | <b>9.36</b>   |                               |   |
| $(\Sigma \lambda)^2 + \varepsilon$ | <b>11.02</b>  |                               |   |
| <b>CR</b>                          | <b>0.85</b>   |                               |   |

Variabel *Promotion*

| <b>Sub Indikator</b>               | <b><i>Standardized Loading (<math>\lambda</math>)</i></b> | <b><math>\lambda^2</math></b> | <b><math>1 - \lambda^2 (\varepsilon)</math></b> |
|------------------------------------|---|-------------------------------|---|
| C1                                 | 0.72  | 0.52                          | 0.48  |
| C2                                 | 0.78  | 0.61                          | 0.39  |
| C3                                 | 0.76  | 0.58                          | 0.42  |
| C4                                 | 0.77  | 0.59                          | 0.41  |
| $\Sigma$                           | <b>3.03</b>   |                               | <b>1.70</b>                                     |
| $(\Sigma \lambda)^2$               | <b>9.18</b>   |                               |   |
| $(\Sigma \lambda)^2 + \varepsilon$ | <b>10.88</b>  |                               |   |
| <b>CR</b>                          | <b>0.84</b>   |                               |   |



**Lampiran 7**  
**Uji Normalitas**

DATE: 06/27/2014

TIME: 09:29

PRELIS 2.80

BY

Karl G. Jöreskog & Dag Sörbom

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SY='D:\Fukjiang\input.PSF'

NS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26

27 28 29 30 31 32 33 34 35

OU MA=CM XT

Total Sample Size = 200

Univariate Summary Statistics for Continuous Variables

| Variable | Mean | St. Dev. | T-Value | Skewness | Kurtosis | Minimum | Freq. | Maximum | Freq. |
|----------|------|----------|---------|----------|----------|---------|-------|---------|-------|
|----------|------|----------|---------|----------|----------|---------|-------|---------|-------|

|     |       |       |        |        |        |       |   |       |  |
|-----|-------|-------|--------|--------|--------|-------|---|-------|--|
| PQ1 | 3.225 | 0.865 | 52.730 | -0.143 | -0.116 | 1.064 | 5 | 5.322 |  |
|-----|-------|-------|--------|--------|--------|-------|---|-------|--|

6

|     |       |       |        |        |        |       |   |       |  |
|-----|-------|-------|--------|--------|--------|-------|---|-------|--|
| PQ2 | 3.260 | 0.926 | 49.811 | -0.018 | -0.265 | 0.797 | 3 | 5.046 |  |
|-----|-------|-------|--------|--------|--------|-------|---|-------|--|

17

|    |      |       |       |        |        |        |       |    |       |   |
|----|------|-------|-------|--------|--------|--------|-------|----|-------|---|
| 24 | PQ3  | 3.410 | 0.973 | 49.565 | -0.093 | -0.317 | 0.933 | 4  | 5.116 |   |
| 59 | SQ1  | 3.600 | 1.125 | 45.242 | -0.104 | -1.236 | 1.951 | 43 | 5.019 |   |
| 51 | SQ2  | 3.615 | 1.069 | 47.830 | -0.214 | -0.650 | 0.762 | 3  | 5.038 |   |
| 36 | SQ3  | 3.280 | 1.139 | 40.713 | -0.081 | -0.598 | 0.643 | 7  | 5.021 |   |
| 77 | SI1  | 3.940 | 1.050 | 53.081 | -0.442 | -0.691 | 1.283 | 5  | 5.068 |   |
| 12 | SI2  | 3.310 | 1.009 | 46.372 | -0.167 | -0.143 | 1.173 | 12 | 5.447 |   |
| 92 | SI3  | 4.005 | 1.119 | 50.635 | -0.593 | -0.687 | 1.126 | 5  | 5.067 |   |
| 68 | SI4  | 3.695 | 1.187 | 44.022 | -0.342 | -0.791 | 0.727 | 5  | 5.063 |   |
| 7  | P1   | 2.695 | 0.840 | 45.376 | 0.027  | 0.024  | 0.977 | 14 | 4.863 | 4 |
| 2  | P2   | 2.285 | 1.044 | 30.963 | 0.247  | -0.572 | 0.893 | 51 | 4.725 |   |
| 38 | P3   | 2.680 | 0.861 | 44.020 | 0.021  | -0.147 | 0.983 | 16 | 5.114 |   |
| 46 | BE1  | 3.225 | 1.242 | 36.727 | -0.102 | -0.719 | 0.851 | 17 | 5.077 |   |
| 42 | BE2  | 3.435 | 1.159 | 41.926 | -0.177 | -0.664 | 0.814 | 8  | 5.041 |   |
| 42 | BE3  | 3.350 | 1.210 | 39.144 | -0.147 | -0.709 | 0.961 | 15 | 5.087 |   |
| 41 | BE4  | 3.485 | 1.070 | 46.049 | -0.133 | -0.621 | 0.639 | 3  | 5.032 |   |
| 42 | BE5  | 3.495 | 1.084 | 45.581 | -0.167 | -0.553 | 0.984 | 7  | 5.071 |   |
| 9  | BE6  | 3.460 | 1.102 | 44.401 | -0.158 | -0.592 | 0.837 | 6  | 5.047 |   |
| 6  | BE7  | 3.175 | 0.979 | 45.847 | -0.114 | -0.219 | 1.081 | 11 | 5.355 |   |
| 19 | BE8  | 3.095 | 0.900 | 48.632 | -0.054 | -0.225 | 0.859 | 5  | 5.264 |   |
| 46 | BE9  | 3.260 | 1.004 | 45.933 | -0.043 | -0.336 | 0.794 | 5  | 5.137 |   |
|    | BE10 | 3.525 | 1.102 | 45.217 | -0.191 | -0.612 | 0.896 | 6  | 5.055 |   |

|    |      |       |       |        |        |        |       |   |       |
|----|------|-------|-------|--------|--------|--------|-------|---|-------|
| 33 | BE11 | 3.320 | 1.065 | 44.105 | -0.097 | -0.452 | 0.916 | 8 | 4.999 |
| 36 | BE12 | 3.305 | 1.085 | 43.066 | -0.109 | -0.467 | 0.901 | 9 | 4.969 |
| 5  | BE13 | 3.230 | 0.901 | 50.718 | -0.209 | -0.147 | 1.031 | 6 | 5.497 |
| 10 | BE14 | 3.135 | 0.912 | 48.637 | -0.043 | -0.120 | 1.065 | 8 | 5.117 |
| 49 | T1   | 3.685 | 1.030 | 50.592 | -0.211 | -0.620 | 0.777 | 2 | 5.085 |
| 48 | T2   | 3.675 | 1.017 | 51.097 | -0.218 | -0.532 | 1.160 | 5 | 5.068 |
| 32 | T3   | 3.505 | 0.982 | 50.464 | -0.128 | -0.367 | 1.090 | 5 | 5.076 |
| 35 | T4   | 3.465 | 1.079 | 45.408 | -0.147 | -0.491 | 1.030 | 8 | 5.130 |
| 65 | C1   | 3.800 | 1.075 | 49.987 | -0.345 | -0.679 | 1.023 | 4 | 5.071 |
| 48 | C2   | 3.635 | 1.048 | 49.075 | -0.216 | -0.578 | 0.959 | 4 | 5.067 |
| 54 | C3   | 3.755 | 1.005 | 52.839 | -0.261 | -0.577 | 1.061 | 3 | 5.062 |
| 69 | C4   | 3.770 | 1.124 | 47.433 | -0.354 | -0.769 | 0.729 | 3 | 5.056 |

### Test of Univariate Normality for Continuous Variables

|          | Skewness | Kurtosis | Skewness and Kurtosis |         |            |         |
|----------|----------|----------|-----------------------|---------|------------|---------|
| Variable | Z-Score  | P-Value  | Z-Score               | P-Value | Chi-Square | P-Value |
| PQ1      | -0.846   | 0.397    | -0.220                | 0.826   | 0.765      | 0.682   |
| PQ2      | -0.107   | 0.915    | -0.762                | 0.446   | 0.592      | 0.744   |
| PQ3      | -0.548   | 0.584    | -0.972                | 0.331   | 1.245      | 0.537   |
| SQ1      | -0.615   | 0.539    | -1.947                | 0.053   | 5.727      | 0.067   |
| SQ2      | -1.256   | 0.209    | -1.890                | 0.077   | 8.814      | 0.012   |
| SQ3      | -0.478   | 0.633    | -1.870                | 0.078   | 5.845      | 0.054   |
| SI1      | -1.917   | 0.062    | -1.965                | 0.053   | 5.128      | 0.121   |
| SI2      | -0.981   | 0.327    | -0.314                | 0.753   | 1.061      | 0.588   |
| SI3      | -1.888   | 0.061    | -1.942                | 0.053   | 5.466      | 0.093   |
| SI4      | -1.877   | 0.068    | -1.727                | 0.090   | 5.798      | 0.086   |

|      |        |       |        |       |       |       |
|------|--------|-------|--------|-------|-------|-------|
| P1   | 0.159  | 0.874 | 0.222  | 0.825 | 0.074 | 0.963 |
| P2   | 1.444  | 0.149 | -1.818 | 0.067 | 5.004 | 0.130 |
| P3   | 0.126  | 0.900 | -0.327 | 0.744 | 0.122 | 0.941 |
| BE1  | -0.604 | 0.546 | -1.866 | 0.082 | 5.387 | 0.126 |
| BE2  | -1.043 | 0.297 | -1.887 | 0.075 | 8.855 | 0.012 |
| BE3  | -0.868 | 0.385 | -1.902 | 0.062 | 5.311 | 0.116 |
| BE4  | -0.786 | 0.432 | -1.901 | 0.062 | 5.916 | 0.061 |
| BE5  | -0.984 | 0.325 | -1.909 | 0.065 | 5.414 | 0.067 |
| BE6  | -0.929 | 0.353 | -1.832 | 0.060 | 5.299 | 0.143 |
| BE7  | -0.674 | 0.500 | -0.584 | 0.559 | 0.796 | 0.672 |
| BE8  | -0.321 | 0.748 | -0.607 | 0.544 | 0.471 | 0.790 |
| BE9  | -0.256 | 0.798 | -1.051 | 0.293 | 1.170 | 0.557 |
| BE10 | -1.126 | 0.260 | -1.951 | 0.054 | 7.273 | 0.026 |
| BE11 | -0.574 | 0.566 | -1.581 | 0.114 | 2.829 | 0.243 |
| BE12 | -0.642 | 0.521 | -1.656 | 0.098 | 3.155 | 0.206 |
| BE13 | -1.229 | 0.219 | -0.326 | 0.745 | 1.617 | 0.445 |
| BE14 | -0.256 | 0.798 | -0.236 | 0.813 | 0.121 | 0.941 |
| T1   | -1.238 | 0.216 | -1.902 | 0.062 | 5.793 | 0.082 |
| T2   | -1.281 | 0.200 | -1.955 | 0.056 | 5.620 | 0.060 |
| T3   | -0.754 | 0.451 | -1.187 | 0.235 | 1.976 | 0.372 |
| T4   | -0.865 | 0.387 | -1.777 | 0.076 | 3.905 | 0.142 |
| C1   | -1.954 | 0.056 | -1.886 | 0.074 | 5.308 | 0.129 |
| C2   | -1.265 | 0.206 | -1.851 | 0.074 | 5.666 | 0.096 |
| C3   | -1.525 | 0.127 | -1.844 | 0.085 | 5.361 | 0.125 |
| C4   | -1.943 | 0.051 | -1.944 | 0.058 | 5.736 | 0.089 |

Relative Multivariate Kurtosis = 1.046

Test of Multivariate Normality for Continuous Variables

| Skewness |         |         | Kurtosis |         |         | Skewness and Kurtosis |       |
|----------|---------|---------|----------|---------|---------|-----------------------|-------|
| Value    | Z-Score | P-Value | Value    | Z-Score | P-Value | Chi-Square            | P-    |
| Value    |         |         |          |         |         |                       | Value |
| 7.349    | 1.952   | 0.056   | 5.211    | 1.906   | 0.061   | 6.337                 | 0.058 |

Histograms for Continuous Variables

PQ1

Frequency Percentage Lower Class Limit

|       |      |       |       |
|-------|------|-------|-------|
| 5     | 2.5  | 1.064 | ••    |
| 0     | 0.0  | 1.489 |       |
| 36    | 18.0 | 1.915 | ..... |
| 0     | 0.0  | 2.341 |       |
| 74    | 37.0 | 2.767 |       |
| ..... |      |       |       |
| 0     | 0.0  | 3.193 |       |
| 79    | 39.5 | 3.619 |       |
| ..... |      |       |       |
| 0     | 0.0  | 4.044 |       |
| 0     | 0.0  | 4.470 |       |
| 6     | 3.0  | 4.896 | ••    |

PQ2

|  |      |       |       |
|--|------|-------|-------|
| Frequency Percentage Lower Class Limit |      |       |       |
| 3                                      | 1.5  | 0.797 | •     |
| 0                                      | 0.0  | 1.222 |       |
| 40                                     | 20.0 | 1.647 | ..... |
| 0                                      | 0.0  | 2.072 |       |
| 0                                      | 0.0  | 2.497 |       |
| 76                                     | 38.0 | 2.922 |       |
| .....                                  |      |       |       |
| 0                                      | 0.0  | 3.346 |       |
| 64                                     | 32.0 | 3.771 |       |
| .....                                  |      |       |       |
| 0                                      | 0.0  | 4.196 |       |
| 17                                     | 8.5  | 4.621 | ..... |

PQ3

|  |      |       |       |
|--|------|-------|-------|
| Frequency Percentage Lower Class Limit |      |       |       |
| 4                                      | 2.0  | 0.933 | ••    |
| 0                                      | 0.0  | 1.351 |       |
| 34                                     | 17.0 | 1.769 | ..... |
| 0                                      | 0.0  | 2.188 |       |
| 62                                     | 31.0 | 2.606 |       |
| .....                                  |      |       |       |
| 0                                      | 0.0  | 3.024 |       |
| 0                                      | 0.0  | 3.443 |       |
| 76                                     | 38.0 | 3.861 |       |
| .....                                  |      |       |       |
| 0                                      | 0.0  | 4.279 |       |

24 12.0 4.697 .....

SQ1

Frequency Percentage Lower Class Limit

43 21.5 1.951

.....

0 0.0 2.258

0 0.0 2.565

53 26.5 2.871

.....

0 0.0 3.178

0 0.0 3.485

45 22.5 3.792

.....

0 0.0 4.099

0 0.0 4.405

59 29.5 4.712

.....

SQ2

Frequency Percentage Lower Class Limit

3 1.5 0.762 •

0 0.0 1.189

30 15.0 1.617 .....

0 0.0 2.045

0 0.0 2.472

59 29.5 2.900

.....

0 0.0 3.328

57 28.5 3.755

.....

0 0.0 4.183

51 25.5 4.610

.....

SQ3

Frequency Percentage Lower Class Limit

7 3.5 0.643 ••••

0 0.0 1.081

0 0.0 1.519

|       |      |       |  |
|-------|------|-------|--|
| 52    | 26.0 | 1.956 |  |
| ..... |      |       |  |
| 0     | 0.0  | 2.394 |  |
| 55    | 27.5 | 2.832 |  |
| ..... |      |       |  |
| 0     | 0.0  | 3.270 |  |
| 50    | 25.0 | 3.708 |  |
| ..... |      |       |  |
| 0     | 0.0  | 4.146 |  |
| 36    | 18.0 | 4.584 |  |
| ..... |      |       |  |

SI1

| Frequency | Percentage | Lower Class Limit |       |
|-----------|------------|-------------------|-------|
| 5         | 2.5        | 1.283             | ••    |
| 0         | 0.0        | 1.662             |       |
| 12        | 6.0        | 2.040             | ••••• |
| 0         | 0.0        | 2.419             |       |
| 50        | 25.0       | 2.797             |       |
| .....     |            |                   |       |
| 0         | 0.0        | 3.176             |       |
| 56        | 28.0       | 3.554             |       |
| .....     |            |                   |       |
| 0         | 0.0        | 3.933             |       |
| 0         | 0.0        | 4.311             |       |
| 77        | 38.5       | 4.690             |       |
| .....     |            |                   |       |

SI2

| Frequency | Percentage | Lower Class Limit |                |
|-----------|------------|-------------------|----------------|
| 12        | 6.0        | 1.173             | ••••           |
| 0         | 0.0        | 1.601             |                |
| 32        | 16.0       | 2.028             | ••••••••••     |
| 50        | 25.0       | 2.455             | •••••••••••••• |
| 0         | 0.0        | 2.883             |                |
| 0         | 0.0        | 3.310             |                |
| 94        | 47.0       | 3.737             |                |
| .....     |            |                   |                |
| 0         | 0.0        | 4.165             |                |
| 0         | 0.0        | 4.592             |                |
| 12        | 6.0        | 5.019             | ••••           |





|    |      |       |       |
|----|------|-------|-------|
| 23 | 11.5 | 3.697 | ..... |
| 0  | 0.0  | 4.086 |       |
| 4  | 2.0  | 4.475 | •     |

P2

Frequency Percentage Lower Class Limit

|       |      |       |       |
|-------|------|-------|-------|
| 51    | 25.5 | 0.893 |       |
| ..... |      |       |       |
| 0     | 0.0  | 1.276 |       |
| 0     | 0.0  | 1.660 |       |
| 71    | 35.5 | 2.043 |       |
| ..... |      |       |       |
| 0     | 0.0  | 2.426 |       |
| 55    | 27.5 | 2.809 |       |
| ..... |      |       |       |
| 0     | 0.0  | 3.192 |       |
| 16    | 8.0  | 3.575 | ..... |
| 0     | 0.0  | 3.959 |       |
| 7     | 3.5  | 4.342 | ...   |

P3

Frequency Percentage Lower Class Limit

|       |      |       |       |
|-------|------|-------|-------|
| 16    | 8.0  | 0.983 | ..... |
| 0     | 0.0  | 1.396 |       |
| 66    | 33.0 | 1.809 |       |
| ..... |      |       |       |
| 0     | 0.0  | 2.222 |       |
| 86    | 43.0 | 2.635 |       |
| ..... |      |       |       |
| 0     | 0.0  | 3.049 |       |
| 0     | 0.0  | 3.462 |       |
| 30    | 15.0 | 3.875 | ..... |
| 0     | 0.0  | 4.288 |       |
| 2     | 1.0  | 4.701 |       |

BE1

Frequency Percentage Lower Class Limit

|       |      |       |       |
|-------|------|-------|-------|
| 17    | 8.5  | 0.851 | ..... |
| 0     | 0.0  | 1.273 |       |
| 47    | 23.5 | 1.696 |       |
| ..... |      |       |       |

|    |      |       |
|----|------|-------|
| 0  | 0.0  | 2.119 |
| 0  | 0.0  | 2.541 |
| 48 | 24.0 | 2.964 |

.....

|    |      |       |
|----|------|-------|
| 0  | 0.0  | 3.387 |
| 50 | 25.0 | 3.809 |

.....

|    |      |       |
|----|------|-------|
| 0  | 0.0  | 4.232 |
| 38 | 19.0 | 4.655 |

.....

### BE2

Frequency Percentage Lower Class Limit

|   |     |       |       |
|---|-----|-------|-------|
| 8 | 4.0 | 0.814 | ..... |
|---|-----|-------|-------|

|   |     |       |
|---|-----|-------|
| 0 | 0.0 | 1.237 |
|---|-----|-------|

|    |      |       |
|----|------|-------|
| 39 | 19.5 | 1.659 |
|----|------|-------|

.....

|   |     |       |
|---|-----|-------|
| 0 | 0.0 | 2.082 |
|---|-----|-------|

|   |     |       |
|---|-----|-------|
| 0 | 0.0 | 2.505 |
|---|-----|-------|

|    |      |       |
|----|------|-------|
| 57 | 28.5 | 2.928 |
|----|------|-------|

.....

|   |     |       |
|---|-----|-------|
| 0 | 0.0 | 3.350 |
|---|-----|-------|

|    |      |       |
|----|------|-------|
| 50 | 25.0 | 3.773 |
|----|------|-------|

.....

|   |     |       |
|---|-----|-------|
| 0 | 0.0 | 4.196 |
|---|-----|-------|

|    |      |       |
|----|------|-------|
| 46 | 23.0 | 4.619 |
|----|------|-------|

.....

### BE3

Frequency Percentage Lower Class Limit

|    |     |       |       |
|----|-----|-------|-------|
| 15 | 7.5 | 0.961 | ..... |
|----|-----|-------|-------|

|   |     |       |
|---|-----|-------|
| 0 | 0.0 | 1.373 |
|---|-----|-------|

|    |      |       |
|----|------|-------|
| 36 | 18.0 | 1.786 |
|----|------|-------|

.....

|   |     |       |
|---|-----|-------|
| 0 | 0.0 | 2.199 |
|---|-----|-------|

|    |      |       |
|----|------|-------|
| 55 | 27.5 | 2.611 |
|----|------|-------|

.....

|   |     |       |
|---|-----|-------|
| 0 | 0.0 | 3.024 |
|---|-----|-------|

|   |     |       |
|---|-----|-------|
| 0 | 0.0 | 3.437 |
|---|-----|-------|

|    |      |       |
|----|------|-------|
| 52 | 26.0 | 3.849 |
|----|------|-------|

.....

|    |      |       |
|----|------|-------|
| 0  | 0.0  | 4.262 |
| 42 | 21.0 | 4.675 |

.....

#### BE4

| Frequency | Percentage | Lower Class Limit |
|-----------|------------|-------------------|
|-----------|------------|-------------------|

|    |      |       |   |
|----|------|-------|---|
| 3  | 1.5  | 0.639 | • |
| 0  | 0.0  | 1.079 |   |
| 0  | 0.0  | 1.518 |   |
| 38 | 19.0 | 1.957 |   |

.....

|    |      |       |
|----|------|-------|
| 0  | 0.0  | 2.396 |
| 60 | 30.0 | 2.836 |

.....

|    |      |       |
|----|------|-------|
| 0  | 0.0  | 3.275 |
| 57 | 28.5 | 3.714 |

.....

|    |      |       |
|----|------|-------|
| 0  | 0.0  | 4.153 |
| 42 | 21.0 | 4.593 |

.....

#### BE5

| Frequency | Percentage | Lower Class Limit |
|-----------|------------|-------------------|
|-----------|------------|-------------------|

|    |      |       |                      |
|----|------|-------|----------------------|
| 7  | 3.5  | 0.984 | ••••                 |
| 0  | 0.0  | 1.393 |                      |
| 30 | 15.0 | 1.801 | •••••••••••••••••••• |
| 0  | 0.0  | 2.210 |                      |
| 61 | 30.5 | 2.619 |                      |

.....

|    |      |       |
|----|------|-------|
| 0  | 0.0  | 3.028 |
| 0  | 0.0  | 3.436 |
| 61 | 30.5 | 3.845 |

.....

|    |      |       |
|----|------|-------|
| 0  | 0.0  | 4.254 |
| 41 | 20.5 | 4.663 |

.....

#### BE6

| Frequency | Percentage | Lower Class Limit |
|-----------|------------|-------------------|
|-----------|------------|-------------------|

|   |     |       |      |
|---|-----|-------|------|
| 6 | 3.0 | 0.837 | •••• |
| 0 | 0.0 | 1.258 |      |

|       |      |       |       |
|-------|------|-------|-------|
| 36    | 18.0 | 1.679 | ..... |
| 0     | 0.0  | 2.100 |       |
| 0     | 0.0  | 2.521 |       |
| 60    | 30.0 | 2.942 | ..... |
| ..... |      |       |       |
| 0     | 0.0  | 3.363 |       |
| 56    | 28.0 | 3.784 | ..... |
| ..... |      |       |       |
| 0     | 0.0  | 4.205 |       |
| 42    | 21.0 | 4.626 | ..... |
| ..... |      |       |       |

BE7

| Frequency | Percentage | Lower Class Limit |       |
|-----------|------------|-------------------|-------|
| 11        | 5.5        | 1.081             | ..... |
| 0         | 0.0        | 1.509             |       |
| 39        | 19.5       | 1.936             | ..... |
| 0         | 0.0        | 2.364             |       |
| 63        | 31.5       | 2.791             | ..... |
| .....     |            |                   |       |
| 0         | 0.0        | 3.218             |       |
| 78        | 39.0       | 3.646             | ..... |
| .....     |            |                   |       |
| 0         | 0.0        | 4.073             |       |
| 0         | 0.0        | 4.501             |       |
| 9         | 4.5        | 4.928             | ..... |

BE8

| Frequency | Percentage | Lower Class Limit |       |
|-----------|------------|-------------------|-------|
| 5         | 2.5        | 0.859             | ..    |
| 0         | 0.0        | 1.299             |       |
| 51        | 25.5       | 1.740             | ..... |
| .....     |            |                   |       |
| 0         | 0.0        | 2.181             |       |
| 70        | 35.0       | 2.621             | ..... |
| .....     |            |                   |       |
| 0         | 0.0        | 3.062             |       |
| 0         | 0.0        | 3.502             |       |
| 68        | 34.0       | 3.943             | ..... |
| .....     |            |                   |       |
| 0         | 0.0        | 4.383             |       |

6 3.0 4.824 . . .

BE9

Frequency Percentage Lower Class Limit

|       |      |       |           |
|-------|------|-------|-----------|
| 5     | 2.5  | 0.794 | . . .     |
| 0     | 0.0  | 1.228 |           |
| 47    | 23.5 | 1.662 |           |
| ..... |      |       |           |
| 0     | 0.0  | 2.097 |           |
| 0     | 0.0  | 2.531 |           |
| 58    | 29.0 | 2.965 |           |
| ..... |      |       |           |
| 0     | 0.0  | 3.400 |           |
| 71    | 35.5 | 3.834 |           |
| ..... |      |       |           |
| 0     | 0.0  | 4.268 |           |
| 19    | 9.5  | 4.703 | . . . . . |

BE10

Frequency Percentage Lower Class Limit

|       |      |       |           |
|-------|------|-------|-----------|
| 6     | 3.0  | 0.896 | . . .     |
| 0     | 0.0  | 1.312 |           |
| 32    | 16.0 | 1.728 | . . . . . |
| 0     | 0.0  | 2.144 |           |
| 0     | 0.0  | 2.560 |           |
| 59    | 29.5 | 2.976 |           |
| ..... |      |       |           |
| 0     | 0.0  | 3.392 |           |
| 57    | 28.5 | 3.807 |           |
| ..... |      |       |           |
| 0     | 0.0  | 4.223 |           |
| 46    | 23.0 | 4.639 |           |
| ..... |      |       |           |

BE11

Frequency Percentage Lower Class Limit

|    |      |       |           |
|----|------|-------|-----------|
| 8  | 4.0  | 0.916 | . . .     |
| 0  | 0.0  | 1.324 |           |
| 34 | 17.0 | 1.733 | . . . . . |
| 0  | 0.0  | 2.141 |           |
| 0  | 0.0  | 2.549 |           |

|       |      |       |       |
|-------|------|-------|-------|
| 77    | 38.5 | 2.957 |       |
| ..... |      |       |       |
| 0     | 0.0  | 3.366 |       |
| 48    | 24.0 | 3.774 | ..... |
| 0     | 0.0  | 4.182 |       |
| 33    | 16.5 | 4.590 | ..... |

BE12

| Frequency | Percentage | Lower Class Limit |       |
|-----------|------------|-------------------|-------|
| 9         | 4.5        | 0.901             | ..... |
| 0         | 0.0        | 1.308             |       |
| 33        | 16.5       | 1.715             | ..... |
| 0         | 0.0        | 2.121             |       |
| 0         | 0.0        | 2.528             |       |
| 82        | 41.0       | 2.935             |       |
| .....     |            |                   |       |
| 0         | 0.0        | 3.342             |       |
| 40        | 20.0       | 3.748             | ..... |
| 0         | 0.0        | 4.155             |       |
| 36        | 18.0       | 4.562             | ..... |

BE13

| Frequency | Percentage | Lower Class Limit |       |
|-----------|------------|-------------------|-------|
| 6         | 3.0        | 1.031             | ..    |
| 0         | 0.0        | 1.477             |       |
| 40        | 20.0       | 1.924             | ..... |
| 0         | 0.0        | 2.371             |       |
| 61        | 30.5       | 2.817             |       |
| .....     |            |                   |       |
| 0         | 0.0        | 3.264             |       |
| 88        | 44.0       | 3.710             |       |
| .....     |            |                   |       |
| 0         | 0.0        | 4.157             |       |
| 0         | 0.0        | 4.604             |       |
| 5         | 2.5        | 5.050             | ..    |

BE14

| Frequency | Percentage | Lower Class Limit |       |
|-----------|------------|-------------------|-------|
| 8         | 4.0        | 1.065             | ..... |
| 0         | 0.0        | 1.470             |       |
| 37        | 18.5       | 1.875             | ..... |

|       |      |       |       |
|-------|------|-------|-------|
| 0     | 0.0  | 2.280 |       |
| 85    | 42.5 | 2.686 |       |
| ..... |      |       |       |
| 0     | 0.0  | 3.091 |       |
| 0     | 0.0  | 3.496 |       |
| 60    | 30.0 | 3.902 |       |
| ..... |      |       |       |
| 0     | 0.0  | 4.307 |       |
| 10    | 5.0  | 4.712 | ..... |

T1

| Frequency | Percentage | Lower Class Limit |       |
|-----------|------------|-------------------|-------|
| 2         | 1.0        | 0.777             | •     |
| 0         | 0.0        | 1.208             |       |
| 0         | 0.0        | 1.639             |       |
| 29        | 14.5       | 2.069             | ..... |
| 0         | 0.0        | 2.500             |       |
| 48        | 24.0       | 2.931             |       |
| .....     |            |                   |       |
| 0         | 0.0        | 3.362             |       |
| 72        | 36.0       | 3.793             |       |
| .....     |            |                   |       |
| 0         | 0.0        | 4.223             |       |
| 49        | 24.5       | 4.654             |       |
| .....     |            |                   |       |

T2

| Frequency | Percentage | Lower Class Limit |       |
|-----------|------------|-------------------|-------|
| 5         | 2.5        | 1.160             | ••    |
| 0         | 0.0        | 1.551             |       |
| 18        | 9.0        | 1.942             | ..... |
| 0         | 0.0        | 2.333             |       |
| 62        | 31.0       | 2.723             |       |
| .....     |            |                   |       |
| 0         | 0.0        | 3.114             |       |
| 0         | 0.0        | 3.505             |       |
| 67        | 33.5       | 3.896             |       |
| .....     |            |                   |       |
| 0         | 0.0        | 4.287             |       |
| 48        | 24.0       | 4.678             |       |
| .....     |            |                   |       |





|       |      |       |  |
|-------|------|-------|--|
| 60    | 30.0 | 3.856 |  |
| ..... |      |       |  |
| 0     | 0.0  | 4.261 |  |
| 65    | 32.5 | 4.666 |  |
| ..... |      |       |  |

C2

| Frequency | Percentage | Lower Class Limit |       |
|-----------|------------|-------------------|-------|
| 4         | 2.0        | 0.959             | ••    |
| 0         | 0.0        | 1.370             |       |
| 26        | 13.0       | 1.781             | ..... |
| 0         | 0.0        | 2.192             |       |
| 57        | 28.5       | 2.602             |       |
| .....     |            |                   |       |
| 0         | 0.0        | 3.013             |       |
| 0         | 0.0        | 3.424             |       |
| 65        | 32.5       | 3.834             |       |
| .....     |            |                   |       |
| 0         | 0.0        | 4.245             |       |
| 48        | 24.0       | 4.656             |       |
| .....     |            |                   |       |

C3

| Frequency | Percentage | Lower Class Limit |       |
|-----------|------------|-------------------|-------|
| 3         | 1.5        | 1.061             | •     |
| 0         | 0.0        | 1.461             |       |
| 19        | 9.5        | 1.861             | ..... |
| 0         | 0.0        | 2.261             |       |
| 56        | 28.0       | 2.661             |       |
| .....     |            |                   |       |
| 0         | 0.0        | 3.061             |       |
| 0         | 0.0        | 3.461             |       |
| 68        | 34.0       | 3.862             |       |
| .....     |            |                   |       |
| 0         | 0.0        | 4.262             |       |
| 54        | 27.0       | 4.662             |       |
| .....     |            |                   |       |

C4

| Frequency | Percentage | Lower Class Limit |   |
|-----------|------------|-------------------|---|
| 3         | 1.5        | 0.729             | • |

|       |      |       |       |  |  |  |
|-------|------|-------|-------|--|--|--|
| 0     | 0.0  | 1.162 |       |  |  |  |
| 0     | 0.0  | 1.595 |       |  |  |  |
| 30    | 15.0 | 2.027 | ..... |  |  |  |
| 0     | 0.0  | 2.460 |       |  |  |  |
| 46    | 23.0 | 2.893 |       |  |  |  |
| ..... |      |       |       |  |  |  |
| 0     | 0.0  | 3.325 |       |  |  |  |
| 52    | 26.0 | 3.758 |       |  |  |  |
| ..... |      |       |       |  |  |  |
| 0     | 0.0  | 4.191 |       |  |  |  |
| 69    | 34.5 | 4.624 |       |  |  |  |
| ..... |      |       |       |  |  |  |

Covariance Matrix

|     | PQ1    | PQ2    | PQ3    | SQ1    | SQ2    | SQ3    |
|-----|--------|--------|--------|--------|--------|--------|
| PQ1 | 0.748  |        |        |        |        |        |
| PQ2 | 0.368  | 0.857  |        |        |        |        |
| PQ3 | 0.502  | 0.577  | 0.947  |        |        |        |
| SQ1 | 0.091  | 0.170  | 0.079  | 1.266  |        |        |
| SQ2 | 0.078  | 0.138  | 0.112  | 0.679  | 1.142  |        |
| SQ3 | 0.029  | 0.055  | -0.094 | 0.800  | 0.662  | 1.298  |
| SI1 | 0.434  | 0.331  | 0.315  | 0.353  | 0.324  | 0.245  |
| SI2 | 0.415  | 0.281  | 0.337  | 0.260  | 0.306  | 0.231  |
| SI3 | 0.423  | 0.384  | 0.344  | 0.368  | 0.274  | 0.333  |
| SI4 | 0.441  | 0.325  | 0.324  | 0.315  | 0.311  | 0.230  |
| P1  | -0.142 | -0.300 | -0.175 | -0.105 | -0.112 | -0.055 |
| P2  | -0.244 | -0.340 | -0.166 | -0.323 | -0.235 | -0.300 |
| P3  | -0.235 | -0.277 | -0.167 | -0.133 | -0.071 | -0.115 |
| BE1 | 0.377  | 0.334  | 0.318  | 0.278  | 0.414  | 0.258  |
| BE2 | 0.292  | 0.368  | 0.240  | 0.496  | 0.298  | 0.427  |
| BE3 | 0.436  | 0.320  | 0.348  | 0.318  | 0.354  | 0.237  |
| BE4 | 0.375  | 0.353  | 0.369  | 0.523  | 0.390  | 0.230  |
| BE5 | 0.339  | 0.402  | 0.395  | 0.464  | 0.476  | 0.384  |
| BE6 | 0.402  | 0.431  | 0.344  | 0.339  | 0.477  | 0.439  |
| BE7 | 0.409  | 0.251  | 0.372  | 0.141  | 0.271  | 0.077  |
| BE8 | 0.400  | 0.404  | 0.339  | 0.178  | 0.230  | -0.015 |
| BE9 | 0.327  | 0.410  | 0.283  | 0.334  | 0.142  | 0.118  |

|      |       |       |       |       |       |        |
|------|-------|-------|-------|-------|-------|--------|
| BE10 | 0.358 | 0.354 | 0.324 | 0.360 | 0.489 | 0.221  |
| BE11 | 0.380 | 0.290 | 0.385 | 0.235 | 0.477 | 0.298  |
| BE12 | 0.271 | 0.335 | 0.292 | 0.376 | 0.395 | 0.383  |
| BE13 | 0.365 | 0.191 | 0.302 | 0.158 | 0.186 | -0.023 |
| BE14 | 0.357 | 0.257 | 0.362 | 0.015 | 0.182 | -0.009 |
| T1   | 0.283 | 0.229 | 0.261 | 0.198 | 0.235 | 0.099  |
| T2   | 0.282 | 0.214 | 0.234 | 0.113 | 0.187 | 0.175  |
| T3   | 0.227 | 0.192 | 0.198 | 0.232 | 0.255 | 0.179  |
| T4   | 0.294 | 0.212 | 0.228 | 0.159 | 0.112 | 0.190  |
| C1   | 0.288 | 0.300 | 0.254 | 0.500 | 0.486 | 0.528  |
| C2   | 0.271 | 0.282 | 0.240 | 0.426 | 0.542 | 0.534  |
| C3   | 0.238 | 0.279 | 0.209 | 0.387 | 0.721 | 0.429  |
| C4   | 0.234 | 0.277 | 0.255 | 0.518 | 0.603 | 0.496  |

Covariance Matrix

|      | SI1    | SI2    | SI3    | SI4    | P1     | P2     |
|------|--------|--------|--------|--------|--------|--------|
| SI1  | 1.102  |        |        |        |        |        |
| SI2  | 0.474  | 1.019  |        |        |        |        |
| SI3  | 0.735  | 0.544  | 1.251  |        |        |        |
| SI4  | 0.724  | 0.675  | 0.734  | 1.409  |        |        |
| P1   | -0.058 | -0.045 | -0.134 | -0.060 | 0.706  |        |
| P2   | -0.218 | -0.059 | -0.300 | -0.345 | 0.501  | 1.089  |
| P3   | -0.186 | -0.148 | -0.246 | -0.307 | 0.407  | 0.458  |
| BE1  | 0.675  | 0.527  | 0.608  | 0.641  | -0.036 | -0.113 |
| BE2  | 0.570  | 0.516  | 0.547  | 0.525  | -0.068 | -0.096 |
| BE3  | 0.638  | 0.537  | 0.589  | 0.507  | 0.009  | -0.075 |
| BE4  | 0.536  | 0.396  | 0.548  | 0.659  | -0.148 | -0.333 |
| BE5  | 0.461  | 0.382  | 0.425  | 0.450  | -0.068 | -0.146 |
| BE6  | 0.480  | 0.520  | 0.510  | 0.522  | -0.177 | -0.279 |
| BE7  | 0.504  | 0.485  | 0.615  | 0.435  | -0.052 | -0.023 |
| BE8  | 0.479  | 0.397  | 0.455  | 0.497  | -0.134 | -0.155 |
| BE9  | 0.424  | 0.293  | 0.485  | 0.419  | -0.112 | -0.180 |
| BE10 | 0.646  | 0.490  | 0.567  | 0.613  | -0.059 | -0.124 |
| BE11 | 0.541  | 0.341  | 0.473  | 0.686  | -0.026 | -0.220 |
| BE12 | 0.454  | 0.293  | 0.408  | 0.602  | 0.018  | -0.167 |
| BE13 | 0.462  | 0.393  | 0.440  | 0.411  | 0.105  | 0.146  |
| BE14 | 0.407  | 0.237  | 0.382  | 0.494  | -0.017 | -0.110 |
| T1   | 0.224  | 0.398  | 0.339  | 0.440  | -0.208 | -0.299 |
| T2   | 0.223  | 0.436  | 0.389  | 0.342  | -0.131 | -0.117 |

|    |       |       |       |       |        |        |
|----|-------|-------|-------|-------|--------|--------|
| T3 | 0.253 | 0.333 | 0.399 | 0.291 | -0.217 | -0.229 |
| T4 | 0.280 | 0.404 | 0.408 | 0.409 | -0.150 | -0.291 |
| C1 | 0.407 | 0.543 | 0.563 | 0.608 | -0.068 | -0.267 |
| C2 | 0.403 | 0.336 | 0.533 | 0.427 | -0.186 | -0.365 |
| C3 | 0.323 | 0.344 | 0.274 | 0.428 | -0.199 | -0.335 |
| C4 | 0.394 | 0.416 | 0.531 | 0.533 | -0.130 | -0.365 |

Covariance Matrix

|      | P3     | BE1   | BE2   | BE3   | BE4   | BE5   |
|------|--------|-------|-------|-------|-------|-------|
| P3   | 0.741  |       |       |       |       |       |
| BE1  | -0.160 | 1.542 |       |       |       |       |
| BE2  | -0.081 | 0.975 | 1.342 |       |       |       |
| BE3  | -0.127 | 1.226 | 0.937 | 1.465 |       |       |
| BE4  | -0.300 | 0.779 | 0.745 | 0.716 | 1.146 |       |
| BE5  | -0.029 | 0.680 | 0.828 | 0.667 | 0.710 | 1.176 |
| BE6  | -0.300 | 0.824 | 0.768 | 0.736 | 0.886 | 0.749 |
| BE7  | -0.098 | 0.624 | 0.549 | 0.631 | 0.574 | 0.582 |
| BE8  | -0.197 | 0.617 | 0.560 | 0.611 | 0.612 | 0.504 |
| BE9  | -0.143 | 0.604 | 0.711 | 0.616 | 0.591 | 0.662 |
| BE10 | -0.101 | 0.963 | 1.012 | 0.926 | 0.788 | 0.819 |
| BE11 | -0.041 | 0.728 | 0.732 | 0.644 | 0.771 | 0.865 |
| BE12 | 0.012  | 0.639 | 0.861 | 0.535 | 0.728 | 0.986 |
| BE13 | 0.003  | 0.575 | 0.459 | 0.590 | 0.492 | 0.497 |
| BE14 | -0.036 | 0.602 | 0.509 | 0.541 | 0.596 | 0.552 |
| T1   | -0.301 | 0.328 | 0.187 | 0.265 | 0.301 | 0.192 |
| T2   | -0.227 | 0.339 | 0.207 | 0.358 | 0.232 | 0.194 |
| T3   | -0.220 | 0.321 | 0.195 | 0.272 | 0.229 | 0.208 |
| T4   | -0.309 | 0.295 | 0.109 | 0.244 | 0.242 | 0.066 |
| C1   | -0.250 | 0.534 | 0.486 | 0.501 | 0.612 | 0.440 |
| C2   | -0.225 | 0.612 | 0.527 | 0.561 | 0.518 | 0.556 |
| C3   | -0.221 | 0.550 | 0.402 | 0.450 | 0.466 | 0.547 |
| C4   | -0.179 | 0.545 | 0.548 | 0.419 | 0.562 | 0.418 |

Covariance Matrix

|     | BE6   | BE7   | BE8 | BE9 | BE10 | BE11 |
|-----|-------|-------|-----|-----|------|------|
| BE6 | 1.214 |       |     |     |      |      |
| BE7 | 0.599 | 0.959 |     |     |      |      |

|      |       |       |       |       |       |       |
|------|-------|-------|-------|-------|-------|-------|
| BE8  | 0.666 | 0.561 | 0.810 |       |       |       |
| BE9  | 0.577 | 0.449 | 0.682 | 1.007 |       |       |
| BE10 | 0.789 | 0.683 | 0.714 | 0.626 | 1.215 |       |
| BE11 | 0.764 | 0.577 | 0.548 | 0.481 | 0.857 | 1.133 |
| BE12 | 0.698 | 0.469 | 0.474 | 0.630 | 0.779 | 1.015 |
| BE13 | 0.487 | 0.681 | 0.550 | 0.450 | 0.601 | 0.527 |
| BE14 | 0.488 | 0.541 | 0.529 | 0.487 | 0.647 | 0.760 |
| T1   | 0.304 | 0.366 | 0.291 | 0.244 | 0.220 | 0.167 |
| T2   | 0.355 | 0.386 | 0.353 | 0.333 | 0.202 | 0.113 |
| T3   | 0.278 | 0.291 | 0.300 | 0.308 | 0.206 | 0.126 |
| T4   | 0.348 | 0.231 | 0.273 | 0.191 | 0.095 | 0.084 |
| C1   | 0.628 | 0.358 | 0.311 | 0.308 | 0.467 | 0.457 |
| C2   | 0.619 | 0.497 | 0.357 | 0.368 | 0.485 | 0.529 |
| C3   | 0.549 | 0.352 | 0.374 | 0.341 | 0.501 | 0.540 |
| C4   | 0.544 | 0.379 | 0.292 | 0.296 | 0.481 | 0.539 |

Covariance Matrix

|      | BE12  | BE13  | BE14  | T1    | T2    | T3    |
|------|-------|-------|-------|-------|-------|-------|
| BE12 | 1.178 |       |       |       |       |       |
| BE13 | 0.443 | 0.811 |       |       |       |       |
| BE14 | 0.645 | 0.500 | 0.831 |       |       |       |
| T1   | 0.137 | 0.278 | 0.172 | 1.061 |       |       |
| T2   | 0.098 | 0.291 | 0.199 | 0.591 | 1.035 |       |
| T3   | 0.103 | 0.218 | 0.155 | 0.625 | 0.589 | 0.965 |
| T4   | 0.020 | 0.202 | 0.156 | 0.672 | 0.694 | 0.488 |
| C1   | 0.423 | 0.297 | 0.311 | 0.486 | 0.478 | 0.302 |
| C2   | 0.521 | 0.286 | 0.308 | 0.408 | 0.471 | 0.376 |
| C3   | 0.500 | 0.278 | 0.334 | 0.446 | 0.384 | 0.366 |
| C4   | 0.489 | 0.217 | 0.387 | 0.445 | 0.457 | 0.361 |

Covariance Matrix

|    | T4    | C1    | C2    | C3    | C4    |
|----|-------|-------|-------|-------|-------|
| T4 | 1.165 |       |       |       |       |
| C1 | 0.592 | 1.156 |       |       |       |
| C2 | 0.391 | 0.511 | 1.097 |       |       |
| C3 | 0.328 | 0.511 | 0.715 | 1.010 |       |
| C4 | 0.526 | 0.764 | 0.671 | 0.596 | 1.263 |

Means

| PQ1   | PQ2   | PQ3   | SQ1   | SQ2   | SQ3   |
|-------|-------|-------|-------|-------|-------|
| 3.225 | 3.260 | 3.410 | 3.600 | 3.615 | 3.280 |

Means

| SI1   | SI2   | SI3   | SI4   | P1    | P2    |
|-------|-------|-------|-------|-------|-------|
| 3.940 | 3.310 | 4.005 | 3.695 | 2.695 | 2.285 |

Means

| P3    | BE1   | BE2   | BE3   | BE4   | BE5   |
|-------|-------|-------|-------|-------|-------|
| 2.680 | 3.225 | 3.435 | 3.350 | 3.485 | 3.495 |

Means

| BE6   | BE7   | BE8   | BE9   | BE10  | BE11  |
|-------|-------|-------|-------|-------|-------|
| 3.460 | 3.175 | 3.095 | 3.260 | 3.525 | 3.320 |

Means

| BE12  | BE13  | BE14  | T1    | T2    | T3    |
|-------|-------|-------|-------|-------|-------|
| 3.305 | 3.230 | 3.135 | 3.685 | 3.675 | 3.505 |

Means

| T4    | C1    | C2    | C3    | C4    |
|-------|-------|-------|-------|-------|
| 3.465 | 3.800 | 3.635 | 3.755 | 3.770 |

Standard Deviations

| PQ1 | PQ2 | PQ3 | SQ1 | SQ2 | SQ3 |
|-----|-----|-----|-----|-----|-----|
|-----|-----|-----|-----|-----|-----|

0.865 0.926 0.973 1.125 1.069 1.139

Standard Deviations

| SI1   | SI2   | SI3   | SI4   | P1    | P2    |
|-------|-------|-------|-------|-------|-------|
| ----- | ----- | ----- | ----- | ----- | ----- |
| 1.050 | 1.009 | 1.119 | 1.187 | 0.840 | 1.044 |

Standard Deviations

| P3    | BE1   | BE2   | BE3   | BE4   | BE5   |
|-------|-------|-------|-------|-------|-------|
| ----- | ----- | ----- | ----- | ----- | ----- |
| 0.861 | 1.242 | 1.159 | 1.210 | 1.070 | 1.084 |

Standard Deviations

| BE6   | BE7   | BE8   | BE9   | BE10  | BE11  |
|-------|-------|-------|-------|-------|-------|
| ----- | ----- | ----- | ----- | ----- | ----- |
| 1.102 | 0.979 | 0.900 | 1.004 | 1.102 | 1.065 |

Standard Deviations

| BE12  | BE13  | BE14  | T1    | T2    | T3    |
|-------|-------|-------|-------|-------|-------|
| ----- | ----- | ----- | ----- | ----- | ----- |
| 1.085 | 0.901 | 0.912 | 1.030 | 1.017 | 0.982 |

Standard Deviations

| T4    | C1    | C2    | C3    | C4    |
|-------|-------|-------|-------|-------|
| ----- | ----- | ----- | ----- | ----- |
| 1.079 | 1.075 | 1.048 | 1.005 | 1.124 |

The Problem used 103128 Bytes (= 0.2% of available workspace)

**Lampiran 8**  
**Output lisrel**

DATE: 6/27/2014

TIME: 9:27

L I S R E L 8.70

BY

Karl G. Jöreskog & Dag Sörbom

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The following lines were read from file D:\Fukjiang\output.SPJ:

Raw Data from file 'D:\Fukjiang\input.psf'

Latent Variables PQ SQ SI P BE T C

Relationships

PQ1 = PQ

PQ2 = PQ

PQ3 = PQ

SQ1 = SQ

SQ2 = SQ

SQ3 = SQ

SI1 = SI

SI2 = SI

SI3 = SI

SI4 = SI

P1 = P

P2 = P

P3 = P



BE1 = BE  
BE2 = BE  
BE3 = BE  
BE4 = BE  
BE5 = BE  
BE6 = BE  
BE7 = BE  
BE8 = BE  
BE9 = BE  
BE10 = BE  
BE11 = BE  
BE12 = BE  
BE13 = BE  
BE14 = BE  
T1 = T  
T2 = T  
T3 = T  
T4 = T  
C1 = C  
C2 = C  
C3 = C  
C4 = C  
BE = PQ SQ SI P  
T = BE  
C = BE T  
Path Diagram  
Wide Print  
Print Residuals  
Number of Decimals = 3  
OPTIONS: AD=OFF ALL  
End of Problem

Sample Size = 200

### Covariance Matrix

|     |     |      |     |     |     |     |     |
|-----|-----|------|-----|-----|-----|-----|-----|
|     | BE1 | BE2  | BE3 | BE4 | BE5 | BE6 | BE7 |
| BE8 | BE9 | BE10 |     |     |     |     |     |

|       |       |       |       |       |       |       |       |  |
|-------|-------|-------|-------|-------|-------|-------|-------|--|
| BE1   | 1.542 |       |       |       |       |       |       |  |
| BE2   | 0.972 | 1.342 |       |       |       |       |       |  |
| BE3   | 1.232 | 0.942 | 1.465 |       |       |       |       |  |
| BE4   | 0.790 | 0.748 | 0.734 | 1.146 |       |       |       |  |
| BE5   | 0.682 | 0.844 | 0.675 | 0.719 | 1.176 |       |       |  |
| BE6   | 0.846 | 0.779 | 0.758 | 0.886 | 0.751 | 1.214 |       |  |
| BE7   | 0.644 | 0.577 | 0.657 | 0.603 | 0.596 | 0.613 | 0.959 |  |
| BE8   | 0.622 | 0.572 | 0.620 | 0.632 | 0.516 | 0.680 | 0.576 |  |
| 0.810 |       |       |       |       |       |       |       |  |
| BE9   | 0.594 | 0.715 | 0.617 | 0.602 | 0.670 | 0.583 | 0.472 |  |
| 0.694 | 1.007 |       |       |       |       |       |       |  |
| BE10  | 0.962 | 1.017 | 0.931 | 0.799 | 0.824 | 0.808 | 0.702 |  |
| 0.724 | 0.632 | 1.215 |       |       |       |       |       |  |
| BE11  | 0.737 | 0.729 | 0.656 | 0.774 | 0.861 | 0.777 | 0.597 |  |
| 0.557 | 0.479 | 0.856 |       |       |       |       |       |  |
| BE12  | 0.640 | 0.857 | 0.541 | 0.726 | 0.984 | 0.708 | 0.484 |  |
| 0.483 | 0.624 | 0.774 |       |       |       |       |       |  |
| BE13  | 0.581 | 0.472 | 0.603 | 0.516 | 0.514 | 0.502 | 0.703 |  |
| 0.551 | 0.463 | 0.607 |       |       |       |       |       |  |
| BE14  | 0.613 | 0.514 | 0.556 | 0.598 | 0.561 | 0.495 | 0.564 |  |
| 0.540 | 0.487 | 0.657 |       |       |       |       |       |  |
| T1    | 0.353 | 0.223 | 0.287 | 0.319 | 0.207 | 0.322 | 0.387 |  |
| 0.311 | 0.273 | 0.252 |       |       |       |       |       |  |
| T2    | 0.365 | 0.243 | 0.386 | 0.259 | 0.212 | 0.376 | 0.384 |  |
| 0.373 | 0.356 | 0.227 |       |       |       |       |       |  |
| T3    | 0.338 | 0.216 | 0.285 | 0.251 | 0.221 | 0.299 | 0.293 |  |
| 0.314 | 0.320 | 0.226 |       |       |       |       |       |  |
| T4    | 0.337 | 0.148 | 0.279 | 0.261 | 0.090 | 0.373 | 0.255 |  |
| 0.297 | 0.215 | 0.137 |       |       |       |       |       |  |
| C1    | 0.543 | 0.489 | 0.508 | 0.610 | 0.436 | 0.635 | 0.367 |  |
| 0.321 | 0.309 | 0.462 |       |       |       |       |       |  |
| C2    | 0.615 | 0.536 | 0.571 | 0.520 | 0.558 | 0.616 | 0.506 |  |
| 0.367 | 0.372 | 0.499 |       |       |       |       |       |  |
| C3    | 0.538 | 0.409 | 0.438 | 0.471 | 0.544 | 0.545 | 0.355 |  |
| 0.370 | 0.335 | 0.506 |       |       |       |       |       |  |
| C4    | 0.549 | 0.553 | 0.428 | 0.564 | 0.421 | 0.554 | 0.412 |  |
| 0.298 | 0.291 | 0.493 |       |       |       |       |       |  |
| PQ1   | 0.396 | 0.319 | 0.454 | 0.398 | 0.360 | 0.414 | 0.428 |  |
| 0.416 | 0.353 | 0.384 |       |       |       |       |       |  |

|        |        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|--------|
| PQ2    | 0.333  | 0.374  | 0.316  | 0.356  | 0.403  | 0.433  | 0.251  |
| 0.402  | 0.414  | 0.360  |        |        |        |        |        |
| PQ3    | 0.319  | 0.258  | 0.358  | 0.378  | 0.409  | 0.343  | 0.390  |
| 0.348  | 0.300  | 0.341  |        |        |        |        |        |
| SQ1    | 0.236  | 0.471  | 0.281  | 0.517  | 0.445  | 0.321  | 0.146  |
| 0.184  | 0.336  | 0.342  |        |        |        |        |        |
| SQ2    | 0.384  | 0.294  | 0.331  | 0.394  | 0.453  | 0.469  | 0.254  |
| 0.223  | 0.136  | 0.474  |        |        |        |        |        |
| SQ3    | 0.218  | 0.395  | 0.198  | 0.215  | 0.363  | 0.413  | 0.046  |
| -0.027 | 0.098  | 0.194  |        |        |        |        |        |
| SI1    | 0.682  | 0.579  | 0.654  | 0.547  | 0.482  | 0.495  | 0.543  |
| 0.488  | 0.428  | 0.660  |        |        |        |        |        |
| SI2    | 0.538  | 0.543  | 0.554  | 0.442  | 0.409  | 0.540  | 0.518  |
| 0.418  | 0.331  | 0.510  |        |        |        |        |        |
| SI3    | 0.602  | 0.551  | 0.596  | 0.560  | 0.450  | 0.525  | 0.637  |
| 0.462  | 0.491  | 0.565  |        |        |        |        |        |
| SI4    | 0.652  | 0.540  | 0.529  | 0.696  | 0.478  | 0.553  | 0.476  |
| 0.522  | 0.457  | 0.623  |        |        |        |        |        |
| P1     | -0.021 | -0.073 | 0.017  | -0.148 | -0.064 | -0.176 | -0.047 |
| -0.132 | -0.111 | -0.065 |        |        |        |        |        |
| P2     | -0.090 | -0.104 | -0.060 | -0.325 | -0.132 | -0.262 | -0.025 |
| -0.158 | -0.185 | -0.125 |        |        |        |        |        |
| P3     | -0.164 | -0.086 | -0.134 | -0.306 | -0.027 | -0.299 | -0.105 |
| -0.206 | -0.148 | -0.113 |        |        |        |        |        |

Covariance Matrix

|      | BE11  | BE12  | BE13  | BE14  | T1    | T2    | T3    |
|------|-------|-------|-------|-------|-------|-------|-------|
| T4   | C1    | C2    |       |       |       |       |       |
|      | ----- | ----- | ----- | ----- | ----- | ----- | ----- |
|      | ----- | ----- |       |       |       |       |       |
| BE11 | 1.133 |       |       |       |       |       |       |
| BE12 | 1.017 | 1.178 |       |       |       |       |       |
| BE13 | 0.534 | 0.442 | 0.811 |       |       |       |       |
| BE14 | 0.766 | 0.647 | 0.512 | 0.831 |       |       |       |
| T1   | 0.182 | 0.152 | 0.304 | 0.183 | 1.061 |       |       |
| T2   | 0.130 | 0.115 | 0.286 | 0.210 | 0.591 | 1.035 |       |
| T3   | 0.139 | 0.117 | 0.220 | 0.163 | 0.637 | 0.597 | 0.965 |
| T4   | 0.107 | 0.038 | 0.219 | 0.173 | 0.660 | 0.705 | 0.518 |

1.165

|        |        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|--------|
| C1     | 0.451  | 0.423  | 0.303  | 0.304  | 0.505  | 0.497  | 0.333  |
| 0.626  | 1.156  |        |        |        |        |        |        |
| C2     | 0.534  | 0.529  | 0.305  | 0.311  | 0.422  | 0.489  | 0.396  |
| 0.417  | 0.525  | 1.097  |        |        |        |        |        |
| C3     | 0.541  | 0.507  | 0.273  | 0.330  | 0.455  | 0.392  | 0.381  |
| 0.346  | 0.534  | 0.714  |        |        |        |        |        |
| C4     | 0.546  | 0.498  | 0.234  | 0.393  | 0.465  | 0.493  | 0.388  |
| 0.560  | 0.773  | 0.700  |        |        |        |        |        |
| PQ1    | 0.400  | 0.288  | 0.380  | 0.377  | 0.292  | 0.290  | 0.238  |
| 0.307  | 0.307  | 0.289  |        |        |        |        |        |
| PQ2    | 0.288  | 0.332  | 0.196  | 0.261  | 0.238  | 0.221  | 0.195  |
| 0.225  | 0.304  | 0.281  |        |        |        |        |        |
| PQ3    | 0.386  | 0.291  | 0.317  | 0.382  | 0.265  | 0.239  | 0.199  |
| 0.246  | 0.258  | 0.241  |        |        |        |        |        |
| SQ1    | 0.234  | 0.374  | 0.168  | 0.014  | 0.220  | 0.141  | 0.253  |
| 0.197  | 0.503  | 0.421  |        |        |        |        |        |
| SQ2    | 0.476  | 0.399  | 0.164  | 0.178  | 0.240  | 0.196  | 0.261  |
| 0.140  | 0.490  | 0.537  |        |        |        |        |        |
| SQ3    | 0.287  | 0.382  | -0.040 | -0.033 | 0.099  | 0.182  | 0.190  |
| 0.221  | 0.524  | 0.525  |        |        |        |        |        |
| SI1    | 0.552  | 0.456  | 0.491  | 0.425  | 0.237  | 0.227  | 0.247  |
| 0.299  | 0.425  | 0.420  |        |        |        |        |        |
| SI2    | 0.383  | 0.332  | 0.416  | 0.280  | 0.410  | 0.453  | 0.350  |
| 0.453  | 0.580  | 0.380  |        |        |        |        |        |
| SI3    | 0.476  | 0.416  | 0.476  | 0.386  | 0.348  | 0.399  | 0.394  |
| 0.410  | 0.559  | 0.555  |        |        |        |        |        |
| SI4    | 0.691  | 0.616  | 0.432  | 0.509  | 0.456  | 0.353  | 0.321  |
| 0.439  | 0.632  | 0.451  |        |        |        |        |        |
| P1     | -0.023 | 0.023  | 0.086  | -0.014 | -0.202 | -0.130 | -0.212 |
| -0.144 | -0.071 | -0.177 |        |        |        |        |        |
| P2     | -0.212 | -0.163 | 0.125  | -0.094 | -0.287 | -0.113 | -0.220 |
| -0.284 | -0.249 | -0.353 |        |        |        |        |        |
| P3     | -0.043 | 0.013  | -0.016 | -0.037 | -0.292 | -0.230 | -0.225 |
| -0.308 | -0.255 | -0.223 |        |        |        |        |        |

Covariance Matrix

|       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|
|       | C3    | C4    | PQ1   | PQ2   | PQ3   | SQ1   | SQ2   |
| SQ3   | SI1   | SI2   |       |       |       |       |       |
| ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- |
| ----- | ----- |       |       |       |       |       |       |

|        |        |        |        |        |        |        |        |  |
|--------|--------|--------|--------|--------|--------|--------|--------|--|
| C3     | 1.010  |        |        |        |        |        |        |  |
| C4     | 0.617  | 1.263  |        |        |        |        |        |  |
| PQ1    | 0.251  | 0.263  | 0.748  |        |        |        |        |  |
| PQ2    | 0.280  | 0.276  | 0.373  | 0.857  |        |        |        |  |
| PQ3    | 0.217  | 0.271  | 0.520  | 0.576  | 0.947  |        |        |  |
| SQ1    | 0.389  | 0.526  | 0.106  | 0.160  | 0.074  | 1.266  |        |  |
| SQ2    | 0.724  | 0.609  | 0.087  | 0.131  | 0.103  | 0.689  | 1.142  |  |
| SQ3    | 0.431  | 0.502  | 0.022  | 0.047  | -0.105 | 0.786  | 0.681  |  |
| 1.298  |        |        |        |        |        |        |        |  |
| SI1    | 0.332  | 0.383  | 0.471  | 0.347  | 0.346  | 0.338  | 0.313  |  |
| 0.213  | 1.102  |        |        |        |        |        |        |  |
| SI2    | 0.363  | 0.469  | 0.453  | 0.301  | 0.365  | 0.285  | 0.306  |  |
| 0.234  | 0.561  | 1.019  |        |        |        |        |        |  |
| SI3    | 0.278  | 0.534  | 0.451  | 0.391  | 0.360  | 0.369  | 0.253  |  |
| 0.305  | 0.739  | 0.617  |        |        |        |        |        |  |
| SI4    | 0.463  | 0.548  | 0.486  | 0.341  | 0.352  | 0.355  | 0.329  |  |
| 0.232  | 0.730  | 0.738  |        |        |        |        |        |  |
| P1     | -0.191 | -0.116 | -0.142 | -0.297 | -0.171 | -0.097 | -0.108 |  |
| -0.060 | -0.059 | -0.066 |        |        |        |        |        |  |
| P2     | -0.322 | -0.341 | -0.245 | -0.331 | -0.153 | -0.313 | -0.211 |  |
| -0.291 | -0.234 | -0.109 |        |        |        |        |        |  |
| P3     | -0.219 | -0.169 | -0.239 | -0.278 | -0.170 | -0.134 | -0.069 |  |
| -0.106 | -0.175 | -0.177 |        |        |        |        |        |  |

Covariance Matrix

|     | SI3    | SI4    | P1    | P2    | P3    |
|-----|--------|--------|-------|-------|-------|
|     | -----  | -----  | ----- | ----- | ----- |
| SI3 | 1.251  |        |       |       |       |
| SI4 | 0.740  | 1.409  |       |       |       |
| P1  | -0.124 | -0.078 | 0.706 |       |       |
| P2  | -0.298 | -0.375 | 0.509 | 1.089 |       |
| P3  | -0.245 | -0.329 | 0.409 | 0.469 | 0.741 |

Initial Estimates (TSLS)

Measurement Equations

BE1 = 1.000\*BE, Errorvar.= 0.0720, R<sup>2</sup> = 0.953

BE2 = 0.798\*BE, Errorvar.= 0.406, R<sup>2</sup> = 0.697

BE3 = 0.939\*BE, Errorvar.= 0.168, R<sup>2</sup> = 0.885

BE4 = 0.677\*BE, Errorvar.= 0.472, R<sup>2</sup> = 0.588

BE5 = 0.599\*BE, Errorvar.= 0.648, R<sup>2</sup> = 0.449

BE6 = 0.669\*BE, Errorvar.= 0.556, R<sup>2</sup> = 0.542

BE7 = 0.556\*BE, Errorvar.= 0.505, R<sup>2</sup> = 0.473

BE8 = 0.549\*BE, Errorvar.= 0.366, R<sup>2</sup> = 0.548

BE9 = 0.508\*BE, Errorvar.= 0.628, R<sup>2</sup> = 0.376

BE10 = 0.803\*BE, Errorvar.= 0.268, R<sup>2</sup> = 0.779

BE11 = 0.631\*BE, Errorvar.= 0.547, R<sup>2</sup> = 0.517

BE12 = 0.544\*BE, Errorvar.= 0.743, R<sup>2</sup> = 0.369

BE13 = 0.489\*BE, Errorvar.= 0.459, R<sup>2</sup> = 0.434

BE14 = 0.493\*BE, Errorvar.= 0.474, R<sup>2</sup> = 0.430

T1 = 1.000\*T, Errorvar.= 0.227, R<sup>2</sup> = 0.831

T2 = 0.850\*T, Errorvar.= 0.432, R<sup>2</sup> = 0.650

T3 = 0.744\*T, Errorvar.= 0.503, R<sup>2</sup> = 0.550

T4 = 0.838\*T, Errorvar.= 0.579, R<sup>2</sup> = 0.574

C1 = 1.000\*C, Errorvar.= 0.225, R<sup>2</sup> = 0.881

C2 = 0.748\*C, Errorvar.= 0.576, R<sup>2</sup> = 0.619

$$C3 = 0.646 * C, \text{ Errorvar.} = 0.622, R^2 = 0.528$$

$$C4 = 0.894 * C, \text{ Errorvar.} = 0.520, R^2 = 0.720$$

$$PQ1 = 0.724 * PQ, \text{ Errorvar.} = 0.224, R^2 = 0.701$$

$$PQ2 = 0.650 * PQ, \text{ Errorvar.} = 0.434, R^2 = 0.494$$

$$PQ3 = 0.727 * PQ, \text{ Errorvar.} = 0.418, R^2 = 0.558$$

$$SQ1 = 0.738 * SQ, \text{ Errorvar.} = 0.683, R^2 = 0.522$$

$$SQ2 = 0.675 * SQ, \text{ Errorvar.} = 0.687, R^2 = 0.399$$

$$SQ3 = 0.726 * SQ, \text{ Errorvar.} = 0.770, R^2 = 0.406$$

$$SI1 = 0.851 * SI, \text{ Errorvar.} = 0.377, R^2 = 0.658$$

$$SI2 = 0.712 * SI, \text{ Errorvar.} = 0.513, R^2 = 0.497$$

$$SI3 = 0.869 * SI, \text{ Errorvar.} = 0.496, R^2 = 0.603$$

$$SI4 = 0.885 * SI, \text{ Errorvar.} = 0.626, R^2 = 0.556$$

$$P1 = 0.738 * P, \text{ Errorvar.} = 0.161, R^2 = 0.772$$

$$P2 = 0.731 * P, \text{ Errorvar.} = 0.555, R^2 = 0.490$$

$$P3 = 0.572 * P, \text{ Errorvar.} = 0.415, R^2 = 0.441$$

### Structural Equations

$$BE = 0.429 * PQ + 0.331 * SQ + 0.474 * SI + 0.235 * P, \text{ Errorvar.} = 0.673, R^2 = 0.542$$

$$T = 0.483 * BE, \text{ Errorvar.} = 0.769, R^2 = 0.308$$

$$C = 0.434 * BE + 0.740 * T, \text{ Errorvar.} = 0.326, R^2 = 0.805$$

### Reduced Form Equations

$$BE = 0.429*PQ + 0.331*SQ + 0.474*SI + 0.235*P, \text{ Errorvar.} = 0.673, R^2 = 0.542$$

$$T = 0.207*PQ + 0.160*SQ + 0.229*SI + 0.113*P, \text{ Errorvar.} = 0.926, R^2 = 0.167$$

$$C = 0.339*PQ + 0.262*SQ + 0.375*SI + 0.186*P, \text{ Errorvar.} = 1.169, R^2 = 0.299$$

### Correlation Matrix of Independent Variables

|    | PQ     | SQ     | SI     | P     |
|----|--------|--------|--------|-------|
| PQ | 1.000  |        |        |       |
| SQ | 0.118  | 1.000  |        |       |
| SI | 0.667  | 0.404  | 1.000  |       |
| P  | -0.459 | -0.264 | -0.329 | 1.000 |

### Covariance Matrix of Latent Variables

|    | BE     | T      | C      | PQ     | SQ     | SI     | P     |
|----|--------|--------|--------|--------|--------|--------|-------|
| BE | 1.000  |        |        |        |        |        |       |
| T  | 0.710  | 1.000  |        |        |        |        |       |
| C  | 0.764  | 0.631  | 1.000  |        |        |        |       |
| PQ | 0.676  | 0.326  | 0.535  | 1.000  |        |        |       |
| SQ | 0.511  | 0.247  | 0.404  | 0.118  | 1.000  |        |       |
| SI | 0.816  | 0.394  | 0.646  | 0.667  | 0.404  | 1.000  |       |
| P  | -0.205 | -0.099 | -0.162 | -0.459 | -0.264 | -0.329 | 1.000 |

### Behavior under Minimization Iterations

| Iter | Try | Abscissa       | Slope           | Function       |
|------|-----|----------------|-----------------|----------------|
| 1    | 0   | 0.00000000D+00 | -0.72699089D+01 | 0.84400198D+01 |
|      | 1   | 0.10000000D+01 | -0.16479649D+00 | 0.66753325D+01 |



|    |   |                |                 |                |
|----|---|----------------|-----------------|----------------|
| 2  | 0 | 0.00000000D+00 | -0.36611906D+00 | 0.66753325D+01 |
|    | 1 | 0.10000000D+01 | -0.12389509D+00 | 0.64273570D+01 |
|    | 2 | 0.20000000D+01 | 0.22013234D+00  | 0.64598663D+01 |
|    | 3 | 0.13601314D+01 | -0.20168524D-01 | 0.64009596D+01 |
| 3  | 0 | 0.00000000D+00 | -0.80426079D-01 | 0.64009596D+01 |
|    | 1 | 0.13601314D+01 | 0.10116266D-02  | 0.63454181D+01 |
| 4  | 0 | 0.00000000D+00 | -0.30901121D-01 | 0.63454181D+01 |
|    | 1 | 0.13601314D+01 | -0.37067546D-02 | 0.63227418D+01 |
|    | 2 | 0.27202629D+01 | 0.17338489D-01  | 0.63325686D+01 |
|    | 3 | 0.15996950D+01 | 0.37231168D-03  | 0.63223460D+01 |
| 5  | 0 | 0.00000000D+00 | -0.12502307D-01 | 0.63223460D+01 |
|    | 1 | 0.15996950D+01 | -0.14352953D-02 | 0.63110503D+01 |
|    | 2 | 0.31993900D+01 | 0.11238215D-01  | 0.63186016D+01 |
|    | 3 | 0.17808630D+01 | -0.10064126D-03 | 0.63109109D+01 |
| 6  | 0 | 0.00000000D+00 | -0.54071888D-02 | 0.63109109D+01 |
|    | 1 | 0.17808630D+01 | 0.38251185D-03  | 0.63064577D+01 |
| 7  | 0 | 0.00000000D+00 | -0.28619708D-02 | 0.63064577D+01 |
|    | 1 | 0.17808630D+01 | -0.35016588D-03 | 0.63035791D+01 |
|    | 2 | 0.35617260D+01 | 0.23549360D-02  | 0.63053245D+01 |
|    | 3 | 0.20113894D+01 | -0.13951365D-04 | 0.63035371D+01 |
| 8  | 0 | 0.00000000D+00 | -0.15390962D-02 | 0.63035371D+01 |
|    | 1 | 0.20113894D+01 | -0.49023201D-03 | 0.63014993D+01 |
|    | 2 | 0.40227788D+01 | 0.54326652D-03  | 0.63015546D+01 |
|    | 3 | 0.29654764D+01 | 0.14722820D-05  | 0.63012664D+01 |
| 9  | 0 | 0.00000000D+00 | -0.10606437D-02 | 0.63012664D+01 |
|    | 1 | 0.29654764D+01 | -0.77599960D-04 | 0.62995847D+01 |
| 10 | 0 | 0.00000000D+00 | -0.76147319D-03 | 0.62995847D+01 |
|    | 1 | 0.29654764D+01 | 0.24599732D-03  | 0.62988005D+01 |
|    | 2 | 0.22413865D+01 | -0.76608170D-05 | 0.62987145D+01 |
| 11 | 0 | 0.00000000D+00 | -0.49905712D-03 | 0.62987145D+01 |
|    | 1 | 0.22413865D+01 | -0.73393761D-04 | 0.62980753D+01 |
|    | 2 | 0.44827729D+01 | 0.34046727D-03  | 0.62983767D+01 |

|    |                  |                 |                |
|----|------------------|-----------------|----------------|
| 3  | 0.26388720D+01   | 0.83325196D-06  | 0.62980608D+01 |
| 12 | 0 0.00000000D+00 | -0.31845722D-03 | 0.62980608D+01 |
|    | 1 0.26388720D+01 | -0.41687944D-04 | 0.62975853D+01 |
|    | 2 0.52777440D+01 | 0.23688395D-03  | 0.62978424D+01 |
|    | 3 0.30337760D+01 | -0.12423980D-06 | 0.62975770D+01 |
| 13 | 0 0.00000000D+00 | -0.19968911D-03 | 0.62975770D+01 |
|    | 1 0.30337760D+01 | -0.24117890D-04 | 0.62972375D+01 |
|    | 2 0.60675520D+01 | 0.15160581D-03  | 0.62974309D+01 |
|    | 3 0.34501585D+01 | -0.14527645D-07 | 0.62972325D+01 |
| 14 | 0 0.00000000D+00 | -0.13344053D-03 | 0.62972325D+01 |
|    | 1 0.34501585D+01 | -0.31945688D-04 | 0.62969475D+01 |
|    | 2 0.69003170D+01 | 0.68638387D-04  | 0.62970110D+01 |
|    | 3 0.45459352D+01 | 0.94880284D-07  | 0.62969300D+01 |
| 15 | 0 0.00000000D+00 | -0.87378852D-04 | 0.62969300D+01 |
|    | 1 0.45459352D+01 | -0.24212602D-05 | 0.62967260D+01 |
| 16 | 0 0.00000000D+00 | -0.59011120D-04 | 0.62967260D+01 |
|    | 1 0.45459352D+01 | 0.44304285D-05  | 0.62966020D+01 |
| 17 | 0 0.00000000D+00 | -0.39738568D-04 | 0.62966020D+01 |
|    | 1 0.45459352D+01 | 0.59298617D-05  | 0.62965252D+01 |
|    | 2 0.39556639D+01 | -0.71414567D-08 | 0.62965234D+01 |
| 18 | 0 0.00000000D+00 | -0.23835220D-04 | 0.62965234D+01 |
|    | 1 0.39556639D+01 | -0.13379534D-05 | 0.62964736D+01 |
| 19 | 0 0.00000000D+00 | -0.13617936D-04 | 0.62964736D+01 |
|    | 1 0.39556639D+01 | 0.44662272D-05  | 0.62964555D+01 |
|    | 2 0.29787376D+01 | 0.50412029D-08  | 0.62964533D+01 |
| 20 | 0 0.00000000D+00 | -0.76360042D-05 | 0.62964533D+01 |
|    | 1 0.29787376D+01 | -0.21582548D-05 | 0.62964388D+01 |
|    | 2 0.59574753D+01 | 0.33154332D-05  | 0.62964405D+01 |
|    | 3 0.41532428D+01 | 0.47208856D-09  | 0.62964375D+01 |
| 21 | 0 0.00000000D+00 | -0.50417819D-05 | 0.62964375D+01 |
|    | 1 0.41532428D+01 | -0.25243481D-06 | 0.62964265D+01 |

22 0 0.00000000D+00 -0.32877758D-05 0.62964265D+01  
1 0.41532428D+01 -0.97468443D-07 0.62964195D+01

23 0 0.00000000D+00 -0.19276566D-05 0.62964195D+01  
1 0.41532428D+01 0.12125865D-05 0.62964180D+01  
2 0.25494924D+01 0.74113952D-09 0.62964170D+01

24 0 0.00000000D+00 -0.64016942D-06 0.62964170D+01  
1 0.25494924D+01 0.29698644D-06 0.62964166D+01  
2 0.17415535D+01 -0.29581324D-11 0.62964164D+01

25 0 0.00000000D+00 -0.16475621D-06 0.62964164D+01  
1 0.17415535D+01 0.29724373D-09 0.62964163D+01

26 0 0.00000000D+00 -0.59378475D-07 0.62964163D+01  
1 0.17415535D+01 -0.14550799D-07 0.62964162D+01  
2 0.34831070D+01 0.30272334D-07 0.62964163D+01  
3 0.23069087D+01 0.49775955D-12 0.62964162D+01

27 0 0.00000000D+00 -0.28201223D-07 0.62964162D+01  
1 0.23069087D+01 -0.11272740D-07 0.62964162D+01  
2 0.46138175D+01 0.56577895D-08 0.62964162D+01  
3 0.38429022D+01 -0.22781716D-12 0.62964162D+01

28 0 0.00000000D+00 -0.15958897D-07 0.62964162D+01  
1 0.38429022D+01 -0.22504724D-09 0.62964162D+01

29 0 0.00000000D+00 -0.59985003D-08 0.62964162D+01  
1 0.38429022D+01 0.46035414D-08 0.62964161D+01  
2 0.21742652D+01 0.89771282D-13 0.62964161D+01

30 0 0.00000000D+00 -0.86609914D-09 0.62964161D+01  
1 0.21742652D+01 0.58016413D-09 0.62964161D+01  
2 0.13020653D+01 -0.19539192D-14 0.62964161D+01

31 0 0.00000000D+00 -0.22677931D-09 0.62964161D+01  
1 0.13020653D+01 -0.30268984D-10 0.62964161D+01  
2 0.26041306D+01 0.16623677D-09 0.62964161D+01  
3 0.15026304D+01 0.29802545D-15 0.62964161D+01

|    |   |                |                 |                |
|----|---|----------------|-----------------|----------------|
| 32 | 0 | 0.00000000D+00 | -0.72084158D-10 | 0.62964161D+01 |
|    | 1 | 0.15026304D+01 | -0.10753755D-10 | 0.62964161D+01 |
|    | 2 | 0.30052607D+01 | 0.50576483D-10  | 0.62964161D+01 |
|    | 3 | 0.17661043D+01 | 0.11982793D-16  | 0.62964161D+01 |
| 33 | 0 | 0.00000000D+00 | -0.13807050D-10 | 0.62964161D+01 |
|    | 1 | 0.17661043D+01 | 0.12686911D-11  | 0.62964161D+01 |
| 34 | 0 | 0.00000000D+00 | -0.26838676D-11 | 0.62964161D+01 |
|    | 1 | 0.17661043D+01 | 0.12977352D-11  | 0.62964161D+01 |
|    | 2 | 0.11904729D+01 | -0.86052636D-18 | 0.62964161D+01 |

Number of Iterations = 34

LISREL Estimates (Maximum Likelihood)

Measurement Equations

BE1 = 0.928\*BE, Errorvar.= 0.680 , R<sup>2</sup> = 0.559  
(0.0719)  
9.465

BE2 = 0.914\*BE, Errorvar.= 0.507 , R<sup>2</sup> = 0.623  
(0.0783) (0.0544)  
11.678 9.310

BE3 = 0.885\*BE, Errorvar.= 0.681 , R<sup>2</sup> = 0.535  
(0.0826) (0.0716)  
10.716 9.512

BE4 = 0.862\*BE, Errorvar.= 0.403 , R<sup>2</sup> = 0.648  
(0.0721) (0.0436)  
11.951 9.232

BE5 = 0.868\*BE, Errorvar.= 0.422 , R<sup>2</sup> = 0.641  
(0.0731) (0.0456)

11.875            9.255

BE6 = 0.870\*BE, Errorvar.= 0.457 , R<sup>2</sup> = 0.624

(0.0745)            (0.0491)

11.689            9.307

BE7 = 0.725\*BE, Errorvar.= 0.433 , R<sup>2</sup> = 0.549

(0.0667)            (0.0456)

10.868            9.486

BE8 = 0.710\*BE, Errorvar.= 0.305 , R<sup>2</sup> = 0.623

(0.0608)            (0.0328)

11.684            9.308

BE9 = 0.699\*BE, Errorvar.= 0.519 , R<sup>2</sup> = 0.485

(0.0689)            (0.0541)

10.143            9.596

BE10 = 0.968\*BE, Errorvar.= 0.279 , R<sup>2</sup> = 0.770

(0.0732)            (0.0324)

13.214            8.621

BE11 = 0.891\*BE, Errorvar.= 0.340 , R<sup>2</sup> = 0.700

(0.0713)            (0.0376)

12.495            9.033

BE12 = 0.852\*BE, Errorvar.= 0.452 , R<sup>2</sup> = 0.616

(0.0734)            (0.0485)

11.609            9.328

BE13 = 0.639\*BE, Errorvar.= 0.403 , R<sup>2</sup> = 0.504

(0.0617)            (0.0421)

10.359            9.567

BE14 = 0.693\*BE, Errorvar.= 0.350 , R<sup>2</sup> = 0.579

(0.0619)            (0.0372)

11.200            9.422

T1 = 0.798\*T, Errorvar.= 0.424 , R<sup>2</sup> = 0.600

(0.0560)

7.574

$$T2 = 0.809 * T, \text{ Errorvar.} = 0.380, R^2 = 0.633$$

|          |          |
|----------|----------|
| (0.0732) | (0.0526) |
| 11.047   | 7.223    |

$$T3 = 0.717 * T, \text{ Errorvar.} = 0.451, R^2 = 0.533$$

|          |          |
|----------|----------|
| (0.0709) | (0.0552) |
| 10.120   | 8.165    |

$$T4 = 0.821 * T, \text{ Errorvar.} = 0.490, R^2 = 0.579$$

|          |          |
|----------|----------|
| (0.0777) | (0.0630) |
| 10.570   | 7.784    |

$$C1 = 0.770 * C, \text{ Errorvar.} = 0.563, R^2 = 0.513$$

|          |  |
|----------|--|
| (0.0661) |  |
| 8.521    |  |

$$C2 = 0.820 * C, \text{ Errorvar.} = 0.425, R^2 = 0.613$$

|          |          |
|----------|----------|
| (0.0804) | (0.0547) |
| 10.202   | 7.764    |

$$C3 = 0.764 * C, \text{ Errorvar.} = 0.427, R^2 = 0.577$$

|          |          |
|----------|----------|
| (0.0770) | (0.0529) |
| 9.921    | 8.077    |

$$C4 = 0.861 * C, \text{ Errorvar.} = 0.523, R^2 = 0.586$$

|          |          |
|----------|----------|
| (0.0861) | (0.0653) |
| 9.993    | 8.004    |

$$PQ1 = 0.677 * PQ, \text{ Errorvar.} = 0.289, R^2 = 0.613$$

|          |          |
|----------|----------|
| (0.0557) | (0.0419) |
| 12.158   | 6.915    |

$$PQ2 = 0.664 * PQ, \text{ Errorvar.} = 0.415, R^2 = 0.515$$

|          |          |
|----------|----------|
| (0.0613) | (0.0523) |
| 10.831   | 7.950    |

$$PQ3 = 0.754 * PQ, \text{ Errorvar.} = 0.378, R^2 = 0.600$$

|          |          |
|----------|----------|
| (0.0629) | (0.0535) |
| 11.990   | 7.074    |

$$\begin{aligned} \text{SQ1} &= 0.889 * \text{SQ}, \text{Errorvar.} = 0.477, R^2 = 0.624 \\ & (0.0747) \quad (0.0781) \\ & 11.890 \quad 6.104 \end{aligned}$$

$$\begin{aligned} \text{SQ2} &= 0.793 * \text{SQ}, \text{Errorvar.} = 0.513, R^2 = 0.551 \\ & (0.0719) \quad (0.0721) \\ & 11.030 \quad 7.117 \end{aligned}$$

$$\begin{aligned} \text{SQ3} &= 0.863 * \text{SQ}, \text{Errorvar.} = 0.553, R^2 = 0.574 \\ & (0.0763) \quad (0.0811) \\ & 11.312 \quad 6.812 \end{aligned}$$

$$\begin{aligned} \text{SI1} &= 0.823 * \text{SI}, \text{Errorvar.} = 0.425, R^2 = 0.614 \\ & (0.0655) \quad (0.0551) \\ & 12.569 \quad 7.713 \end{aligned}$$

$$\begin{aligned} \text{SI2} &= 0.739 * \text{SI}, \text{Errorvar.} = 0.473, R^2 = 0.536 \\ & (0.0647) \quad (0.0567) \\ & 11.416 \quad 8.348 \end{aligned}$$

$$\begin{aligned} \text{SI3} &= 0.849 * \text{SI}, \text{Errorvar.} = 0.531, R^2 = 0.576 \\ & (0.0707) \quad (0.0659) \\ & 11.998 \quad 8.057 \end{aligned}$$

$$\begin{aligned} \text{SI4} &= 0.907 * \text{SI}, \text{Errorvar.} = 0.586, R^2 = 0.584 \\ & (0.0748) \quad (0.0733) \\ & 12.127 \quad 7.984 \end{aligned}$$

$$\begin{aligned} \text{P1} &= 0.643 * \text{P}, \text{Errorvar.} = 0.292, R^2 = 0.586 \\ & (0.0575) \quad (0.0467) \\ & 11.177 \quad 6.250 \end{aligned}$$

$$\begin{aligned} \text{P2} &= 0.784 * \text{P}, \text{Errorvar.} = 0.475, R^2 = 0.564 \\ & (0.0717) \quad (0.0724) \\ & 10.935 \quad 6.563 \end{aligned}$$

$$\begin{aligned} \text{P3} &= 0.622 * \text{P}, \text{Errorvar.} = 0.354, R^2 = 0.523 \\ & (0.0595) \quad (0.0498) \\ & 10.465 \quad 7.114 \end{aligned}$$

### Structural Equations

$$BE = 0.346*PQ + 0.220*SQ + 0.480*SI + 0.177*P, \text{ Errorvar.} = 0.366, R^2 = 0.634$$

|         |          |         |          |          |
|---------|----------|---------|----------|----------|
| (0.110) | (0.0748) | (0.111) | (0.0725) | (0.0679) |
| 3.150   | 2.938    | 4.329   | 2.434    | 5.387    |

$$T = 0.387*BE, \text{ Errorvar.} = 0.850, R^2 = 0.150$$

|          |         |
|----------|---------|
| (0.0804) | (0.141) |
| 4.816    | 6.014   |

$$C = 0.503*BE + 0.509*T, \text{ Errorvar.} = 0.290, R^2 = 0.710$$

|          |          |          |
|----------|----------|----------|
| (0.0745) | (0.0768) | (0.0668) |
| 6.754    | 6.625    | 4.339    |

### Reduced Form Equations

$$BE = 0.346*PQ + 0.220*SQ + 0.480*SI + 0.177*P, \text{ Errorvar.} = 0.366, R^2 = 0.634$$

|         |          |         |          |
|---------|----------|---------|----------|
| (0.110) | (0.0748) | (0.111) | (0.0725) |
| 3.150   | 2.938    | 4.329   | 2.434    |

$$T = 0.134*PQ + 0.0851*SQ + 0.186*SI + 0.0683*P, \text{ Errorvar.} = 0.905, R^2 = 0.0950$$

|          |          |          |          |
|----------|----------|----------|----------|
| (0.0493) | (0.0330) | (0.0552) | (0.0308) |
| 2.715    | 2.576    | 3.367    | 2.216    |

$$C = 0.242*PQ + 0.154*SQ + 0.336*SI + 0.124*P, \text{ Errorvar.} = 0.689, R^2 = 0.311$$

|          |          |          |          |
|----------|----------|----------|----------|
| (0.0798) | (0.0541) | (0.0832) | (0.0519) |
| 3.033    | 2.843    | 4.041    | 2.379    |

### Correlation Matrix of Independent Variables

|    | PQ    | SQ | SI | P |
|----|-------|----|----|---|
| PQ | 1.000 |    |    |   |



|    |         |         |         |       |
|----|---------|---------|---------|-------|
| SQ | 0.116   | 1.000   |         |       |
|    | (0.087) |         |         |       |
|    | 1.338   |         |         |       |
| SI | 0.683   | 0.420   | 1.000   |       |
|    | (0.054) | (0.074) |         |       |
|    | 12.591  | 5.717   |         |       |
| P  | -0.457  | -0.257  | -0.316  | 1.000 |
|    | (0.075) | (0.084) | (0.080) |       |
|    | -6.122  | -3.060  | -3.961  |       |

Covariance Matrix of Latent Variables

|    | BE     | T      | C      | PQ     | SQ     | SI     | P     |
|----|--------|--------|--------|--------|--------|--------|-------|
| BE | 1.000  |        |        |        |        |        |       |
| T  | 0.387  | 1.000  |        |        |        |        |       |
| C  | 0.700  | 0.704  | 1.000  |        |        |        |       |
| PQ | 0.619  | 0.240  | 0.433  | 1.000  |        |        |       |
| SQ | 0.417  | 0.161  | 0.292  | 0.116  | 1.000  |        |       |
| SI | 0.753  | 0.292  | 0.527  | 0.683  | 0.420  | 1.000  |       |
| P  | -0.190 | -0.073 | -0.133 | -0.457 | -0.257 | -0.316 | 1.000 |

Goodness of Fit Statistics

Degrees of Freedom = 547

Minimum Fit Function Chi-Square = 2505.974 (P = 0.0)

Normal Theory Weighted Least Squares Chi-Square = 2344.054 (P = 0.0)

Estimated Non-centrality Parameter (NCP) = 1797.054

90 Percent Confidence Interval for NCP = (1651.057 ; 1950.540)

Minimum Fit Function Value = 12.593

Population Discrepancy Function Value (F0) = 9.030

90 Percent Confidence Interval for F0 = (8.297 ; 9.802)

Root Mean Square Error of Approximation (RMSEA) = 0.068

90 Percent Confidence Interval for RMSEA = (0.053 ; 0.084)

P-Value for Test of Close Fit (RMSEA < 0.05) = 0.000

Expected Cross-Validation Index (ECVI) = 12.613

90 Percent Confidence Interval for ECVI = (11.880 ; 13.385)

ECVI for Saturated Model = 16.332  
 ECVI for Independence Model = 93.952

Chi-Square for Independence Model with 595 Degrees of Freedom =  
 18626.378

Independence AIC = 18696.378  
 Model AIC = 510.054  
 Saturated AIC = 1260.000  
 Independence CAIC = 18846.819  
 Model CAIC = 2866.815  
 Saturated CAIC = 3967.940

Normed Fit Index (NFI) = 0.915  
 Non-Normed Fit Index (NNFI) = 0.932  
 Parsimony Normed Fit Index (PNFI) = 0.796  
 Comparative Fit Index (CFI) = 0.941  
 Incremental Fit Index (IFI) = 0.942  
 Relative Fit Index (RFI) = 0.904

Critical N (CN) = 50.781

Root Mean Square Residual (RMR) = 0.065  
 Standardized RMR = 0.0680  
 Goodness of Fit Index (GFI) = 0.948  
 Adjusted Goodness of Fit Index (AGFI) = 0.937  
 Parsimony Goodness of Fit Index (PGFI) = 0.719

Fitted Covariance Matrix

|     | BE1   | BE2   | BE3   | BE4   | BE5   | BE6 | BE7 |
|-----|-------|-------|-------|-------|-------|-----|-----|
| BE8 | BE9   | BE10  |       |       |       |     |     |
| BE1 | 1.542 |       |       |       |       |     |     |
| BE2 | 0.849 | 1.342 |       |       |       |     |     |
| BE3 | 0.822 | 0.809 | 1.465 |       |       |     |     |
| BE4 | 0.800 | 0.788 | 0.763 | 1.146 |       |     |     |
| BE5 | 0.806 | 0.794 | 0.769 | 0.748 | 1.176 |     |     |

|       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|
| BE6   | 0.808 | 0.796 | 0.770 | 0.750 | 0.756 | 1.214 |       |
| BE7   | 0.673 | 0.663 | 0.642 | 0.625 | 0.630 | 0.631 | 0.959 |
| BE8   | 0.660 | 0.650 | 0.629 | 0.612 | 0.617 | 0.618 | 0.515 |
| 0.810 |       |       |       |       |       |       |       |
| BE9   | 0.649 | 0.639 | 0.619 | 0.602 | 0.607 | 0.608 | 0.507 |
| 0.497 | 1.007 |       |       |       |       |       |       |
| BE10  | 0.898 | 0.885 | 0.857 | 0.834 | 0.840 | 0.842 | 0.702 |
| 0.687 | 0.676 | 1.215 |       |       |       |       |       |
| BE11  | 0.827 | 0.814 | 0.788 | 0.768 | 0.773 | 0.775 | 0.646 |
| 0.633 | 0.622 | 0.862 |       |       |       |       |       |
| BE12  | 0.791 | 0.779 | 0.754 | 0.734 | 0.740 | 0.742 | 0.618 |
| 0.605 | 0.595 | 0.824 |       |       |       |       |       |
| BE13  | 0.593 | 0.584 | 0.566 | 0.551 | 0.555 | 0.556 | 0.464 |
| 0.454 | 0.447 | 0.618 |       |       |       |       |       |
| BE14  | 0.644 | 0.634 | 0.614 | 0.597 | 0.602 | 0.603 | 0.503 |
| 0.493 | 0.485 | 0.671 |       |       |       |       |       |
| T1    | 0.287 | 0.282 | 0.273 | 0.266 | 0.268 | 0.269 | 0.224 |
| 0.220 | 0.216 | 0.299 |       |       |       |       |       |
| T2    | 0.291 | 0.286 | 0.277 | 0.270 | 0.272 | 0.273 | 0.227 |
| 0.222 | 0.219 | 0.303 |       |       |       |       |       |
| T3    | 0.258 | 0.254 | 0.246 | 0.239 | 0.241 | 0.242 | 0.201 |
| 0.197 | 0.194 | 0.269 |       |       |       |       |       |
| T4    | 0.295 | 0.291 | 0.281 | 0.274 | 0.276 | 0.277 | 0.231 |
| 0.226 | 0.222 | 0.307 |       |       |       |       |       |
| C1    | 0.500 | 0.493 | 0.477 | 0.464 | 0.468 | 0.469 | 0.391 |
| 0.383 | 0.377 | 0.521 |       |       |       |       |       |
| C2    | 0.533 | 0.525 | 0.508 | 0.495 | 0.499 | 0.500 | 0.417 |
| 0.408 | 0.401 | 0.556 |       |       |       |       |       |
| C3    | 0.496 | 0.489 | 0.473 | 0.461 | 0.464 | 0.465 | 0.388 |
| 0.380 | 0.374 | 0.517 |       |       |       |       |       |
| C4    | 0.559 | 0.551 | 0.533 | 0.519 | 0.523 | 0.524 | 0.437 |
| 0.428 | 0.421 | 0.583 |       |       |       |       |       |
| PQ1   | 0.389 | 0.383 | 0.371 | 0.361 | 0.364 | 0.365 | 0.304 |
| 0.298 | 0.293 | 0.406 |       |       |       |       |       |
| PQ2   | 0.382 | 0.376 | 0.364 | 0.354 | 0.357 | 0.358 | 0.298 |
| 0.292 | 0.287 | 0.398 |       |       |       |       |       |
| PQ3   | 0.433 | 0.427 | 0.413 | 0.402 | 0.405 | 0.406 | 0.338 |
| 0.331 | 0.326 | 0.451 |       |       |       |       |       |
| SQ1   | 0.344 | 0.338 | 0.328 | 0.319 | 0.321 | 0.322 | 0.269 |
| 0.263 | 0.259 | 0.358 |       |       |       |       |       |

|        |        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|--------|
| SQ2    | 0.307  | 0.302  | 0.293  | 0.285  | 0.287  | 0.288  | 0.240  |
| 0.235  | 0.231  | 0.320  |        |        |        |        |        |
| SQ3    | 0.334  | 0.329  | 0.318  | 0.310  | 0.312  | 0.313  | 0.261  |
| 0.256  | 0.251  | 0.348  |        |        |        |        |        |
| SI1    | 0.575  | 0.567  | 0.549  | 0.534  | 0.538  | 0.539  | 0.450  |
| 0.440  | 0.433  | 0.600  |        |        |        |        |        |
| SI2    | 0.517  | 0.509  | 0.493  | 0.480  | 0.483  | 0.484  | 0.404  |
| 0.395  | 0.389  | 0.539  |        |        |        |        |        |
| SI3    | 0.593  | 0.584  | 0.566  | 0.551  | 0.555  | 0.556  | 0.464  |
| 0.454  | 0.447  | 0.618  |        |        |        |        |        |
| SI4    | 0.634  | 0.625  | 0.605  | 0.589  | 0.593  | 0.595  | 0.496  |
| 0.486  | 0.478  | 0.661  |        |        |        |        |        |
| P1     | -0.113 | -0.112 | -0.108 | -0.105 | -0.106 | -0.106 | -0.089 |
| -0.087 | -0.085 | -0.118 |        |        |        |        |        |
| P2     | -0.138 | -0.136 | -0.132 | -0.128 | -0.129 | -0.129 | -0.108 |
| -0.106 | -0.104 | -0.144 |        |        |        |        |        |
| P3     | -0.110 | -0.108 | -0.105 | -0.102 | -0.103 | -0.103 | -0.086 |
| -0.084 | -0.083 | -0.114 |        |        |        |        |        |

Fitted Covariance Matrix

|       | BE11  | BE12  | BE13  | BE14  | T1    | T2    | T3    |
|-------|-------|-------|-------|-------|-------|-------|-------|
| T4    | C1    | C2    |       |       |       |       |       |
| ----- |       |       |       |       |       |       |       |
| ----- |       |       |       |       |       |       |       |
| BE11  | 1.133 |       |       |       |       |       |       |
| BE12  | 0.759 | 1.178 |       |       |       |       |       |
| BE13  | 0.569 | 0.544 | 0.811 |       |       |       |       |
| BE14  | 0.618 | 0.591 | 0.443 | 0.831 |       |       |       |
| T1    | 0.275 | 0.263 | 0.197 | 0.214 | 1.061 |       |       |
| T2    | 0.279 | 0.267 | 0.200 | 0.217 | 0.646 | 1.035 |       |
| T3    | 0.247 | 0.236 | 0.177 | 0.192 | 0.572 | 0.580 | 0.965 |
| T4    | 0.283 | 0.271 | 0.203 | 0.220 | 0.655 | 0.664 | 0.589 |
| 1.165 |       |       |       |       |       |       |       |
| C1    | 0.480 | 0.459 | 0.344 | 0.374 | 0.432 | 0.438 | 0.388 |
| 0.445 | 1.156 |       |       |       |       |       |       |
| C2    | 0.511 | 0.489 | 0.367 | 0.398 | 0.461 | 0.467 | 0.414 |
| 0.474 | 0.631 | 1.097 |       |       |       |       |       |
| C3    | 0.476 | 0.455 | 0.342 | 0.371 | 0.429 | 0.435 | 0.385 |
| 0.441 | 0.588 | 0.626 |       |       |       |       |       |

|        |        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|--------|
| C4     | 0.537  | 0.513  | 0.385  | 0.418  | 0.483  | 0.490  | 0.434  |
| 0.497  | 0.662  | 0.706  |        |        |        |        |        |
| PQ1    | 0.373  | 0.357  | 0.268  | 0.291  | 0.129  | 0.131  | 0.116  |
| 0.133  | 0.226  | 0.241  |        |        |        |        |        |
| PQ2    | 0.366  | 0.350  | 0.263  | 0.285  | 0.127  | 0.129  | 0.114  |
| 0.131  | 0.221  | 0.236  |        |        |        |        |        |
| PQ3    | 0.416  | 0.397  | 0.298  | 0.323  | 0.144  | 0.146  | 0.129  |
| 0.148  | 0.251  | 0.268  |        |        |        |        |        |
| SQ1    | 0.330  | 0.315  | 0.237  | 0.257  | 0.114  | 0.116  | 0.103  |
| 0.118  | 0.199  | 0.213  |        |        |        |        |        |
| SQ2    | 0.294  | 0.282  | 0.211  | 0.229  | 0.102  | 0.103  | 0.092  |
| 0.105  | 0.178  | 0.190  |        |        |        |        |        |
| SQ3    | 0.320  | 0.306  | 0.230  | 0.249  | 0.111  | 0.113  | 0.100  |
| 0.114  | 0.194  | 0.207  |        |        |        |        |        |
| SI1    | 0.552  | 0.528  | 0.396  | 0.430  | 0.191  | 0.194  | 0.172  |
| 0.197  | 0.334  | 0.356  |        |        |        |        |        |
| SI2    | 0.496  | 0.474  | 0.356  | 0.386  | 0.172  | 0.174  | 0.154  |
| 0.177  | 0.300  | 0.320  |        |        |        |        |        |
| SI3    | 0.569  | 0.545  | 0.409  | 0.443  | 0.197  | 0.200  | 0.177  |
| 0.203  | 0.344  | 0.367  |        |        |        |        |        |
| SI4    | 0.609  | 0.582  | 0.437  | 0.474  | 0.211  | 0.214  | 0.190  |
| 0.217  | 0.368  | 0.392  |        |        |        |        |        |
| P1     | -0.109 | -0.104 | -0.078 | -0.085 | -0.038 | -0.038 | -0.034 |
| -0.039 | -0.066 | -0.070 |        |        |        |        |        |
| P2     | -0.133 | -0.127 | -0.095 | -0.103 | -0.046 | -0.047 | -0.041 |
| -0.047 | -0.080 | -0.085 |        |        |        |        |        |
| P3     | -0.105 | -0.101 | -0.076 | -0.082 | -0.036 | -0.037 | -0.033 |
| -0.038 | -0.064 | -0.068 |        |        |        |        |        |

Fitted Covariance Matrix

|     | C3  | C4  | PQ1 | PQ2 | PQ3 | SQ1 | SQ2 |
|-----|-----|-----|-----|-----|-----|-----|-----|
| SQ3 | SI1 | SI2 |     |     |     |     |     |

|     |       |       |       |       |       |       |  |
|-----|-------|-------|-------|-------|-------|-------|--|
| C3  | 1.010 |       |       |       |       |       |  |
| C4  | 0.657 | 1.263 |       |       |       |       |  |
| PQ1 | 0.224 | 0.252 | 0.748 |       |       |       |  |
| PQ2 | 0.220 | 0.248 | 0.450 | 0.857 |       |       |  |
| PQ3 | 0.249 | 0.281 | 0.511 | 0.501 | 0.947 |       |  |
| SQ1 | 0.198 | 0.223 | 0.070 | 0.069 | 0.078 | 1.266 |  |

|        |        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|--------|
| SQ2    | 0.177  | 0.199  | 0.062  | 0.061  | 0.070  | 0.705  | 1.142  |
| SQ3    | 0.192  | 0.217  | 0.068  | 0.067  | 0.076  | 0.767  | 0.685  |
| 1.298  |        |        |        |        |        |        |        |
| SI1    | 0.331  | 0.373  | 0.381  | 0.373  | 0.424  | 0.307  | 0.274  |
| 0.299  | 1.102  |        |        |        |        |        |        |
| SI2    | 0.297  | 0.335  | 0.342  | 0.335  | 0.380  | 0.276  | 0.246  |
| 0.268  | 0.608  | 1.019  |        |        |        |        |        |
| SI3    | 0.342  | 0.385  | 0.392  | 0.385  | 0.437  | 0.317  | 0.283  |
| 0.308  | 0.698  | 0.627  |        |        |        |        |        |
| SI4    | 0.365  | 0.412  | 0.420  | 0.412  | 0.467  | 0.339  | 0.303  |
| 0.329  | 0.747  | 0.670  |        |        |        |        |        |
| P1     | -0.065 | -0.074 | -0.199 | -0.195 | -0.221 | -0.147 | -0.131 |
| -0.143 | -0.167 | -0.150 |        |        |        |        |        |
| P2     | -0.080 | -0.090 | -0.243 | -0.238 | -0.270 | -0.179 | -0.160 |
| -0.174 | -0.204 | -0.183 |        |        |        |        |        |
| P3     | -0.063 | -0.071 | -0.193 | -0.189 | -0.214 | -0.142 | -0.127 |
| -0.138 | -0.162 | -0.145 |        |        |        |        |        |

#### Fitted Covariance Matrix

|     | SI3    | SI4    | P1    | P2    | P3    |
|-----|--------|--------|-------|-------|-------|
| SI3 | 1.251  |        |       |       |       |
| SI4 | 0.770  | 1.409  |       |       |       |
| P1  | -0.172 | -0.184 | 0.706 |       |       |
| P2  | -0.210 | -0.225 | 0.504 | 1.089 |       |
| P3  | -0.167 | -0.178 | 0.400 | 0.488 | 0.741 |

#### Fitted Residuals

|     | BE1    | BE2    | BE3    | BE4    | BE5    | BE6    | BE7   |
|-----|--------|--------|--------|--------|--------|--------|-------|
| BE8 | BE9    | BE10   |        |        |        |        |       |
| BE1 | 0.000  |        |        |        |        |        |       |
| BE2 | 0.123  | 0.000  |        |        |        |        |       |
| BE3 | 0.411  | 0.133  | 0.000  |        |        |        |       |
| BE4 | -0.010 | -0.040 | -0.029 | 0.000  |        |        |       |
| BE5 | -0.124 | 0.050  | -0.093 | -0.030 | 0.000  |        |       |
| BE6 | 0.038  | -0.017 | -0.013 | 0.136  | -0.005 | 0.000  |       |
| BE7 | -0.030 | -0.086 | 0.015  | -0.022 | -0.033 | -0.019 | 0.000 |

|        |        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|--------|
| BE8    | -0.038 | -0.078 | -0.009 | 0.020  | -0.101 | 0.061  | 0.061  |
| 0.000  |        |        |        |        |        |        |        |
| BE9    | -0.054 | 0.077  | -0.002 | 0.000  | 0.063  | -0.025 | -0.035 |
| 0.197  | 0.000  |        |        |        |        |        |        |
| BE10   | 0.064  | 0.132  | 0.074  | -0.034 | -0.016 | -0.035 | 0.000  |
| 0.036  | -0.045 | 0.000  |        |        |        |        |        |
| BE11   | -0.090 | -0.085 | -0.132 | 0.006  | 0.088  | 0.001  | -0.049 |
| -0.075 | -0.143 | -0.006 |        |        |        |        |        |
| BE12   | -0.151 | 0.078  | -0.213 | -0.008 | 0.244  | -0.033 | -0.134 |
| -0.122 | 0.028  | -0.051 |        |        |        |        |        |
| BE13   | -0.012 | -0.112 | 0.037  | -0.035 | -0.041 | -0.055 | 0.240  |
| 0.097  | 0.016  | -0.011 |        |        |        |        |        |
| BE14   | -0.031 | -0.120 | -0.058 | 0.000  | -0.041 | -0.108 | 0.061  |
| 0.047  | 0.003  | -0.013 |        |        |        |        |        |
| T1     | 0.066  | -0.059 | 0.013  | 0.053  | -0.061 | 0.053  | 0.163  |
| 0.092  | 0.057  | -0.047 |        |        |        |        |        |
| T2     | 0.074  | -0.044 | 0.109  | -0.011 | -0.060 | 0.104  | 0.157  |
| 0.150  | 0.137  | -0.076 |        |        |        |        |        |
| T3     | 0.080  | -0.037 | 0.039  | 0.012  | -0.020 | 0.058  | 0.092  |
| 0.116  | 0.126  | -0.043 |        |        |        |        |        |
| T4     | 0.042  | -0.142 | -0.003 | -0.013 | -0.186 | 0.096  | 0.024  |
| 0.072  | -0.007 | -0.171 |        |        |        |        |        |
| C1     | 0.043  | -0.003 | 0.031  | 0.146  | -0.032 | 0.166  | -0.024 |
| -0.062 | -0.068 | -0.059 |        |        |        |        |        |
| C2     | 0.082  | 0.011  | 0.062  | 0.025  | 0.060  | 0.116  | 0.090  |
| -0.041 | -0.030 | -0.056 |        |        |        |        |        |
| C3     | 0.042  | -0.080 | -0.035 | 0.011  | 0.080  | 0.080  | -0.033 |
| -0.010 | -0.038 | -0.011 |        |        |        |        |        |
| C4     | -0.010 | 0.002  | -0.106 | 0.045  | -0.102 | 0.029  | -0.025 |
| -0.130 | -0.130 | -0.090 |        |        |        |        |        |
| PQ1    | 0.007  | -0.064 | 0.083  | 0.037  | -0.003 | 0.049  | 0.124  |
| 0.118  | 0.060  | -0.022 |        |        |        |        |        |
| PQ2    | -0.048 | -0.002 | -0.048 | 0.001  | 0.046  | 0.075  | -0.047 |
| 0.110  | 0.127  | -0.037 |        |        |        |        |        |
| PQ3    | -0.114 | -0.169 | -0.055 | -0.024 | 0.004  | -0.063 | 0.052  |
| 0.016  | -0.026 | -0.110 |        |        |        |        |        |
| SQ1    | -0.107 | 0.133  | -0.046 | 0.198  | 0.124  | -0.002 | -0.123 |
| -0.079 | 0.077  | -0.017 |        |        |        |        |        |
| SQ2    | 0.077  | -0.008 | 0.039  | 0.109  | 0.166  | 0.182  | 0.014  |
| -0.012 | -0.095 | 0.155  |        |        |        |        |        |

|        |        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|--------|
| SQ3    | -0.116 | 0.066  | -0.120 | -0.095 | 0.051  | 0.100  | -0.215 |
| -0.282 | -0.154 | -0.154 |        |        |        |        |        |
| SI1    | 0.107  | 0.012  | 0.106  | 0.013  | -0.056 | -0.044 | 0.094  |
| 0.048  | -0.005 | 0.060  |        |        |        |        |        |
| SI2    | 0.021  | 0.034  | 0.062  | -0.038 | -0.075 | 0.056  | 0.115  |
| 0.022  | -0.058 | -0.029 |        |        |        |        |        |
| SI3    | 0.009  | -0.034 | 0.030  | 0.010  | -0.105 | -0.031 | 0.174  |
| 0.008  | 0.044  | -0.053 |        |        |        |        |        |
| SI4    | 0.017  | -0.085 | -0.076 | 0.107  | -0.115 | -0.042 | -0.020 |
| 0.036  | -0.021 | -0.038 |        |        |        |        |        |
| P1     | 0.092  | 0.039  | 0.125  | -0.043 | 0.042  | -0.069 | 0.042  |
| -0.045 | -0.026 | 0.053  |        |        |        |        |        |
| P2     | 0.049  | 0.032  | 0.072  | -0.197 | -0.003 | -0.133 | 0.083  |
| -0.052 | -0.081 | 0.019  |        |        |        |        |        |
| P3     | -0.054 | 0.022  | -0.029 | -0.205 | 0.076  | -0.196 | -0.019 |
| -0.122 | -0.065 | 0.002  |        |        |        |        |        |

Fitted Residuals

|        | BE11   | BE12   | BE13   | BE14   | T1     | T2     | T3     |
|--------|--------|--------|--------|--------|--------|--------|--------|
| T4     | C1     | C2     |        |        |        |        |        |
|        | -----  | -----  | -----  | -----  | -----  | -----  | -----  |
|        | BE11   | 0.000  |        |        |        |        |        |
|        | BE12   | 0.259  | 0.000  |        |        |        |        |
|        | BE13   | -0.035 | -0.102 | 0.000  |        |        |        |
|        | BE14   | 0.148  | 0.056  | 0.068  | 0.000  |        |        |
|        | T1     | -0.093 | -0.111 | 0.107  | -0.031 | 0.000  |        |
|        | T2     | -0.149 | -0.152 | 0.086  | -0.007 | -0.055 | 0.000  |
|        | T3     | -0.108 | -0.120 | 0.043  | -0.030 | 0.065  | 0.017  |
|        | T4     | -0.176 | -0.232 | 0.016  | -0.047 | 0.004  | 0.040  |
| 0.000  |        |        |        |        |        |        |        |
|        | C1     | -0.029 | -0.036 | -0.042 | -0.070 | 0.072  | 0.059  |
| 0.182  | 0.000  |        |        |        |        |        |        |
|        | C2     | 0.023  | 0.040  | -0.061 | -0.087 | -0.038 | 0.022  |
| -0.057 | -0.107 | 0.000  |        |        |        |        |        |
|        | C3     | 0.065  | 0.052  | -0.069 | -0.041 | 0.026  | -0.042 |
| -0.095 | -0.054 | 0.088  |        |        |        |        |        |
|        | C4     | 0.010  | -0.016 | -0.151 | -0.025 | -0.018 | 0.003  |
| 0.063  | 0.111  | -0.006 |        |        |        |        |        |



|        |        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|--------|
| PQ1    | 0.027  | -0.069 | 0.112  | 0.086  | 0.163  | 0.158  | 0.121  |
| 0.174  | 0.081  | 0.048  |        |        |        |        |        |
| PQ2    | -0.078 | -0.018 | -0.067 | -0.024 | 0.111  | 0.092  | 0.081  |
| 0.095  | 0.082  | 0.045  |        |        |        |        |        |
| PQ3    | -0.030 | -0.106 | 0.019  | 0.058  | 0.121  | 0.093  | 0.069  |
| 0.097  | 0.007  | -0.027 |        |        |        |        |        |
| SQ1    | -0.096 | 0.058  | -0.069 | -0.243 | 0.106  | 0.025  | 0.151  |
| 0.079  | 0.303  | 0.209  |        |        |        |        |        |
| SQ2    | 0.181  | 0.118  | -0.047 | -0.051 | 0.138  | 0.092  | 0.169  |
| 0.035  | 0.312  | 0.347  |        |        |        |        |        |
| SQ3    | -0.034 | 0.075  | -0.269 | -0.282 | -0.012 | 0.069  | 0.090  |
| 0.107  | 0.330  | 0.318  |        |        |        |        |        |
| SI1    | 0.000  | -0.073 | 0.095  | -0.005 | 0.046  | 0.033  | 0.075  |
| 0.102  | 0.091  | 0.064  |        |        |        |        |        |
| SI2    | -0.113 | -0.142 | 0.060  | -0.106 | 0.238  | 0.279  | 0.196  |
| 0.276  | 0.280  | 0.060  |        |        |        |        |        |
| SI3    | -0.094 | -0.129 | 0.068  | -0.057 | 0.151  | 0.198  | 0.217  |
| 0.207  | 0.214  | 0.188  |        |        |        |        |        |
| SI4    | 0.082  | 0.034  | -0.005 | 0.035  | 0.245  | 0.139  | 0.131  |
| 0.222  | 0.264  | 0.058  |        |        |        |        |        |
| P1     | 0.086  | 0.127  | 0.164  | 0.071  | -0.164 | -0.092 | -0.178 |
| -0.105 | -0.006 | -0.107 |        |        |        |        |        |
| P2     | -0.080 | -0.036 | 0.220  | 0.009  | -0.241 | -0.066 | -0.179 |
| -0.237 | -0.169 | -0.267 |        |        |        |        |        |
| P3     | 0.062  | 0.113  | 0.059  | 0.045  | -0.256 | -0.193 | -0.192 |
| -0.270 | -0.192 | -0.155 |        |        |        |        |        |

Fitted Residuals

|     | C3     | C4     | PQ1    | PQ2   | PQ3    | SQ1    | SQ2   |
|-----|--------|--------|--------|-------|--------|--------|-------|
| SQ3 | SI1    | SI2    |        |       |        |        |       |
|     | -----  | -----  | -----  | ----- | -----  | -----  | ----- |
|     | -----  | -----  |        |       |        |        |       |
| C3  | 0.000  |        |        |       |        |        |       |
| C4  | -0.040 | 0.000  |        |       |        |        |       |
| PQ1 | 0.027  | 0.011  | 0.000  |       |        |        |       |
| PQ2 | 0.060  | 0.029  | -0.076 | 0.000 |        |        |       |
| PQ3 | -0.033 | -0.010 | 0.010  | 0.075 | 0.000  |        |       |
| SQ1 | 0.191  | 0.303  | 0.036  | 0.091 | -0.003 | 0.000  |       |
| SQ2 | 0.548  | 0.410  | 0.025  | 0.070 | 0.034  | -0.016 | 0.000 |

|        |        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|--------|
| SQ3    | 0.238  | 0.285  | -0.046 | -0.019 | -0.181 | 0.019  | -0.004 |
| 0.000  |        |        |        |        |        |        |        |
| SI1    | 0.001  | 0.010  | 0.090  | -0.026 | -0.077 | 0.030  | 0.039  |
| -0.086 | 0.000  |        |        |        |        |        |        |
| SI2    | 0.065  | 0.133  | 0.111  | -0.034 | -0.016 | 0.009  | 0.059  |
| -0.034 | -0.047 | 0.000  |        |        |        |        |        |
| SI3    | -0.064 | 0.149  | 0.059  | 0.006  | -0.077 | 0.052  | -0.030 |
| -0.003 | 0.041  | -0.010 |        |        |        |        |        |
| SI4    | 0.097  | 0.136  | 0.066  | -0.071 | -0.115 | 0.016  | 0.027  |
| -0.098 | -0.016 | 0.068  |        |        |        |        |        |
| P1     | -0.125 | -0.042 | 0.057  | -0.102 | 0.051  | 0.050  | 0.023  |
| 0.083  | 0.109  | 0.084  |        |        |        |        |        |
| P2     | -0.242 | -0.252 | -0.003 | -0.093 | 0.117  | -0.133 | -0.051 |
| -0.117 | -0.030 | 0.074  |        |        |        |        |        |
| P3     | -0.156 | -0.098 | -0.047 | -0.089 | 0.045  | 0.009  | 0.058  |
| 0.032  | -0.013 | -0.031 |        |        |        |        |        |

### Fitted Residuals

|     | SI3    | SI4    | P1    | P2     | P3    |
|-----|--------|--------|-------|--------|-------|
| SI3 | 0.000  |        |       |        |       |
| SI4 | -0.030 | 0.000  |       |        |       |
| P1  | 0.048  | 0.106  | 0.000 |        |       |
| P2  | -0.088 | -0.150 | 0.006 | 0.000  |       |
| P3  | -0.078 | -0.151 | 0.009 | -0.019 | 0.000 |

### Summary Statistics for Fitted Residuals

Smallest Fitted Residual = -0.282

Median Fitted Residual = 0.000

Largest Fitted Residual = 0.548

### Stemleaf Plot

```

- 2|8877765
- 2|4444311000
- 1|9999888877766655555555
- 1|444333333322222222211111111111100000000

```

```

-
0|9999999999998888888888888888887777777777776666666666666666666
55555555555555555555555555
-
0|44444444444444444444444444444444444433333333333333333333333333
322222222222222222222222111111111111111111111111110000000000
0000+48

0|1111111111111111111111111222222222222222222333333333333333
33344444444444444444444444444444

0|555555555555555555566666666666666666666666666666666677777777
77777777778888888888888888888999999999999999999
1|000000001111111111111111222222222223333333344444
1|555555566666777788899
2|00001112224444
2|5668889
3|00123
3|5
4|11
4|
5|
5|5

```

Standardized Residuals

|       | BE1 | BE2    | BE3    | BE4    | BE5    | BE6    | BE7    |        |
|-------|-----|--------|--------|--------|--------|--------|--------|--------|
| BE8   | BE9 | BE10   |        |        |        |        |        |        |
|       | BE1 | --     |        |        |        |        |        |        |
|       | BE2 | 3.166  | --     |        |        |        |        |        |
|       | BE3 | 8.983  | 3.406  | --     |        |        |        |        |
|       | BE4 | -0.293 | -1.361 | -0.834 | --     |        |        |        |
|       | BE5 | -3.500 | 1.655  | -2.630 | -1.107 | --     |        |        |
|       | BE6 | 1.023  | -0.537 | -0.341 | 4.866  | -0.161 | --     |        |
|       | BE7 | -0.811 | -2.780 | 0.408  | -0.796 | -1.182 | -0.636 | --     |
|       | BE8 | -1.251 | -3.025 | -0.300 | 0.865  | -4.317 | 2.502  | 2.522  |
| --    |     |        |        |        |        |        |        |        |
|       | BE9 | -1.351 | 2.232  | -0.038 | -0.010 | 2.016  | -0.765 | -1.094 |
| 7.411 | --  |        |        |        |        |        |        |        |

|        |        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|--------|
| BE10   | 2.299  | 5.610  | 2.681  | -1.651 | -0.741 | -1.547 | -0.010 |
| 1.986  | -1.825 | --     |        |        |        |        |        |
| BE11   | -2.878 | -3.178 | -4.204 | 0.256  | 3.602  | 0.057  | -1.963 |
| -3.637 | -5.187 | -0.295 |        |        |        |        |        |
| BE12   | -4.109 | 2.469  | -5.771 | -0.305 | 8.540  | -1.114 | -4.555 |
| -4.994 | 0.877  | -2.273 |        |        |        |        |        |
| BE13   | -0.343 | -3.715 | 1.039  | -1.297 | -1.501 | -1.904 | 8.508  |
| 4.138  | 0.512  | -0.517 |        |        |        |        |        |
| BE14   | -0.949 | -4.312 | -1.780 | 0.001  | -1.619 | -4.086 | 2.352  |
| 2.186  | 0.098  | -0.681 |        |        |        |        |        |
| T1     | 1.008  | -1.018 | 0.204  | 1.006  | -1.139 | 0.950  | 3.143  |
| 2.033  | 1.037  | -0.964 |        |        |        |        |        |
| T2     | 1.176  | -0.778 | 1.732  | -0.214 | -1.157 | 1.946  | 3.121  |
| 3.446  | 2.558  | -1.631 |        |        |        |        |        |
| T3     | 1.241  | -0.641 | 0.609  | 0.230  | -0.368 | 1.041  | 1.785  |
| 2.574  | 2.317  | -0.848 |        |        |        |        |        |
| T4     | 0.607  | -2.292 | -0.039 | -0.233 | -3.241 | 1.635  | 0.443  |
| 1.486  | -0.118 | -3.247 |        |        |        |        |        |
| C1     | 0.703  | -0.060 | 0.510  | 2.997  | -0.639 | 3.254  | -0.500 |
| -1.491 | -1.322 | -1.321 |        |        |        |        |        |
| C2     | 1.498  | 0.237  | 1.143  | 0.569  | 1.348  | 2.530  | 2.060  |
| -1.104 | -0.627 | -1.445 |        |        |        |        |        |
| C3     | 0.771  | -1.676 | -0.656 | 0.245  | 1.817  | 1.767  | -0.770 |
| -0.260 | -0.826 | -0.282 |        |        |        |        |        |
| C4     | -0.162 | 0.038  | -1.771 | 0.945  | -2.091 | 0.580  | -0.517 |
| -3.148 | -2.526 | -2.074 |        |        |        |        |        |
| PQ1    | 0.156  | -1.557 | 1.762  | 0.985  | -0.091 | 1.241  | 3.304  |
| 3.670  | 1.494  | -0.654 |        |        |        |        |        |
| PQ2    | -0.897 | -0.043 | -0.903 | 0.033  | 1.049  | 1.641  | -1.106 |
| 2.960  | 2.771  | -0.938 |        |        |        |        |        |
| PQ3    | -2.129 | -3.584 | -1.030 | -0.567 | 0.093  | -1.408 | 1.218  |
| 0.446  | -0.570 | -2.901 |        |        |        |        |        |
| SQ1    | -1.588 | 2.220  | -0.689 | 3.659  | 2.248  | -0.029 | -2.282 |
| -1.703 | 1.329  | -0.338 |        |        |        |        |        |
| SQ2    | 1.137  | -0.137 | 0.581  | 1.995  | 2.983  | 3.176  | 0.259  |
| -0.260 | -1.664 | 3.050  |        |        |        |        |        |
| SQ3    | -1.635 | 1.052  | -1.715 | -1.661 | 0.875  | 1.673  | -3.815 |
| -5.769 | -2.553 | -2.931 |        |        |        |        |        |
| SI1    | 2.046  | 0.269  | 2.038  | 0.309  | -1.336 | -1.022 | 2.259  |
| 1.346  | -0.121 | 1.652  |        |        |        |        |        |

|        |        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|--------|
| SI2    | 0.400  | 0.724  | 1.166  | -0.892 | -1.728 | 1.248  | 2.711  |
| 0.609  | -1.273 | -0.752 |        |        |        |        |        |
| SI3    | 0.149  | -0.672 | 0.534  | 0.210  | -2.273 | -0.648 | 3.816  |
| 0.197  | 0.906  | -1.314 |        |        |        |        |        |
| SI4    | 0.289  | -1.594 | -1.262 | 2.249  | -2.361 | -0.830 | -0.418 |
| 0.873  | -0.407 | -0.895 |        |        |        |        |        |
| P1     | 1.673  | 0.796  | 2.297  | -0.964 | 0.923  | -1.493 | 0.956  |
| -1.185 | -0.558 | 1.291  |        |        |        |        |        |
| P2     | 0.702  | 0.510  | 1.047  | -3.510 | -0.045 | -2.264 | 1.510  |
| -1.087 | -1.385 | 0.358  |        |        |        |        |        |
| P3     | -0.925 | 0.414  | -0.503 | -4.280 | 1.559  | -3.932 | -0.405 |
| -2.981 | -1.318 | 0.039  |        |        |        |        |        |

Standardized Residuals

|        | BE11   | BE12   | BE13   | BE14   | T1     | T2     | T3     |
|--------|--------|--------|--------|--------|--------|--------|--------|
| T4     | C1     | C2     |        |        |        |        |        |
|        | -----  | -----  | -----  | -----  | -----  | -----  | -----  |
| -----  |        |        |        |        |        |        |        |
| BE11   | --     |        |        |        |        |        |        |
| BE12   | 10.228 | --     |        |        |        |        |        |
| BE13   | -1.449 | -3.592 | --     |        |        |        |        |
| BE14   | 6.607  | 2.139  | 2.710  | --     |        |        |        |
| T1     | -1.855 | -2.032 | 2.170  | -0.651 | --     |        |        |
| T2     | -3.089 | -2.875 | 1.807  | -0.157 | -3.224 | --     |        |
| T3     | -2.123 | -2.189 | 0.879  | -0.634 | 3.017  | 0.877  | --     |
| T4     | -3.276 | -3.984 | 0.309  | -0.941 | 0.207  | 2.125  | -2.986 |
| --     |        |        |        |        |        |        |        |
| C1     | -0.621 | -0.711 | -0.918 | -1.602 | 1.589  | 1.363  | -1.210 |
| 3.736  | --     |        |        |        |        |        |        |
| C2     | 0.561  | 0.873  | -1.478 | -2.205 | -0.964 | 0.580  | -0.427 |
| -1.330 | -4.113 | --     |        |        |        |        |        |
| C3     | 1.594  | 1.152  | -1.685 | -1.047 | 0.660  | -1.110 | -0.112 |
| -2.235 | -2.005 | 4.137  |        |        |        |        |        |
| C4     | 0.215  | -0.313 | -3.320 | -0.569 | -0.417 | 0.070  | -1.022 |
| 1.324  | 3.737  | -0.270 |        |        |        |        |        |
| PQ1    | 0.763  | -1.775 | 3.142  | 2.531  | 2.969  | 2.945  | 2.284  |
| 3.009  | 1.543  | 0.977  |        |        |        |        |        |
| PQ2    | -1.888 | -0.395 | -1.635 | -0.609 | 1.853  | 1.562  | 1.392  |
| 1.500  | 1.421  | 0.832  |        |        |        |        |        |

|        |        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|--------|
| PQ3    | -0.748 | -2.392 | 0.472  | 1.506  | 1.961  | 1.539  | 1.160  |
| 1.494  | 0.117  | -0.488 |        |        |        |        |        |
| SQ1    | -1.874 | 1.037  | -1.342 | -4.962 | 1.398  | 0.333  | 2.069  |
| 0.999  | 4.171  | 3.039  |        |        |        |        |        |
| SQ2    | 3.478  | 2.079  | -0.923 | -1.049 | 1.901  | 1.296  | 2.426  |
| 0.456  | 4.445  | 5.214  |        |        |        |        |        |
| SQ3    | -0.619 | 1.265  | -5.050 | -5.508 | -0.162 | 0.914  | 1.211  |
| 1.317  | 4.429  | 4.514  |        |        |        |        |        |
| SI1    | -0.004 | -1.683 | 2.403  | -0.121 | 0.728  | 0.530  | 1.216  |
| 1.544  | 1.528  | 1.158  |        |        |        |        |        |
| SI2    | -2.827 | -3.212 | 1.492  | -2.770 | 3.836  | 4.596  | 3.250  |
| 4.228  | 4.732  | 1.093  |        |        |        |        |        |
| SI3    | -2.192 | -2.719 | 1.560  | -1.380 | 2.224  | 2.993  | 3.288  |
| 2.888  | 3.321  | 3.114  |        |        |        |        |        |
| SI4    | 1.831  | 0.675  | -0.099 | 0.800  | 3.414  | 1.976  | 1.874  |
| 2.930  | 3.866  | 0.918  |        |        |        |        |        |
| P1     | 2.044  | 2.763  | 3.961  | 1.780  | -2.803 | -1.585 | -3.170 |
| -1.708 | -0.098 | -1.982 |        |        |        |        |        |
| P2     | -1.489 | -0.619 | 4.240  | 0.184  | -3.297 | -0.923 | -2.555 |
| -3.090 | -2.381 | -3.958 |        |        |        |        |        |
| P3     | 1.359  | 2.292  | 1.348  | 1.058  | -4.234 | -3.245 | -3.314 |
| -4.263 | -3.242 | -2.753 |        |        |        |        |        |

#### Standardized Residuals

|        | C3     | C4     | PQ1    | PQ2    | PQ3    | SQ1    | SQ2    |
|--------|--------|--------|--------|--------|--------|--------|--------|
| SQ3    | SI1    | SI2    |        |        |        |        |        |
|        | -----  | -----  | -----  | -----  | -----  | -----  | -----  |
|        | -----  | -----  |        |        |        |        |        |
| C3     | --     |        |        |        |        |        |        |
| C4     | -1.657 | --     |        |        |        |        |        |
| PQ1    | 0.574  | 0.199  | --     |        |        |        |        |
| PQ2    | 1.143  | 0.484  | -5.227 | --     |        |        |        |
| PQ3    | -0.609 | -0.173 | 0.840  | 4.401  | --     |        |        |
| SQ1    | 2.869  | 4.075  | 0.808  | 1.746  | -0.069 | --     |        |
| SQ2    | 8.483  | 5.698  | 0.545  | 1.327  | 0.659  | -1.224 | --     |
| SQ3    | 3.489  | 3.740  | -0.975 | -0.350 | -3.379 | 1.500  | -0.246 |
| --     |        |        |        |        |        |        |        |
| SI1    | 0.012  | 0.161  | 2.785  | -0.668 | -2.086 | 0.601  | 0.757  |
| -1.599 | --     |        |        |        |        |        |        |

|        |        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|--------|
| SI2    | 1.211  | 2.220  | 3.230  | -0.851 | -0.401 | 0.178  | 1.122  |
| -0.610 | -2.016 | --     |        |        |        |        |        |
| SI3    | -1.091 | 2.274  | 1.617  | 0.134  | -1.863 | 0.925  | -0.525 |
| -0.049 | 1.731  | -0.390 |        |        |        |        |        |
| SI4    | 1.567  | 1.964  | 1.743  | -1.561 | -2.653 | 0.268  | 0.444  |
| -1.566 | -0.668 | 2.417  |        |        |        |        |        |
| P1     | -2.397 | -0.723 | 1.896  | -2.856 | 1.480  | 1.173  | 0.538  |
| 1.842  | 2.693  | 2.020  |        |        |        |        |        |
| P2     | -3.706 | -3.448 | -0.074 | -2.053 | 2.692  | -2.481 | -0.938 |
| -2.051 | -0.593 | 1.404  |        |        |        |        |        |
| P3     | -2.870 | -1.616 | -1.409 | -2.310 | 1.188  | 0.186  | 1.250  |
| 0.661  | -0.303 | -0.700 |        |        |        |        |        |

### Standardized Residuals

|     | SI3    | SI4    | P1    | P2     | P3 |
|-----|--------|--------|-------|--------|----|
| SI3 | --     |        |       |        |    |
| SI4 | -1.042 | --     |       |        |    |
| P1  | 1.082  | 2.256  | --    |        |    |
| P2  | -1.554 | -2.526 | 0.650 | --     |    |
| P3  | -1.611 | -2.964 | 1.130 | -1.740 | -- |

### Summary Statistics for Standardized Residuals

Smallest Standardized Residual = -5.771

Median Standardized Residual = 0.000

Largest Standardized Residual = 10.228

### Stemleaf Plot

```

- 5|88522000
- 4|633332211100
- 3|98776665544333322222221110000
- 2|99999888877666555444433333222111111100000
-
1|999998888777777777766666666666666655555444444433333333
33222211111111100000000000
-
0|9999999999999998888888888777777777766666666666666655555

```

5444444444333333333333222222211111111100000000000000000  
0000+27

0|111111222222222222333333344444445555555556666666666677  
7777778888888999999999999

1|00000000000011111112222222222223333333333344444455555  
555555566666666677777778888888999999

2|000000000011111222222233333334444555556677778889999

3|000000001111222333334445567777889

4|01112224445679

5|267

6|6

7|4

8|555

9|0

10|2

#### Largest Negative Standardized Residuals

|              |          |      |        |
|--------------|----------|------|--------|
| Residual for | BE5 and  | BE1  | -3.500 |
| Residual for | BE5 and  | BE3  | -2.630 |
| Residual for | BE7 and  | BE2  | -2.780 |
| Residual for | BE8 and  | BE2  | -3.025 |
| Residual for | BE8 and  | BE5  | -4.317 |
| Residual for | BE11 and | BE1  | -2.878 |
| Residual for | BE11 and | BE2  | -3.178 |
| Residual for | BE11 and | BE3  | -4.204 |
| Residual for | BE11 and | BE8  | -3.637 |
| Residual for | BE11 and | BE9  | -5.187 |
| Residual for | BE12 and | BE1  | -4.109 |
| Residual for | BE12 and | BE3  | -5.771 |
| Residual for | BE12 and | BE7  | -4.555 |
| Residual for | BE12 and | BE8  | -4.994 |
| Residual for | BE13 and | BE2  | -3.715 |
| Residual for | BE13 and | BE12 | -3.592 |
| Residual for | BE14 and | BE2  | -4.312 |
| Residual for | BE14 and | BE6  | -4.086 |
| Residual for | T2 and   | BE11 | -3.089 |
| Residual for | T2 and   | BE12 | -2.875 |
| Residual for | T2 and   | T1   | -3.224 |
| Residual for | T4 and   | BE5  | -3.241 |
| Residual for | T4 and   | BE10 | -3.247 |



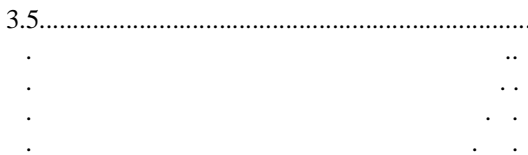
|              |         |      |        |
|--------------|---------|------|--------|
| Residual for | T4 and  | BE11 | -3.276 |
| Residual for | T4 and  | BE12 | -3.984 |
| Residual for | T4 and  | T3   | -2.986 |
| Residual for | C2 and  | C1   | -4.113 |
| Residual for | C4 and  | BE8  | -3.148 |
| Residual for | C4 and  | BE13 | -3.320 |
| Residual for | PQ2 and | PQ1  | -5.227 |
| Residual for | PQ3 and | BE2  | -3.584 |
| Residual for | PQ3 and | BE10 | -2.901 |
| Residual for | SQ1 and | BE14 | -4.962 |
| Residual for | SQ3 and | BE7  | -3.815 |
| Residual for | SQ3 and | BE8  | -5.769 |
| Residual for | SQ3 and | BE10 | -2.931 |
| Residual for | SQ3 and | BE13 | -5.050 |
| Residual for | SQ3 and | BE14 | -5.508 |
| Residual for | SQ3 and | PQ3  | -3.379 |
| Residual for | SI2 and | BE11 | -2.827 |
| Residual for | SI2 and | BE12 | -3.212 |
| Residual for | SI2 and | BE14 | -2.770 |
| Residual for | SI3 and | BE12 | -2.719 |
| Residual for | SI4 and | PQ3  | -2.653 |
| Residual for | P1 and  | T1   | -2.803 |
| Residual for | P1 and  | T3   | -3.170 |
| Residual for | P1 and  | PQ2  | -2.856 |
| Residual for | P2 and  | BE4  | -3.510 |
| Residual for | P2 and  | T1   | -3.297 |
| Residual for | P2 and  | T4   | -3.090 |
| Residual for | P2 and  | C2   | -3.958 |
| Residual for | P2 and  | C3   | -3.706 |
| Residual for | P2 and  | C4   | -3.448 |
| Residual for | P3 and  | BE4  | -4.280 |
| Residual for | P3 and  | BE6  | -3.932 |
| Residual for | P3 and  | BE8  | -2.981 |
| Residual for | P3 and  | T1   | -4.234 |
| Residual for | P3 and  | T2   | -3.245 |
| Residual for | P3 and  | T3   | -3.314 |
| Residual for | P3 and  | T4   | -4.263 |
| Residual for | P3 and  | C1   | -3.242 |
| Residual for | P3 and  | C2   | -2.753 |
| Residual for | P3 and  | C3   | -2.870 |
| Residual for | P3 and  | SI4  | -2.964 |

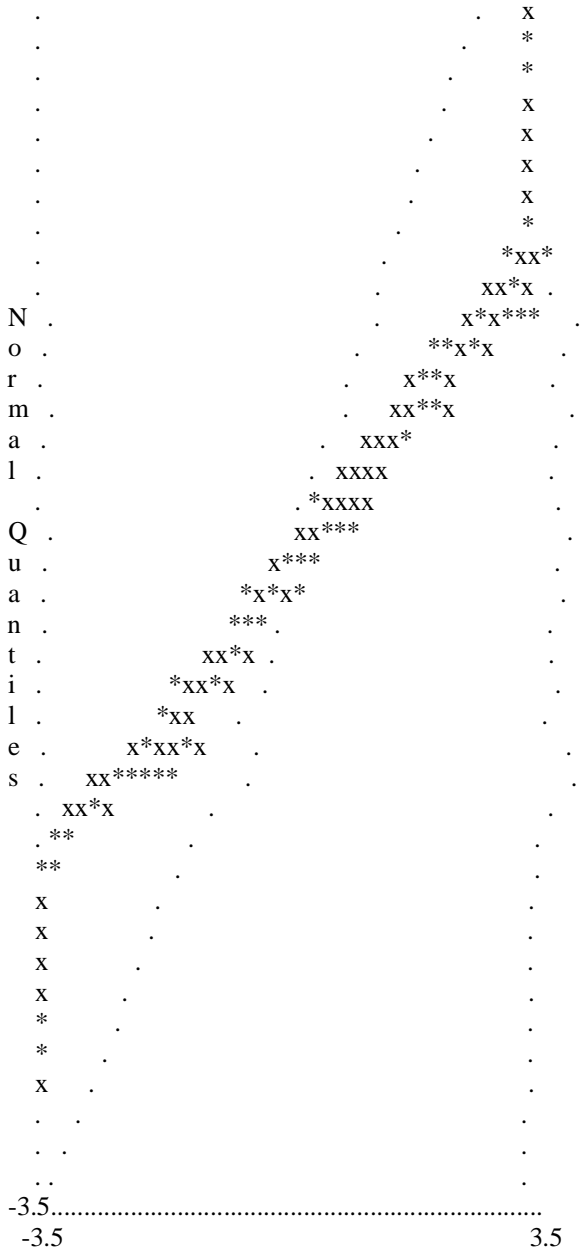
### Largest Positive Standardized Residuals

|              |          |      |        |
|--------------|----------|------|--------|
| Residual for | BE2 and  | BE1  | 3.166  |
| Residual for | BE3 and  | BE1  | 8.983  |
| Residual for | BE3 and  | BE2  | 3.406  |
| Residual for | BE6 and  | BE4  | 4.866  |
| Residual for | BE9 and  | BE8  | 7.411  |
| Residual for | BE10 and | BE2  | 5.610  |
| Residual for | BE10 and | BE3  | 2.681  |
| Residual for | BE11 and | BE5  | 3.602  |
| Residual for | BE12 and | BE5  | 8.540  |
| Residual for | BE12 and | BE11 | 10.228 |
| Residual for | BE13 and | BE7  | 8.508  |
| Residual for | BE13 and | BE8  | 4.138  |
| Residual for | BE14 and | BE11 | 6.607  |
| Residual for | BE14 and | BE13 | 2.710  |
| Residual for | T1 and   | BE7  | 3.143  |
| Residual for | T2 and   | BE7  | 3.121  |
| Residual for | T2 and   | BE8  | 3.446  |
| Residual for | T3 and   | T1   | 3.017  |
| Residual for | C1 and   | BE4  | 2.997  |
| Residual for | C1 and   | BE6  | 3.254  |
| Residual for | C1 and   | T4   | 3.736  |
| Residual for | C3 and   | C2   | 4.137  |
| Residual for | C4 and   | C1   | 3.737  |
| Residual for | PQ1 and  | BE7  | 3.304  |
| Residual for | PQ1 and  | BE8  | 3.670  |
| Residual for | PQ1 and  | BE13 | 3.142  |
| Residual for | PQ1 and  | T1   | 2.969  |
| Residual for | PQ1 and  | T2   | 2.945  |
| Residual for | PQ1 and  | T4   | 3.009  |
| Residual for | PQ2 and  | BE8  | 2.960  |
| Residual for | PQ2 and  | BE9  | 2.771  |
| Residual for | PQ3 and  | PQ2  | 4.401  |
| Residual for | SQ1 and  | BE4  | 3.659  |
| Residual for | SQ1 and  | C1   | 4.171  |
| Residual for | SQ1 and  | C2   | 3.039  |
| Residual for | SQ1 and  | C3   | 2.869  |
| Residual for | SQ1 and  | C4   | 4.075  |
| Residual for | SQ2 and  | BE5  | 2.983  |
| Residual for | SQ2 and  | BE6  | 3.176  |
| Residual for | SQ2 and  | BE10 | 3.050  |

|              |         |      |       |
|--------------|---------|------|-------|
| Residual for | SQ2 and | BE11 | 3.478 |
| Residual for | SQ2 and | C1   | 4.445 |
| Residual for | SQ2 and | C2   | 5.214 |
| Residual for | SQ2 and | C3   | 8.483 |
| Residual for | SQ2 and | C4   | 5.698 |
| Residual for | SQ3 and | C1   | 4.429 |
| Residual for | SQ3 and | C2   | 4.514 |
| Residual for | SQ3 and | C3   | 3.489 |
| Residual for | SQ3 and | C4   | 3.740 |
| Residual for | SI1 and | PQ1  | 2.785 |
| Residual for | SI2 and | BE7  | 2.711 |
| Residual for | SI2 and | T1   | 3.836 |
| Residual for | SI2 and | T2   | 4.596 |
| Residual for | SI2 and | T3   | 3.250 |
| Residual for | SI2 and | T4   | 4.228 |
| Residual for | SI2 and | C1   | 4.732 |
| Residual for | SI2 and | PQ1  | 3.230 |
| Residual for | SI3 and | BE7  | 3.816 |
| Residual for | SI3 and | T2   | 2.993 |
| Residual for | SI3 and | T3   | 3.288 |
| Residual for | SI3 and | T4   | 2.888 |
| Residual for | SI3 and | C1   | 3.321 |
| Residual for | SI3 and | C2   | 3.114 |
| Residual for | SI4 and | T1   | 3.414 |
| Residual for | SI4 and | T4   | 2.930 |
| Residual for | SI4 and | C1   | 3.866 |
| Residual for | P1 and  | BE12 | 2.763 |
| Residual for | P1 and  | BE13 | 3.961 |
| Residual for | P1 and  | SI1  | 2.693 |
| Residual for | P2 and  | BE13 | 4.240 |
| Residual for | P2 and  | PQ3  | 2.692 |

### Qplot of Standardized Residuals





## Standardized Residuals

The Modification Indices Suggest to Add the

| Path to | from | Decrease in Chi-Square | New Estimate |
|---------|------|------------------------|--------------|
| BE6     | C    | 10.2                   | 0.26         |
| BE7     | T    | 8.6                    | 0.17         |
| BE8     | T    | 9.2                    | 0.15         |
| BE10    | T    | 9.6                    | -0.15        |
| BE11    | T    | 14.3                   | -0.20        |
| BE12    | T    | 14.3                   | -0.22        |
| PQ1     | SI   | 19.1                   | 0.39         |
| PQ2     | P    | 12.8                   | -0.25        |
| PQ3     | SI   | 12.5                   | -0.35        |
| PQ3     | P    | 8.1                    | 0.21         |
| P1      | SI   | 10.3                   | 0.18         |
| P2      | SQ   | 8.4                    | -0.20        |
| BE      | T    | 24.9                   | -0.38        |
| BE      | C    | 27.2                   | -0.55        |
| T       | PQ   | 13.9                   | 0.40         |
| T       | SQ   | 8.0                    | 0.25         |
| T       | SI   | 27.0                   | 0.68         |
| T       | P    | 22.5                   | -0.39        |
| C       | SQ   | 61.1                   | 0.50         |

The Modification Indices Suggest to Add an Error Covariance

| Between | and | Decrease in Chi-Square | New Estimate |
|---------|-----|------------------------|--------------|
| T       | BE  | 24.9                   | -0.33        |
| BE2     | BE1 | 10.0                   | 0.14         |
| BE3     | BE1 | 80.7                   | 0.46         |
| BE3     | BE2 | 11.6                   | 0.15         |
| BE5     | BE1 | 12.2                   | -0.14        |
| BE6     | BE4 | 23.7                   | 0.16         |
| BE8     | BE2 | 9.2                    | -0.09        |
| BE8     | BE5 | 18.6                   | -0.12        |
| BE9     | BE8 | 54.9                   | 0.22         |
| BE10    | BE2 | 31.5                   | 0.17         |
| BE11    | BE1 | 8.3                    | -0.11        |
| BE11    | BE2 | 10.1                   | -0.10        |
| BE11    | BE3 | 17.7                   | -0.16        |
| BE11    | BE5 | 13.0                   | 0.11         |
| BE11    | BE8 | 13.2                   | -0.09        |

|      |      |       |       |
|------|------|-------|-------|
| BE11 | BE9  | 26.9  | -0.17 |
| BE12 | BE1  | 16.9  | -0.17 |
| BE12 | BE3  | 33.3  | -0.24 |
| BE12 | BE5  | 72.9  | 0.29  |
| BE12 | BE7  | 20.7  | -0.15 |
| BE12 | BE8  | 24.9  | -0.14 |
| BE12 | BE11 | 104.6 | 0.31  |
| BE13 | BE2  | 13.8  | -0.13 |
| BE13 | BE7  | 72.4  | 0.26  |
| BE13 | BE8  | 17.1  | 0.11  |
| BE13 | BE12 | 12.9  | -0.12 |
| BE14 | BE2  | 18.6  | -0.14 |
| BE14 | BE6  | 16.7  | -0.12 |
| BE14 | BE11 | 43.7  | 0.18  |
| T2   | BE8  | 8.3   | 0.08  |
| T2   | BE11 | 9.3   | -0.09 |
| T2   | T1   | 10.4  | -0.15 |
| T3   | T1   | 9.1   | 0.13  |
| T4   | T3   | 8.9   | -0.14 |
| C1   | BE4  | 12.2  | 0.13  |
| C1   | T4   | 18.5  | 0.19  |
| C2   | C1   | 16.9  | -0.19 |
| C3   | BE5  | 8.8   | 0.10  |
| C3   | C2   | 17.1  | 0.18  |
| C4   | BE8  | 9.9   | -0.10 |
| C4   | C1   | 14.0  | 0.19  |
| PQ1  | BE13 | 10.5  | 0.09  |
| PQ2  | BE7  | 11.3  | -0.11 |
| PQ2  | BE9  | 9.6   | 0.11  |
| PQ2  | BE13 | 10.5  | -0.10 |
| PQ2  | PQ1  | 27.3  | -0.22 |
| PQ3  | PQ2  | 19.4  | 0.20  |
| SQ1  | BE4  | 25.3  | 0.19  |
| SQ1  | BE6  | 8.0   | -0.12 |
| SQ1  | BE9  | 16.3  | 0.17  |
| SQ1  | BE11 | 20.0  | -0.16 |
| SQ1  | BE14 | 11.4  | -0.12 |
| SQ2  | BE2  | 24.1  | -0.21 |
| SQ2  | BE9  | 16.5  | -0.17 |
| SQ2  | BE11 | 12.2  | 0.12  |
| SQ2  | T4   | 8.1   | -0.13 |



|         |       |       |       |       |       |       |       |       |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|
| LY 10_1 | 0.004 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 0.003   | 0.005 |       |       |       |       |       |       |       |
| LY 11_1 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 0.003   | 0.004 | 0.005 |       |       |       |       |       |       |
| LY 12_1 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| 0.002   | 0.003 | 0.003 |       |       |       |       |       |       |
| LY 13_1 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| 0.002   | 0.003 | 0.002 |       |       |       |       |       |       |
| LY 14_1 | 0.003 | 0.003 | 0.002 | 0.002 | 0.003 | 0.002 | 0.002 | 0.002 |
| 0.002   | 0.003 | 0.003 |       |       |       |       |       |       |
| LY 16_2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000   | 0.000 | 0.000 |       |       |       |       |       |       |
| LY 17_2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000   | 0.000 | 0.000 |       |       |       |       |       |       |
| LY 18_2 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000   | 0.000 | 0.000 |       |       |       |       |       |       |
| LY 20_3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000   | 0.000 | 0.000 |       |       |       |       |       |       |
| LY 21_3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000   | 0.000 | 0.000 |       |       |       |       |       |       |
| LY 22_3 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000   | 0.000 | 0.000 |       |       |       |       |       |       |
| LX 1_1  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000   | 0.000 | 0.000 |       |       |       |       |       |       |
| LX 2_1  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000   | 0.000 | 0.000 |       |       |       |       |       |       |
| LX 3_1  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000   | 0.000 | 0.000 |       |       |       |       |       |       |
| LX 4_2  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000   | 0.000 | 0.000 |       |       |       |       |       |       |
| LX 5_2  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000   | 0.000 | 0.000 |       |       |       |       |       |       |
| LX 6_2  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000   | 0.000 | 0.000 |       |       |       |       |       |       |
| LX 7_3  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000   | 0.000 | 0.000 |       |       |       |       |       |       |
| LX 8_3  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000   | 0.000 | 0.000 |       |       |       |       |       |       |
| LX 9_3  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000   | 0.000 | 0.000 |       |       |       |       |       |       |



|         |        |        |        |        |        |        |        |        |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| LX 10_3 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |        |
| LX 11_4 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |        |
| LX 12_4 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |        |
| LX 13_4 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |        |
| BE 2_1  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  | 0.001  |
| 0.001   | 0.002  | 0.001  |        |        |        |        |        |        |
| BE 3_1  | 0.002  | 0.002  | 0.002  | 0.002  | 0.002  | 0.002  | 0.002  | 0.001  |
| 0.001   | 0.002  | 0.002  |        |        |        |        |        |        |
| BE 3_2  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |        |
| GA 1_1  | -0.001 | -0.001 | -0.001 | -0.001 | -0.001 | -0.001 | -0.001 | -      |
| 0.001   | -0.001 | -0.001 | -0.001 |        |        |        |        |        |
| GA 1_2  | -0.001 | -0.001 | -0.001 | -0.001 | -0.001 | -0.001 | -0.001 | -      |
| 0.001   | -0.001 | -0.001 | -0.001 |        |        |        |        |        |
| GA 1_3  | -0.002 | -0.002 | -0.002 | -0.002 | -0.002 | -0.002 | -0.001 | -      |
| 0.001   | -0.001 | -0.002 | -0.002 |        |        |        |        |        |
| GA 1_4  | -0.001 | -0.001 | -0.001 | -0.001 | -0.001 | -0.001 | -0.001 | -      |
| 0.001   | -0.001 | -0.001 | -0.001 |        |        |        |        |        |
| PH 2_1  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |        |
| PH 3_1  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |        |
| PH 3_2  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |        |
| PH 4_1  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |        |
| PH 4_2  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |        |
| PH 4_3  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |        |
| PS 1_1  | -0.003 | -0.003 | -0.003 | -0.003 | -0.003 | -0.003 | -0.002 | -0.002 |
| -0.002  | -0.003 | -0.003 |        |        |        |        |        |        |
| PS 2_2  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |        |
| PS 3_3  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |        |

|          |       |       |       |       |       |       |       |       |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|
| TE 1_1   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 2_2   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 3_3   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 4_4   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 5_5   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 6_6   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 7_7   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 8_8   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 9_9   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 10_10 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 11_11 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 12_12 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 13_13 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 14_14 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 15_15 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 16_16 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 17_17 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 18_18 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 19_19 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 20_20 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |

|          |       |       |       |       |       |       |       |       |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|
| TE 21_21 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 22_22 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 1_1   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 2_2   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 3_3   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 4_4   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 5_5   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 6_6   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 7_7   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 8_8   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 9_9   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 10_10 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 11_11 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 12_12 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 13_13 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |

Covariance Matrix of Parameter Estimates

LY 12\_1 LY 13\_1 LY 14\_1 LY 16\_2 LY 17\_2 LY 18\_2  
 LY 20\_3 LY 21\_3 LY 22\_3 LX 1\_1

|         | ----- | ----- | ----- | ----- | ----- | ----- | ----- |
|---------|-------|-------|-------|-------|-------|-------|-------|
| LY 12_1 | 0.005 |       |       |       |       |       |       |
| LY 13_1 | 0.002 | 0.004 |       |       |       |       |       |
| LY 14_1 | 0.002 | 0.002 | 0.004 |       |       |       |       |
| LY 16_2 | 0.000 | 0.000 | 0.000 | 0.005 |       |       |       |

|         |        |        |        |        |        |        |        |
|---------|--------|--------|--------|--------|--------|--------|--------|
| LY 17_2 | 0.000  | 0.000  | 0.000  | 0.003  | 0.005  |        |        |
| LY 18_2 | 0.000  | 0.000  | 0.000  | 0.003  | 0.003  | 0.006  |        |
| LY 20_3 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.006  |
| LY 21_3 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.004  |
| 0.006   |        |        |        |        |        |        |        |
| LY 22_3 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.004  |
| 0.004   | 0.007  |        |        |        |        |        |        |
| LX 1_1  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.003  |        |        |        |        |        |
| LX 2_1  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.001  |        |        |        |        |        |
| LX 3_1  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.001  |        |        |        |        |        |
| LX 4_2  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |
| LX 5_2  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |
| LX 6_2  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |
| LX 7_3  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.001  |        |        |        |        |        |
| LX 8_3  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.001  |        |        |        |        |        |
| LX 9_3  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.001  |        |        |        |        |        |
| LX 10_3 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.001  |        |        |        |        |        |
| LX 11_4 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |
| LX 12_4 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |
| LX 13_4 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |
| BE 2_1  | 0.001  | 0.001  | 0.001  | -0.001 | -0.001 | -0.001 | 0.000  |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |
| BE 3_1  | 0.002  | 0.001  | 0.001  | 0.000  | 0.000  | 0.000  | -0.002 |
| -0.002  | -0.002 | 0.000  |        |        |        |        |        |
| BE 3_2  | 0.000  | 0.000  | 0.000  | 0.002  | 0.002  | 0.002  | -0.002 |
| -0.002  | -0.003 | 0.000  |        |        |        |        |        |
| GA 1_1  | -0.001 | -0.001 | -0.001 | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |

|        |        |        |        |        |        |        |       |        |
|--------|--------|--------|--------|--------|--------|--------|-------|--------|
| GA 1_2 | -0.001 | -0.001 | -0.001 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000  | 0.000  | 0.000  |        |        |        |        |       |        |
| GA 1_3 | -0.002 | -0.001 | -0.001 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000  | 0.000  | 0.001  |        |        |        |        |       |        |
| GA 1_4 | -0.001 | 0.000  | -0.001 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000  | 0.000  | 0.000  |        |        |        |        |       |        |
| PH 2_1 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000  | 0.000  | 0.000  |        |        |        |        |       |        |
| PH 3_1 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000  | 0.000  | 0.001  |        |        |        |        |       |        |
| PH 3_2 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000  | 0.000  | 0.000  |        |        |        |        |       |        |
| PH 4_1 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000  | 0.000  | -0.001 |        |        |        |        |       |        |
| PH 4_2 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000  | 0.000  | 0.000  |        |        |        |        |       |        |
| PH 4_3 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000  | 0.000  | -0.001 |        |        |        |        |       |        |
| PS 1_1 | -0.003 | -0.002 | -0.002 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000  | 0.000  | 0.000  |        |        |        |        |       |        |
| PS 2_2 | 0.000  | 0.000  | 0.000  | -0.006 | -0.005 | -0.006 | 0.000 | 0.000  |
| 0.000  | 0.000  | 0.000  |        |        |        |        |       |        |
| PS 3_3 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | -0.003 |
| -0.003 | -0.003 | 0.000  |        |        |        |        |       |        |
| TE 1_1 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000  | 0.000  | 0.000  |        |        |        |        |       |        |
| TE 2_2 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000  | 0.000  | 0.000  |        |        |        |        |       |        |
| TE 3_3 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000  | 0.000  | 0.000  |        |        |        |        |       |        |
| TE 4_4 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000  | 0.000  | 0.000  |        |        |        |        |       |        |
| TE 5_5 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000  | 0.000  | 0.000  |        |        |        |        |       |        |
| TE 6_6 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000  | 0.000  | 0.000  |        |        |        |        |       |        |
| TE 7_7 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000  | 0.000  | 0.000  |        |        |        |        |       |        |
| TE 8_8 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000  | 0.000  | 0.000  |        |        |        |        |       |        |

|          |        |        |       |        |        |        |       |        |
|----------|--------|--------|-------|--------|--------|--------|-------|--------|
| TE 9_9   | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |       |        |
| TE 10_10 | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |       |        |
| TE 11_11 | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |       |        |
| TE 12_12 | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |       |        |
| TE 13_13 | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |       |        |
| TE 14_14 | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |       |        |
| TE 15_15 | 0.000  | 0.000  | 0.000 | 0.001  | 0.001  | 0.001  | 0.001 | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |       |        |
| TE 16_16 | 0.000  | 0.000  | 0.000 | -0.001 | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |       |        |
| TE 17_17 | 0.000  | 0.000  | 0.000 | 0.000  | -0.001 | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |       |        |
| TE 18_18 | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | -0.001 | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |       |        |
| TE 19_19 | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000 | 0.001  |
| 0.001    | 0.001  | 0.000  |       |        |        |        |       |        |
| TE 20_20 | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000 | -0.001 |
| 0.000    | 0.000  | 0.000  |       |        |        |        |       |        |
| TE 21_21 | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| -0.001   | 0.000  | 0.000  |       |        |        |        |       |        |
| TE 22_22 | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | -0.001 | 0.000  |       |        |        |        |       |        |
| TD 1_1   | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | -0.001 |       |        |        |        |       |        |
| TD 2_2   | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |       |        |
| TD 3_3   | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |       |        |
| TD 4_4   | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |       |        |
| TD 5_5   | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |       |        |
| TD 6_6   | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |       |        |

|          |       |       |       |       |       |       |       |       |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|
| TD 7_7   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 8_8   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 9_9   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 10_10 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 11_11 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 12_12 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 13_13 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |

Covariance Matrix of Parameter Estimates

|         |        |         |         |        |        |        |       |       |
|---------|--------|---------|---------|--------|--------|--------|-------|-------|
|         | LX 2_1 | LX 3_1  | LX 4_2  | LX 5_2 | LX 6_2 | LX 7_3 |       |       |
| LX 8_3  | LX 9_3 | LX 10_3 | LX 11_4 |        |        |        |       |       |
|         | -----  | -----   | -----   | -----  | -----  | -----  | ----- | ----- |
|         | -----  |         |         |        |        |        |       |       |
| LX 2_1  | 0.004  |         |         |        |        |        |       |       |
| LX 3_1  | 0.001  | 0.004   |         |        |        |        |       |       |
| LX 4_2  | 0.000  | 0.000   | 0.006   |        |        |        |       |       |
| LX 5_2  | 0.000  | 0.000   | 0.001   | 0.005  |        |        |       |       |
| LX 6_2  | 0.000  | 0.000   | 0.001   | 0.001  | 0.006  |        |       |       |
| LX 7_3  | 0.001  | 0.001   | 0.000   | 0.000  | 0.000  | 0.004  |       |       |
| LX 8_3  | 0.001  | 0.001   | 0.000   | 0.000  | 0.000  | 0.001  | 0.004 |       |
| LX 9_3  | 0.001  | 0.001   | 0.000   | 0.000  | 0.000  | 0.002  | 0.002 |       |
| 0.005   |        |         |         |        |        |        |       |       |
| LX 10_3 | 0.001  | 0.001   | 0.000   | 0.000  | 0.000  | 0.002  | 0.002 |       |
| 0.002   | 0.006  |         |         |        |        |        |       |       |
| LX 11_4 | 0.000  | 0.000   | 0.000   | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 |
| 0.000   | 0.000  | 0.003   |         |        |        |        |       |       |
| LX 12_4 | 0.000  | 0.000   | 0.000   | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 |
| 0.000   | 0.000  | 0.001   |         |        |        |        |       |       |
| LX 13_4 | 0.000  | 0.000   | 0.000   | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 |
| 0.000   | 0.000  | 0.001   |         |        |        |        |       |       |
| BE 2_1  | 0.000  | 0.000   | 0.000   | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 |
| 0.000   | 0.000  | 0.000   |         |        |        |        |       |       |

|        |        |        |       |       |       |       |        |        |
|--------|--------|--------|-------|-------|-------|-------|--------|--------|
| BE 3_1 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  | 0.000  |
| 0.000  | 0.000  | 0.000  |       |       |       |       |        |        |
| BE 3_2 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  | 0.000  |
| 0.000  | 0.000  | 0.000  |       |       |       |       |        |        |
| GA 1_1 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  | 0.000  |
| 0.000  | 0.001  | 0.000  |       |       |       |       |        |        |
| GA 1_2 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  | 0.000  |
| 0.000  | 0.000  | 0.000  |       |       |       |       |        |        |
| GA 1_3 | 0.001  | 0.001  | 0.000 | 0.000 | 0.000 | 0.000 | 0.001  | 0.001  |
| 0.001  | 0.001  | 0.000  |       |       |       |       |        |        |
| GA 1_4 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  | 0.000  |
| 0.000  | 0.000  | 0.000  |       |       |       |       |        |        |
| PH 2_1 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.001  | 0.001  |
| 0.001  | 0.001  | 0.000  |       |       |       |       |        |        |
| PH 3_1 | 0.001  | 0.001  | 0.000 | 0.000 | 0.000 | 0.000 | 0.001  | 0.001  |
| 0.001  | 0.001  | 0.000  |       |       |       |       |        |        |
| PH 3_2 | 0.000  | 0.000  | 0.001 | 0.001 | 0.001 | 0.001 | 0.001  | 0.001  |
| 0.001  | 0.001  | 0.000  |       |       |       |       |        |        |
| PH 4_1 | -0.001 | -0.001 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  | 0.000  |
| 0.000  | 0.000  | 0.000  |       |       |       |       |        |        |
| PH 4_2 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  | 0.000  |
| 0.000  | 0.000  | 0.000  |       |       |       |       |        |        |
| PH 4_3 | -0.001 | -0.001 | 0.000 | 0.000 | 0.000 | 0.000 | -0.001 | -0.001 |
| -0.001 | -0.001 | 0.000  |       |       |       |       |        |        |
| PS 1_1 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  | 0.000  |
| 0.000  | 0.000  | 0.000  |       |       |       |       |        |        |
| PS 2_2 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  | 0.000  |
| 0.000  | 0.000  | 0.000  |       |       |       |       |        |        |
| PS 3_3 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  | 0.000  |
| 0.000  | 0.000  | 0.000  |       |       |       |       |        |        |
| TE 1_1 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  | 0.000  |
| 0.000  | 0.000  | 0.000  |       |       |       |       |        |        |
| TE 2_2 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  | 0.000  |
| 0.000  | 0.000  | 0.000  |       |       |       |       |        |        |
| TE 3_3 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  | 0.000  |
| 0.000  | 0.000  | 0.000  |       |       |       |       |        |        |
| TE 4_4 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  | 0.000  |
| 0.000  | 0.000  | 0.000  |       |       |       |       |        |        |
| TE 5_5 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  | 0.000  |
| 0.000  | 0.000  | 0.000  |       |       |       |       |        |        |



|          |        |        |       |       |       |       |       |       |
|----------|--------|--------|-------|-------|-------|-------|-------|-------|
| TE 6_6   | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TE 7_7   | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TE 8_8   | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TE 9_9   | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TE 10_10 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TE 11_11 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TE 12_12 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TE 13_13 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TE 14_14 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TE 15_15 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TE 16_16 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TE 17_17 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TE 18_18 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TE 19_19 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TE 20_20 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TE 21_21 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TE 22_22 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TD 1_1   | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TD 2_2   | -0.001 | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TD 3_3   | 0.000  | -0.001 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |

|          |        |        |        |        |        |        |        |
|----------|--------|--------|--------|--------|--------|--------|--------|
| TD 4_4   | 0.000  | 0.000  | -0.002 | 0.001  | 0.001  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |
| TD 5_5   | 0.000  | 0.000  | 0.001  | -0.002 | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |
| TD 6_6   | 0.000  | 0.000  | 0.001  | 0.000  | -0.002 | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |
| TD 7_7   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | -0.001 | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |
| TD 8_8   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | -0.001 |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |
| TD 9_9   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| -0.001   | 0.000  | 0.000  |        |        |        |        |        |
| TD 10_10 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | -0.001 | 0.000  |        |        |        |        |        |
| TD 11_11 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | -0.001 |        |        |        |        |        |
| TD 12_12 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.001  |        |        |        |        |        |
| TD 13_13 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |

Covariance Matrix of Parameter Estimates

|         | LX 12_4 | LX 13_4 | BE 2_1 | BE 3_1 | BE 3_2 | GA 1_1 |        |  |
|---------|---------|---------|--------|--------|--------|--------|--------|--|
| GA 1_2  | GA 1_3  | GA 1_4  | PH 2_1 |        |        |        |        |  |
|         |         |         |        |        |        |        |        |  |
| LX 12_4 | 0.005   |         |        |        |        |        |        |  |
| LX 13_4 | 0.001   | 0.004   |        |        |        |        |        |  |
| BE 2_1  | 0.000   | 0.000   | 0.006  |        |        |        |        |  |
| BE 3_1  | 0.000   | 0.000   | 0.000  | 0.006  |        |        |        |  |
| BE 3_2  | 0.000   | 0.000   | -0.001 | 0.000  | 0.006  |        |        |  |
| GA 1_1  | 0.000   | 0.000   | -0.001 | -0.001 | 0.000  | 0.012  |        |  |
| GA 1_2  | 0.000   | 0.000   | 0.000  | 0.000  | 0.000  | 0.004  | 0.006  |  |
| GA 1_3  | 0.000   | 0.000   | -0.001 | -0.001 | 0.000  | -0.008 | -0.004 |  |
| 0.012   |         |         |        |        |        |        |        |  |
| GA 1_4  | 0.000   | 0.000   | 0.000  | 0.000  | 0.000  | 0.004  | 0.002  |  |
| -0.002  | 0.005   |         |        |        |        |        |        |  |
| PH 2_1  | 0.000   | 0.000   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |  |
| 0.001   | 0.000   | 0.008   |        |        |        |        |        |  |

|          |        |        |        |        |        |        |       |        |
|----------|--------|--------|--------|--------|--------|--------|-------|--------|
| PH 3_1   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.001  |        |        |        |        |       |        |
| PH 3_2   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.003  |        |        |        |        |       |        |
| PH 4_1   | -0.001 | -0.001 | 0.000  | 0.000  | 0.000  | -0.001 | 0.000 |        |
| 0.000    | -0.001 | -0.001 |        |        |        |        |       |        |
| PH 4_2   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | -0.001 |
| 0.000    | -0.001 | -0.003 |        |        |        |        |       |        |
| PH 4_3   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| -0.001   | -0.001 | -0.001 |        |        |        |        |       |        |
| PS 1_1   | 0.000  | 0.000  | -0.001 | -0.002 | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.001    | 0.000  | 0.000  |        |        |        |        |       |        |
| PS 2_2   | 0.000  | 0.000  | 0.002  | 0.000  | -0.004 | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |        |
| PS 3_3   | 0.000  | 0.000  | 0.000  | 0.001  | 0.001  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |        |
| TE 1_1   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |        |
| TE 2_2   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |        |
| TE 3_3   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |        |
| TE 4_4   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |        |
| TE 5_5   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |        |
| TE 6_6   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |        |
| TE 7_7   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |        |
| TE 8_8   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |        |
| TE 9_9   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |        |
| TE 10_10 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |        |
| TE 11_11 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |        |
| TE 12_12 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |        |

|          |       |       |       |       |       |       |       |       |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|
| TE 13_13 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 14_14 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 15_15 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 16_16 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 17_17 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 18_18 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 19_19 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 20_20 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 21_21 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 22_22 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 1_1   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 2_2   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 3_3   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 4_4   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 5_5   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 6_6   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 7_7   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 8_8   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 9_9   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 10_10 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |



|          |       |       |       |       |       |       |       |        |
|----------|-------|-------|-------|-------|-------|-------|-------|--------|
| TE 10_10 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |        |
| TE 11_11 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |        |
| TE 12_12 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |        |
| TE 13_13 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |        |
| TE 14_14 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |        |
| TE 15_15 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | -0.002 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |        |
| TE 16_16 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |        |
| TE 17_17 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |        |
| TE 18_18 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |        |
| TE 19_19 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  |
| -0.001   | 0.000 | 0.000 |       |       |       |       |       |        |
| TE 20_20 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |        |
| TE 21_21 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |        |
| TE 22_22 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |        |
| TD 1_1   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |        |
| TD 2_2   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |        |
| TD 3_3   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |        |
| TD 4_4   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |        |
| TD 5_5   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |        |
| TD 6_6   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |        |
| TD 7_7   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000  |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |        |



|          |       |       |       |       |       |       |       |       |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|
| TE 17_17 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 18_18 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 19_19 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 20_20 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 21_21 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 22_22 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 1_1   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 2_2   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 3_3   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 4_4   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 5_5   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 6_6   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 7_7   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 8_8   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 9_9   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 10_10 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 11_11 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 12_12 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 13_13 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |

Covariance Matrix of Parameter Estimates





|          |       |       |       |       |       |       |       |       |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|
| TD 13_13 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |

Covariance Matrix of Parameter Estimates

|          | TD 1_1 | TD 2_2 | TD 3_3 | TD 4_4 | TD 5_5 | TD 6_6 | TD 7_7 | TD 8_8 | TD 9_9 | TD 10_10 |
|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|
| TD 1_1   | 0.002  |        |        |        |        |        |        |        |        |          |
| TD 2_2   | 0.000  | 0.003  |        |        |        |        |        |        |        |          |
| TD 3_3   | 0.000  | 0.000  | 0.003  |        |        |        |        |        |        |          |
| TD 4_4   | 0.000  | 0.000  | 0.000  | 0.006  |        |        |        |        |        |          |
| TD 5_5   | 0.000  | 0.000  | 0.000  | -0.001 | 0.005  |        |        |        |        |          |
| TD 6_6   | 0.000  | 0.000  | 0.000  | -0.001 | -0.001 | 0.007  |        |        |        |          |
| TD 7_7   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.003  |        |        |          |
| TD 8_8   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.003  |        |          |
| TD 9_9   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.004  |          |
| TD 10_10 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.005    |
| TD 11_11 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000    |
| TD 12_12 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000    |
| TD 13_13 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000    |

Covariance Matrix of Parameter Estimates

|          | TD 11_11 | TD 12_12 | TD 13_13 |
|----------|----------|----------|----------|
| TD 11_11 | 0.002    |          |          |
| TD 12_12 | -0.001   | 0.005    |          |
| TD 13_13 | 0.000    | 0.000    | 0.002    |

Correlation Matrix of Parameter Estimates

|        | LY 2_1  | LY 3_1  | LY 4_1  | LY 5_1 | LY 6_1 | LY 7_1 |       |       |
|--------|---------|---------|---------|--------|--------|--------|-------|-------|
| LY 8_1 | LY 9_1  | LY 10_1 | LY 11_1 |        |        |        |       |       |
|        | LY 2_1  | 1.000   |         |        |        |        |       |       |
|        | LY 3_1  | 0.519   | 1.000   |        |        |        |       |       |
|        | LY 4_1  | 0.579   | 0.531   | 1.000  |        |        |       |       |
|        | LY 5_1  | 0.575   | 0.528   | 0.588  | 1.000  |        |       |       |
|        | LY 6_1  | 0.566   | 0.519   | 0.579  | 0.576  | 1.000  |       |       |
|        | LY 7_1  | 0.526   | 0.483   | 0.539  | 0.535  | 0.527  | 1.000 |       |
|        | LY 8_1  | 0.566   | 0.519   | 0.579  | 0.575  | 0.566  | 0.526 | 1.000 |
|        | LY 9_1  | 0.491   | 0.451   | 0.503  | 0.499  | 0.492  | 0.457 | 0.491 |
| 1.000  |         |         |         |        |        |        |       |       |
|        | LY 10_1 | 0.640   | 0.587   | 0.655  | 0.651  | 0.640  | 0.595 | 0.640 |
| 0.556  | 1.000   |         |         |        |        |        |       |       |
|        | LY 11_1 | 0.605   | 0.555   | 0.619  | 0.615  | 0.606  | 0.563 | 0.605 |
| 0.525  | 0.684   | 1.000   |         |        |        |        |       |       |
|        | LY 12_1 | 0.562   | 0.516   | 0.575  | 0.572  | 0.563  | 0.523 | 0.562 |
| 0.488  | 0.636   | 0.601   |         |        |        |        |       |       |
|        | LY 13_1 | 0.502   | 0.460   | 0.513  | 0.510  | 0.502  | 0.467 | 0.502 |
| 0.436  | 0.568   | 0.537   |         |        |        |        |       |       |
|        | LY 14_1 | 0.542   | 0.498   | 0.555  | 0.551  | 0.543  | 0.505 | 0.543 |
| 0.471  | 0.614   | 0.580   |         |        |        |        |       |       |
|        | LY 16_2 | 0.000   | 0.000   | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 |
| 0.000  | 0.000   | 0.000   |         |        |        |        |       |       |
|        | LY 17_2 | 0.000   | 0.000   | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 |
| 0.000  | 0.000   | 0.000   |         |        |        |        |       |       |
|        | LY 18_2 | 0.000   | 0.000   | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 |
| 0.000  | 0.000   | 0.000   |         |        |        |        |       |       |
|        | LY 20_3 | 0.000   | 0.000   | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 |
| 0.000  | 0.000   | 0.000   |         |        |        |        |       |       |
|        | LY 21_3 | 0.000   | 0.000   | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 |
| 0.000  | 0.000   | 0.000   |         |        |        |        |       |       |
|        | LY 22_3 | 0.000   | 0.000   | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 |
| 0.000  | 0.000   | 0.000   |         |        |        |        |       |       |
|        | LX 1_1  | 0.000   | 0.000   | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 |
| 0.000  | 0.000   | 0.000   |         |        |        |        |       |       |
|        | LX 2_1  | 0.000   | 0.000   | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 |
| 0.000  | 0.000   | 0.000   |         |        |        |        |       |       |
|        | LX 3_1  | 0.000   | 0.000   | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 |
| 0.000  | 0.000   | 0.000   |         |        |        |        |       |       |

|         |        |        |        |        |        |        |       |       |
|---------|--------|--------|--------|--------|--------|--------|-------|-------|
| LX 4_2  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 |
| 0.000   | 0.000  | 0.000  |        |        |        |        |       |       |
| LX 5_2  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 |
| 0.000   | 0.000  | 0.000  |        |        |        |        |       |       |
| LX 6_2  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 |
| 0.000   | 0.000  | 0.000  |        |        |        |        |       |       |
| LX 7_3  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 |
| 0.000   | 0.000  | 0.000  |        |        |        |        |       |       |
| LX 8_3  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 |
| 0.000   | 0.000  | 0.000  |        |        |        |        |       |       |
| LX 9_3  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 |
| 0.000   | 0.000  | 0.000  |        |        |        |        |       |       |
| LX 10_3 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 |
| 0.000   | 0.000  | 0.000  |        |        |        |        |       |       |
| LX 11_4 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 |
| 0.000   | 0.000  | 0.000  |        |        |        |        |       |       |
| LX 12_4 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 |
| 0.000   | 0.000  | 0.000  |        |        |        |        |       |       |
| LX 13_4 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 |
| 0.000   | 0.000  | 0.000  |        |        |        |        |       |       |
| BE 2_1  | 0.233  | 0.214  | 0.239  | 0.237  | 0.233  | 0.217  | 0.233 |       |
| 0.203   | 0.264  | 0.249  |        |        |        |        |       |       |
| BE 3_1  | 0.327  | 0.300  | 0.335  | 0.333  | 0.327  | 0.304  | 0.327 |       |
| 0.284   | 0.370  | 0.350  |        |        |        |        |       |       |
| BE 3_2  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 |
| 0.000   | 0.000  | 0.000  |        |        |        |        |       |       |
| GA 1_1  | -0.153 | -0.140 | -0.156 | -0.155 | -0.153 | -0.142 | -     |       |
| 0.153   | -0.132 | -0.173 | -0.163 |        |        |        |       |       |
| GA 1_2  | -0.142 | -0.131 | -0.146 | -0.145 | -0.142 | -0.132 | -     |       |
| 0.142   | -0.124 | -0.161 | -0.152 |        |        |        |       |       |
| GA 1_3  | -0.210 | -0.192 | -0.215 | -0.213 | -0.210 | -0.195 | -     |       |
| 0.210   | -0.182 | -0.237 | -0.224 |        |        |        |       |       |
| GA 1_4  | -0.118 | -0.108 | -0.121 | -0.120 | -0.118 | -0.110 | -     |       |
| 0.118   | -0.102 | -0.133 | -0.126 |        |        |        |       |       |
| PH 2_1  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 |
| 0.000   | 0.000  | 0.000  |        |        |        |        |       |       |
| PH 3_1  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 |
| 0.000   | 0.000  | 0.000  |        |        |        |        |       |       |
| PH 3_2  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 |
| 0.000   | 0.000  | 0.000  |        |        |        |        |       |       |

|          |        |        |        |        |        |        |        |        |
|----------|--------|--------|--------|--------|--------|--------|--------|--------|
| PH 4_1   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |        |
| PH 4_2   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |        |
| PH 4_3   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |        |
| PS 1_1   | -0.522 | -0.479 | -0.534 | -0.530 | -0.522 | -0.486 | -0.522 |        |
| -0.453   | -0.590 | -0.558 |        |        |        |        |        |        |
| PS 2_2   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |        |
| PS 3_3   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |        |
| TE 1_1   | 0.050  | 0.046  | 0.051  | 0.051  | 0.050  | 0.046  | 0.050  |        |
| 0.043    | 0.057  | 0.053  |        |        |        |        |        |        |
| TE 2_2   | -0.051 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |        |
| TE 3_3   | 0.000  | -0.046 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |        |
| TE 4_4   | 0.000  | 0.000  | -0.052 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.001  | 0.000  |        |        |        |        |        |        |
| TE 5_5   | 0.000  | 0.000  | 0.000  | -0.052 | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |        |
| TE 6_6   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | -0.051 | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |        |
| TE 7_7   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | -0.046 | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |        |
| TE 8_8   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | -0.051 |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |        |
| TE 9_9   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| -0.043   | 0.000  | 0.000  |        |        |        |        |        |        |
| TE 10_10 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | -0.062 | 0.000  |        |        |        |        |        |        |
| TE 11_11 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.001  | -0.056 |        |        |        |        |        |        |
| TE 12_12 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |        |
| TE 13_13 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |        |
| TE 14_14 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |        |

|          |       |       |       |       |       |       |       |       |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|
| TE 15_15 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 16_16 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 17_17 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 18_18 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 19_19 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 20_20 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 21_21 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 22_22 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 1_1   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 2_2   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 3_3   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 4_4   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 5_5   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 6_6   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 7_7   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 8_8   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 9_9   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 10_10 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 11_11 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 12_12 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |



|         |        |        |        |        |        |        |        |       |
|---------|--------|--------|--------|--------|--------|--------|--------|-------|
| LX 11_4 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 |
| 0.000   | 0.000  | 0.071  |        |        |        |        |        |       |
| LX 12_4 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 |
| 0.000   | 0.000  | 0.070  |        |        |        |        |        |       |
| LX 13_4 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 |
| 0.000   | 0.000  | 0.067  |        |        |        |        |        |       |
| BE 2_1  | 0.232  | 0.207  | 0.224  | -0.231 | -0.208 | -0.219 | 0.000  |       |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |       |
| BE 3_1  | 0.325  | 0.290  | 0.314  | 0.001  | -0.001 | 0.000  | -0.395 |       |
| -0.382  | -0.386 | 0.000  |        |        |        |        |        |       |
| BE 3_2  | 0.000  | 0.000  | 0.000  | 0.316  | 0.289  | 0.302  | -0.387 |       |
| -0.375  | -0.378 | 0.000  |        |        |        |        |        |       |
| GA 1_1  | -0.152 | -0.135 | -0.146 | 0.000  | 0.000  | 0.000  | 0.000  |       |
| 0.000   | 0.000  | 0.060  |        |        |        |        |        |       |
| GA 1_2  | -0.141 | -0.126 | -0.136 | 0.000  | 0.000  | 0.000  | 0.000  |       |
| 0.000   | 0.000  | -0.016 |        |        |        |        |        |       |
| GA 1_3  | -0.208 | -0.186 | -0.201 | 0.000  | 0.000  | 0.000  | 0.000  |       |
| 0.000   | 0.000  | 0.093  |        |        |        |        |        |       |
| GA 1_4  | -0.117 | -0.105 | -0.113 | 0.000  | 0.000  | 0.000  | 0.000  |       |
| 0.000   | 0.000  | -0.006 |        |        |        |        |        |       |
| PH 2_1  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |       |
| 0.000   | 0.000  | 0.036  |        |        |        |        |        |       |
| PH 3_1  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |       |
| 0.000   | 0.000  | 0.167  |        |        |        |        |        |       |
| PH 3_2  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |       |
| 0.000   | 0.000  | -0.018 |        |        |        |        |        |       |
| PH 4_1  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |       |
| 0.000   | 0.000  | -0.129 |        |        |        |        |        |       |
| PH 4_2  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |       |
| 0.000   | 0.000  | -0.018 |        |        |        |        |        |       |
| PH 4_3  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |       |
| 0.000   | 0.000  | -0.157 |        |        |        |        |        |       |
| PS 1_1  | -0.519 | -0.463 | -0.500 | 0.000  | 0.000  | 0.000  | 0.000  |       |
| 0.000   | 0.000  | 0.011  |        |        |        |        |        |       |
| PS 2_2  | 0.000  | 0.000  | 0.000  | -0.575 | -0.522 | -0.547 | 0.000  |       |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |       |
| PS 3_3  | 0.000  | 0.000  | 0.000  | 0.001  | -0.001 | -0.001 | -0.499 |       |
| -0.487  | -0.491 | 0.000  |        |        |        |        |        |       |
| TE 1_1  | 0.050  | 0.044  | 0.048  | 0.000  | 0.000  | 0.000  | 0.000  |       |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |       |



|          |        |        |       |        |        |        |        |        |
|----------|--------|--------|-------|--------|--------|--------|--------|--------|
| TE 2_2   | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |        |        |
| TE 3_3   | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |        |        |
| TE 4_4   | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |        |        |
| TE 5_5   | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |        |        |
| TE 6_6   | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |        |        |
| TE 7_7   | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |        |        |
| TE 8_8   | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |        |        |
| TE 9_9   | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |        |        |
| TE 10_10 | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |        |        |
| TE 11_11 | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |        |        |
| TE 12_12 | -0.050 | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |        |        |
| TE 13_13 | 0.000  | -0.044 | 0.000 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |        |        |
| TE 14_14 | 0.000  | 0.000  | 0.000 | -0.048 | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |        |        |
| TE 15_15 | 0.000  | 0.000  | 0.000 | 0.000  | 0.249  | 0.217  | 0.230  | 0.000  |
| 0.000    | 0.000  | 0.000  |       |        |        |        |        |        |
| TE 16_16 | 0.000  | 0.000  | 0.000 | 0.000  | -0.259 | -0.008 | -0.003 |        |
| 0.000    | 0.000  | 0.000  | 0.000 |        |        |        |        |        |
| TE 17_17 | 0.000  | 0.000  | 0.000 | 0.000  | 0.004  | -0.203 | -0.002 |        |
| 0.000    | 0.000  | 0.000  | 0.000 |        |        |        |        |        |
| TE 18_18 | 0.000  | 0.000  | 0.000 | 0.000  | 0.005  | -0.005 | -0.225 |        |
| 0.000    | 0.000  | 0.000  | 0.000 |        |        |        |        |        |
| TE 19_19 | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000  | 0.169  |
| 0.163    | 0.164  | 0.000  |       |        |        |        |        |        |
| TE 20_20 | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000  | -0.184 |
| 0.003    | 0.003  | 0.000  |       |        |        |        |        |        |
| TE 21_21 | 0.000  | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000  | 0.004  |
| -0.171   | 0.003  | 0.000  |       |        |        |        |        |        |

|          |        |        |       |       |       |       |       |       |
|----------|--------|--------|-------|-------|-------|-------|-------|-------|
| TE 22_22 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.004 |
| 0.002    | -0.174 | 0.000  |       |       |       |       |       |       |
| TD 1_1   | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | -0.288 |       |       |       |       |       |       |
| TD 2_2   | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.044  |       |       |       |       |       |       |
| TD 3_3   | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.076  |       |       |       |       |       |       |
| TD 4_4   | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TD 5_5   | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TD 6_6   | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TD 7_7   | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TD 8_8   | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TD 9_9   | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TD 10_10 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TD 11_11 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TD 12_12 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |
| TD 13_13 | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000  | 0.000  |       |       |       |       |       |       |

Correlation Matrix of Parameter Estimates

LX 2\_1 LX 3\_1 LX 4\_2 LX 5\_2 LX 6\_2 LX 7\_3  
LX 8\_3 LX 9\_3 LX 10\_3 LX 11\_4

|        |       |       |       |       |       |       |
|--------|-------|-------|-------|-------|-------|-------|
| -----  | ----- | ----- | ----- | ----- | ----- | ----- |
| LX 2_1 | 1.000 |       |       |       |       |       |
| LX 3_1 | 0.300 | 1.000 |       |       |       |       |
| LX 4_2 | 0.004 | 0.005 | 1.000 |       |       |       |
| LX 5_2 | 0.004 | 0.004 | 0.264 | 1.000 |       |       |
| LX 6_2 | 0.004 | 0.005 | 0.263 | 0.272 | 1.000 |       |
| LX 7_3 | 0.159 | 0.177 | 0.066 | 0.062 | 0.063 | 1.000 |

|         |        |        |        |        |        |        |        |
|---------|--------|--------|--------|--------|--------|--------|--------|
| LX 8_3  | 0.145  | 0.160  | 0.060  | 0.056  | 0.057  | 0.347  | 1.000  |
| LX 9_3  | 0.152  | 0.169  | 0.063  | 0.059  | 0.060  | 0.364  | 0.333  |
| 1.000   |        |        |        |        |        |        |        |
| LX 10_3 | 0.154  | 0.170  | 0.064  | 0.059  | 0.061  | 0.367  | 0.336  |
| 0.352   | 1.000  |        |        |        |        |        |        |
| LX 11_4 | 0.063  | 0.070  | 0.022  | 0.021  | 0.021  | 0.035  | 0.032  |
| 0.034   | 0.034  | 1.000  |        |        |        |        |        |
| LX 12_4 | 0.062  | 0.069  | 0.022  | 0.020  | 0.021  | 0.034  | 0.031  |
| 0.033   | 0.033  | 0.219  |        |        |        |        |        |
| LX 13_4 | 0.059  | 0.066  | 0.021  | 0.019  | 0.020  | 0.033  | 0.030  |
| 0.031   | 0.032  | 0.227  |        |        |        |        |        |
| BE 2_1  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |
| BE 3_1  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |
| BE 3_2  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |
| GA 1_1  | 0.064  | 0.061  | -0.007 | -0.003 | -0.004 | 0.069  | 0.059  |
| 0.063   | 0.064  | 0.010  |        |        |        |        |        |
| GA 1_2  | -0.009 | -0.015 | 0.071  | 0.072  | 0.072  | 0.034  | 0.028  |
| 0.031   | 0.031  | 0.000  |        |        |        |        |        |
| GA 1_3  | 0.074  | 0.090  | 0.034  | 0.028  | 0.029  | 0.111  | 0.105  |
| 0.109   | 0.109  | 0.015  |        |        |        |        |        |
| GA 1_4  | 0.001  | -0.004 | -0.002 | 0.001  | 0.000  | 0.012  | 0.010  |
| 0.011   | 0.011  | 0.054  |        |        |        |        |        |
| PH 2_1  | 0.033  | 0.036  | 0.035  | 0.034  | 0.035  | 0.182  | 0.165  |
| 0.173   | 0.175  | 0.066  |        |        |        |        |        |
| PH 3_1  | 0.159  | 0.167  | -0.018 | -0.016 | -0.017 | 0.193  | 0.178  |
| 0.186   | 0.188  | 0.040  |        |        |        |        |        |
| PH 3_2  | -0.016 | -0.018 | 0.122  | 0.120  | 0.122  | 0.140  | 0.128  |
| 0.134   | 0.136  | 0.035  |        |        |        |        |        |
| PH 4_1  | -0.120 | -0.129 | -0.009 | -0.009 | -0.009 | -0.073 | -0.066 |
| -0.070  | -0.071 | -0.115 |        |        |        |        |        |
| PH 4_2  | -0.016 | -0.018 | -0.075 | -0.074 | -0.075 | -0.073 | -0.066 |
| -0.070  | -0.070 | -0.070 |        |        |        |        |        |
| PH 4_3  | -0.140 | -0.155 | -0.052 | -0.049 | -0.050 | -0.107 | -0.098 |
| -0.102  | -0.103 | -0.086 |        |        |        |        |        |
| PS 1_1  | 0.007  | 0.010  | 0.005  | 0.003  | 0.003  | 0.010  | 0.008  |
| 0.009   | 0.009  | 0.003  |        |        |        |        |        |
| PS 2_2  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000   | 0.000  | 0.000  |        |        |        |        |        |

|          |       |       |       |       |       |       |       |       |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|
| PS 3_3   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 1_1   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 2_2   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 3_3   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 4_4   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 5_5   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 6_6   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 7_7   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 8_8   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 9_9   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 10_10 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 11_11 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 12_12 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 13_13 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 14_14 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 15_15 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 16_16 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 17_17 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 18_18 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TE 19_19 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |

|          |        |        |        |        |        |        |        |        |
|----------|--------|--------|--------|--------|--------|--------|--------|--------|
| TE 20_20 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |        |
| TE 21_21 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |        |
| TE 22_22 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |        |
| TD 1_1   | 0.051  | 0.077  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |        |
| TD 2_2   | -0.234 | 0.041  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |        |
| TD 3_3   | 0.047  | -0.280 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |        |
| TD 4_4   | 0.000  | 0.000  | -0.368 | 0.111  | 0.128  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |        |
| TD 5_5   | 0.000  | 0.000  | 0.103  | -0.310 | 0.066  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |        |
| TD 6_6   | 0.000  | 0.000  | 0.123  | 0.068  | -0.328 | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.000  |        |        |        |        |        |        |
| TD 7_7   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | -0.206 | 0.026  | 0.026  |
| 0.030    | 0.031  | 0.000  |        |        |        |        |        |        |
| TD 8_8   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.023  | -0.178 | -0.178 |
| 0.019    | 0.020  | 0.000  |        |        |        |        |        |        |
| TD 9_9   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.028  | 0.021  | 0.021  |
| -0.191   | 0.025  | 0.000  |        |        |        |        |        |        |
| TD 10_10 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.029  | 0.022  | 0.022  |
| 0.025    | -0.194 | 0.000  |        |        |        |        |        |        |
| TD 11_11 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | -0.384 |        |        |        |        |        |        |
| TD 12_12 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.137  |        |        |        |        |        |        |
| TD 13_13 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| 0.000    | 0.000  | 0.100  |        |        |        |        |        |        |

### Correlation Matrix of Parameter Estimates

|         | LX 12_4 | LX 13_4 | BE 2_1 | BE 3_1 | BE 3_2 | GA 1_1 |
|---------|---------|---------|--------|--------|--------|--------|
| GA 1_2  |         |         |        |        |        |        |
| GA 1_3  |         |         |        |        |        |        |
| GA 1_4  |         |         |        |        |        |        |
| PH 2_1  |         |         |        |        |        |        |
| LX 12_4 | 1.000   |         |        |        |        |        |
| LX 13_4 | 0.233   | 1.000   |        |        |        |        |

|        |        |        |        |        |        |        |        |  |
|--------|--------|--------|--------|--------|--------|--------|--------|--|
| BE 2_1 | 0.000  | 0.000  | 1.000  |        |        |        |        |  |
| BE 3_1 | 0.000  | 0.000  | 0.065  | 1.000  |        |        |        |  |
| BE 3_2 | 0.000  | 0.000  | -0.121 | -0.064 | 1.000  |        |        |  |
| GA 1_1 | 0.011  | 0.012  | -0.063 | -0.088 | 0.000  | 1.000  |        |  |
| GA 1_2 | 0.001  | 0.001  | -0.059 | -0.082 | 0.000  | 0.504  | 1.000  |  |
| GA 1_3 | 0.014  | 0.013  | -0.086 | -0.121 | 0.000  | -0.662 | -0.504 |  |
| 1.000  |        |        |        |        |        |        |        |  |
| GA 1_4 | 0.055  | 0.055  | -0.049 | -0.068 | 0.000  | 0.526  | 0.382  |  |
| -0.197 | 1.000  |        |        |        |        |        |        |  |
| PH 2_1 | 0.064  | 0.061  | 0.000  | 0.000  | 0.000  | -0.030 | -0.074 |  |
| 0.078  | 0.004  | 1.000  |        |        |        |        |        |  |
| PH 3_1 | 0.040  | 0.038  | 0.000  | 0.000  | 0.000  | 0.020  | -0.004 |  |
| 0.046  | 0.009  | 0.310  |        |        |        |        |        |  |
| PH 3_2 | 0.035  | 0.033  | 0.000  | 0.000  | 0.000  | -0.009 | -0.044 |  |
| 0.045  | 0.004  | 0.548  |        |        |        |        |        |  |
| PH 4_1 | -0.116 | -0.114 | 0.000  | 0.000  | 0.000  | -0.137 | -0.026 |  |
| 0.004  | -0.178 | -0.180 |        |        |        |        |        |  |
| PH 4_2 | -0.070 | -0.069 | 0.000  | 0.000  | 0.000  | -0.017 | -0.090 |  |
| -0.015 | -0.093 | -0.352 |        |        |        |        |        |  |
| PH 4_3 | -0.087 | -0.085 | 0.000  | 0.000  | 0.000  | -0.038 | -0.010 |  |
| -0.096 | -0.139 | -0.151 |        |        |        |        |        |  |
| PS 1_1 | 0.003  | 0.002  | -0.215 | -0.302 | 0.000  | 0.053  | 0.064  |  |
| 0.174  | -0.024 | 0.006  |        |        |        |        |        |  |
| PS 2_2 | 0.000  | 0.000  | 0.170  | 0.040  | -0.350 | 0.000  | 0.000  |  |
| 0.000  | 0.000  | 0.000  |        |        |        |        |        |  |
| PS 3_3 | 0.000  | 0.000  | 0.003  | 0.285  | 0.160  | 0.000  | 0.000  |  |
| 0.000  | 0.000  | 0.000  |        |        |        |        |        |  |
| TE 1_1 | 0.000  | 0.000  | 0.021  | 0.029  | -0.001 | -0.013 | -0.012 |  |
| -0.018 | -0.010 | 0.000  |        |        |        |        |        |  |
| TE 2_2 | 0.000  | 0.000  | 0.000  | 0.000  | -0.001 | 0.001  | 0.001  |  |
| 0.001  | 0.001  | 0.000  |        |        |        |        |        |  |
| TE 3_3 | 0.000  | 0.000  | 0.000  | 0.000  | -0.001 | 0.001  | 0.001  |  |
| 0.001  | 0.000  | 0.000  |        |        |        |        |        |  |
| TE 4_4 | 0.000  | 0.000  | 0.000  | 0.000  | -0.001 | 0.001  | 0.001  |  |
| 0.001  | 0.001  | 0.000  |        |        |        |        |        |  |
| TE 5_5 | 0.000  | 0.000  | 0.000  | 0.000  | -0.001 | 0.001  | 0.001  |  |
| 0.001  | 0.001  | 0.000  |        |        |        |        |        |  |
| TE 6_6 | 0.000  | 0.000  | 0.000  | 0.000  | -0.001 | 0.001  | 0.001  |  |
| 0.001  | 0.001  | 0.000  |        |        |        |        |        |  |
| TE 7_7 | 0.000  | 0.000  | 0.000  | 0.000  | -0.001 | 0.001  | 0.001  |  |
| 0.001  | 0.001  | 0.000  |        |        |        |        |        |  |

|          |       |       |        |        |        |       |       |
|----------|-------|-------|--------|--------|--------|-------|-------|
| TE 8_8   | 0.000 | 0.000 | 0.000  | 0.000  | -0.001 | 0.001 | 0.001 |
| 0.001    | 0.001 | 0.000 |        |        |        |       |       |
| TE 9_9   | 0.000 | 0.000 | 0.000  | 0.000  | 0.000  | 0.001 | 0.000 |
| 0.001    | 0.000 | 0.000 |        |        |        |       |       |
| TE 10_10 | 0.000 | 0.000 | 0.000  | 0.001  | -0.002 | 0.002 | 0.002 |
| 0.003    | 0.002 | 0.000 |        |        |        |       |       |
| TE 11_11 | 0.000 | 0.000 | 0.000  | 0.000  | -0.001 | 0.001 | 0.001 |
| 0.002    | 0.001 | 0.000 |        |        |        |       |       |
| TE 12_12 | 0.000 | 0.000 | 0.000  | 0.000  | -0.001 | 0.001 | 0.001 |
| 0.001    | 0.001 | 0.000 |        |        |        |       |       |
| TE 13_13 | 0.000 | 0.000 | 0.000  | 0.000  | -0.001 | 0.001 | 0.001 |
| 0.001    | 0.000 | 0.000 |        |        |        |       |       |
| TE 14_14 | 0.000 | 0.000 | 0.000  | 0.000  | -0.001 | 0.001 | 0.001 |
| 0.001    | 0.001 | 0.000 |        |        |        |       |       |
| TE 15_15 | 0.000 | 0.000 | -0.078 | -0.015 | 0.144  | 0.000 |       |
| 0.000    | 0.000 | 0.000 | 0.000  |        |        |       |       |
| TE 16_16 | 0.000 | 0.000 | 0.035  | -0.018 | -0.002 | 0.000 |       |
| 0.000    | 0.000 | 0.000 | 0.000  |        |        |       |       |
| TE 17_17 | 0.000 | 0.000 | 0.019  | -0.010 | -0.001 | 0.000 |       |
| 0.000    | 0.000 | 0.000 | 0.000  |        |        |       |       |
| TE 18_18 | 0.000 | 0.000 | 0.024  | -0.013 | -0.001 | 0.000 |       |
| 0.000    | 0.000 | 0.000 | 0.000  |        |        |       |       |
| TE 19_19 | 0.000 | 0.000 | 0.000  | -0.090 | -0.088 | 0.000 |       |
| 0.000    | 0.000 | 0.000 | 0.000  |        |        |       |       |
| TE 20_20 | 0.000 | 0.000 | 0.000  | 0.000  | 0.035  | 0.034 | 0.000 |
| 0.000    | 0.000 | 0.000 |        |        |        |       | 0.000 |
| TE 21_21 | 0.000 | 0.000 | 0.000  | 0.028  | 0.028  | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |        |        |        |       |       |
| TE 22_22 | 0.000 | 0.000 | 0.000  | 0.030  | 0.029  | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |        |        |        |       |       |
| TD 1_1   | 0.000 | 0.000 | 0.000  | 0.000  | 0.000  | 0.066 | 0.031 |
| -0.057   | 0.038 | 0.007 |        |        |        |       |       |
| TD 2_2   | 0.000 | 0.000 | 0.000  | 0.000  | 0.000  | 0.035 | 0.016 |
| -0.030   | 0.020 | 0.004 |        |        |        |       |       |
| TD 3_3   | 0.000 | 0.000 | 0.000  | 0.000  | 0.000  | 0.059 | 0.028 |
| -0.052   | 0.034 | 0.007 |        |        |        |       |       |
| TD 4_4   | 0.000 | 0.000 | 0.000  | 0.000  | 0.000  | 0.014 | 0.029 |
| -0.020   | 0.012 | 0.007 |        |        |        |       |       |
| TD 5_5   | 0.000 | 0.000 | 0.000  | 0.000  | 0.000  | 0.007 | 0.015 |
| -0.010   | 0.006 | 0.004 |        |        |        |       |       |





|          |        |        |        |       |       |       |        |        |
|----------|--------|--------|--------|-------|-------|-------|--------|--------|
| TE 5_5   | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | -0.001 | 0.000  |
| -0.001   | -0.004 | -0.005 |        |       |       |       |        |        |
| TE 6_6   | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | -0.001 | 0.000  |
| -0.001   | -0.004 | -0.005 |        |       |       |       |        |        |
| TE 7_7   | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | -0.001 | 0.000  |
| -0.001   | -0.003 | -0.003 |        |       |       |       |        |        |
| TE 8_8   | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | -0.001 | 0.000  |
| -0.001   | -0.004 | -0.005 |        |       |       |       |        |        |
| TE 9_9   | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | -0.001 | 0.000  |
| -0.001   | -0.002 | -0.003 |        |       |       |       |        |        |
| TE 10_10 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | -0.003 | -      |
| 0.001    | -0.002 | -0.008 | -0.011 |       |       |       |        |        |
| TE 11_11 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | -0.002 | 0.000  |
| -0.002   | -0.005 | -0.007 |        |       |       |       |        |        |
| TE 12_12 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | -0.001 | 0.000  |
| -0.001   | -0.003 | -0.005 |        |       |       |       |        |        |
| TE 13_13 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | -0.001 | 0.000  |
| -0.001   | -0.002 | -0.003 |        |       |       |       |        |        |
| TE 14_14 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | -0.001 | 0.000  |
| -0.001   | -0.003 | -0.004 |        |       |       |       |        |        |
| TE 15_15 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000  | -0.229 |
| -0.018   | 0.000  | 0.000  |        |       |       |       |        |        |
| TE 16_16 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000  | 0.045  |
| -0.023   | 0.000  | 0.000  |        |       |       |       |        |        |
| TE 17_17 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000  | 0.025  |
| -0.012   | 0.000  | 0.000  |        |       |       |       |        |        |
| TE 18_18 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000  | 0.032  |
| -0.016   | 0.000  | 0.000  |        |       |       |       |        |        |
| TE 19_19 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000  | 0.000  |
| -0.169   | 0.000  | 0.000  |        |       |       |       |        |        |
| TE 20_20 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000  | 0.000  |
| -0.048   | 0.000  | 0.000  |        |       |       |       |        |        |
| TE 21_21 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000  | 0.000  |
| -0.039   | 0.000  | 0.000  |        |       |       |       |        |        |
| TE 22_22 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000  | 0.000  |
| -0.041   | 0.000  | 0.000  |        |       |       |       |        |        |
| TD 1_1   | 0.069  | 0.000  | -0.034 | 0.000 | 0.000 | 0.000 | -0.019 | 0.000  |
| 0.000    | 0.000  | 0.000  |        |       |       |       |        |        |
| TD 2_2   | 0.037  | 0.000  | -0.018 | 0.000 | 0.000 | 0.000 | -0.010 | 0.000  |
| 0.000    | 0.000  | 0.000  |        |       |       |       |        |        |



|          |        |        |        |        |        |        |       |
|----------|--------|--------|--------|--------|--------|--------|-------|
| TE 12_12 | -0.003 | -0.005 | -0.005 | -0.005 | -0.003 | -0.005 | -     |
| 0.003    | -0.010 | -0.007 | 1.000  |        |        |        |       |
| TE 13_13 | -0.002 | -0.003 | -0.003 | -0.003 | -0.002 | -0.003 | -     |
| 0.002    | -0.006 | -0.004 | -0.003 |        |        |        |       |
| TE 14_14 | -0.003 | -0.004 | -0.004 | -0.004 | -0.003 | -0.004 | -     |
| 0.002    | -0.009 | -0.006 | -0.004 |        |        |        |       |
| TE 15_15 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |
| TE 16_16 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |
| TE 17_17 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |
| TE 18_18 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |
| TE 19_19 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |
| TE 20_20 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |
| TE 21_21 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |
| TE 22_22 | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |
| TD 1_1   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |
| TD 2_2   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |
| TD 3_3   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |
| TD 4_4   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |
| TD 5_5   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |
| TD 6_6   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |
| TD 7_7   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |
| TD 8_8   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |
| TD 9_9   | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000 |
| 0.000    | 0.000  | 0.000  |        |        |        |        |       |

|          |       |       |       |       |       |       |       |       |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|
| TD 10_10 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 11_11 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 12_12 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 13_13 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |

Correlation Matrix of Parameter Estimates

|          |          |          |          |          |          |  |  |
|----------|----------|----------|----------|----------|----------|--|--|
| TE 13_13 | TE 14_14 | TE 15_15 | TE 16_16 | TE 17_17 | TE 18_18 |  |  |
| TE 19_19 | TE 20_20 | TE 21_21 | TE 22_22 |          |          |  |  |

|          |        |       |        |        |        |       |        |
|----------|--------|-------|--------|--------|--------|-------|--------|
| -----    | -----  | ----- | -----  | -----  | -----  | ----- | -----  |
| TE 13_13 | 1.000  |       |        |        |        |       |        |
| TE 14_14 | -0.002 | 1.000 |        |        |        |       |        |
| TE 15_15 | 0.000  | 0.000 | 1.000  |        |        |       |        |
| TE 16_16 | 0.000  | 0.000 | -0.098 | 1.000  |        |       |        |
| TE 17_17 | 0.000  | 0.000 | -0.053 | -0.066 | 1.000  |       |        |
| TE 18_18 | 0.000  | 0.000 | -0.068 | -0.085 | -0.046 | 1.000 |        |
| TE 19_19 | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000 | 1.000  |
| TE 20_20 | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000 | -0.036 |
| 1.000    |        |       |        |        |        |       |        |
| TE 21_21 | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000 | -0.030 |
| -0.051   | 1.000  |       |        |        |        |       |        |
| TE 22_22 | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000 | -0.031 |
| -0.054   | -0.043 | 1.000 |        |        |        |       |        |
| TD 1_1   | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000 |        |        |        |       |        |
| TD 2_2   | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000 |        |        |        |       |        |
| TD 3_3   | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000 |        |        |        |       |        |
| TD 4_4   | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000 |        |        |        |       |        |
| TD 5_5   | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000 |        |        |        |       |        |
| TD 6_6   | 0.000  | 0.000 | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000 |        |        |        |       |        |

|          |       |       |       |       |       |       |       |       |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|
| TD 7_7   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 8_8   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 9_9   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 10_10 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 11_11 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 12_12 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |
| TD 13_13 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000    | 0.000 | 0.000 |       |       |       |       |       |       |

Correlation Matrix of Parameter Estimates

|          | TD 1_1 | TD 2_2 | TD 3_3   | TD 4_4 | TD 5_5 | TD 6_6 |       |        |
|----------|--------|--------|----------|--------|--------|--------|-------|--------|
| TD 7_7   | TD 8_8 | TD 9_9 | TD 10_10 |        |        |        |       |        |
|          | -----  | -----  | -----    | -----  | -----  | -----  | ----- | -----  |
|          | TD 1_1 | 1.000  |          |        |        |        |       |        |
|          | TD 2_2 | -0.080 | 1.000    |        |        |        |       |        |
|          | TD 3_3 | -0.137 | -0.072   | 1.000  |        |        |       |        |
|          | TD 4_4 | 0.000  | 0.000    | 0.000  | 1.000  |        |       |        |
|          | TD 5_5 | 0.000  | 0.000    | 0.000  | -0.175 | 1.000  |       |        |
|          | TD 6_6 | 0.000  | 0.000    | 0.000  | -0.208 | -0.108 | 1.000 |        |
|          | TD 7_7 | 0.000  | 0.000    | 0.000  | 0.000  | 0.000  | 0.000 | 1.000  |
|          | TD 8_8 | 0.000  | 0.000    | 0.000  | 0.000  | 0.000  | 0.000 | -0.044 |
| 1.000    | TD 9_9 | 0.000  | 0.000    | 0.000  | 0.000  | 0.000  | 0.000 | -0.055 |
| -0.035   | 1.000  |        |          |        |        |        |       |        |
| TD 10_10 | 0.000  | 0.000  | 0.000    | 0.000  | 0.000  | 0.000  | 0.000 | -      |
| 0.057    | -0.037 | -0.046 | 1.000    |        |        |        |       |        |
| TD 11_11 | 0.000  | 0.000  | 0.000    | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |          |        |        |        |       |        |
| TD 12_12 | 0.000  | 0.000  | 0.000    | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |          |        |        |        |       |        |
| TD 13_13 | 0.000  | 0.000  | 0.000    | 0.000  | 0.000  | 0.000  | 0.000 | 0.000  |
| 0.000    | 0.000  | 0.000  |          |        |        |        |       |        |

Correlation Matrix of Parameter Estimates

|          | TD 11_11 | TD 12_12 | TD 13_13 |
|----------|----------|----------|----------|
| TD 11_11 | 1.000    |          |          |
| TD 12_12 | -0.217   | 1.000    |          |
| TD 13_13 | -0.158   | -0.127   | 1.000    |

Covariances

Y - ETA

|       | BE1   | BE2   | BE3   | BE4   | BE5   | BE6   | BE7   |
|-------|-------|-------|-------|-------|-------|-------|-------|
| BE8   | BE9   | BE10  |       |       |       |       |       |
| BE    | 0.928 | 0.914 | 0.885 | 0.862 | 0.868 | 0.870 | 0.725 |
| 0.710 | 0.699 | 0.968 |       |       |       |       |       |
| T     | 0.359 | 0.354 | 0.343 | 0.334 | 0.336 | 0.337 | 0.281 |
| 0.275 | 0.270 | 0.375 |       |       |       |       |       |
| C     | 0.650 | 0.640 | 0.620 | 0.603 | 0.608 | 0.609 | 0.508 |
| 0.497 | 0.489 | 0.677 |       |       |       |       |       |

Y - ETA

|       | BE11  | BE12  | BE13  | BE14  | T1    | T2    | T3    |
|-------|-------|-------|-------|-------|-------|-------|-------|
| T4    | C1    | C2    |       |       |       |       |       |
| BE    | 0.891 | 0.852 | 0.639 | 0.693 | 0.309 | 0.313 | 0.278 |
| 0.318 | 0.539 | 0.574 |       |       |       |       |       |
| T     | 0.345 | 0.330 | 0.247 | 0.268 | 0.798 | 0.809 | 0.717 |
| 0.821 | 0.542 | 0.577 |       |       |       |       |       |
| C     | 0.624 | 0.596 | 0.447 | 0.485 | 0.562 | 0.569 | 0.504 |
| 0.578 | 0.770 | 0.820 |       |       |       |       |       |

Y - ETA

| C3 | C4 |
|----|----|
|----|----|

|    |       |       |
|----|-------|-------|
| BE | 0.535 | 0.602 |
| T  | 0.537 | 0.605 |
| C  | 0.764 | 0.861 |

Y - KSI

|        | BE1    | BE2    | BE3    | BE4    | BE5    | BE6    | BE7    |
|--------|--------|--------|--------|--------|--------|--------|--------|
| BE8    | BE9    | BE10   |        |        |        |        |        |
| PQ     | 0.574  | 0.566  | 0.548  | 0.533  | 0.537  | 0.539  | 0.449  |
| 0.440  | 0.432  | 0.599  |        |        |        |        |        |
| SQ     | 0.387  | 0.381  | 0.369  | 0.359  | 0.362  | 0.363  | 0.302  |
| 0.296  | 0.291  | 0.403  |        |        |        |        |        |
| SI     | 0.699  | 0.689  | 0.667  | 0.649  | 0.654  | 0.656  | 0.546  |
| 0.535  | 0.526  | 0.729  |        |        |        |        |        |
| P      | -0.176 | -0.174 | -0.168 | -0.164 | -0.165 | -0.165 | -0.138 |
| -0.135 | -0.133 | -0.184 |        |        |        |        |        |

Y - KSI

|        | BE11   | BE12   | BE13   | BE14   | T1     | T2     | T3     |
|--------|--------|--------|--------|--------|--------|--------|--------|
| T4     | C1     | C2     |        |        |        |        |        |
| PQ     | 0.551  | 0.527  | 0.395  | 0.429  | 0.191  | 0.194  | 0.172  |
| 0.197  | 0.333  | 0.355  |        |        |        |        |        |
| SQ     | 0.371  | 0.355  | 0.266  | 0.289  | 0.129  | 0.130  | 0.116  |
| 0.132  | 0.224  | 0.239  |        |        |        |        |        |
| SI     | 0.671  | 0.642  | 0.481  | 0.522  | 0.233  | 0.236  | 0.209  |
| 0.239  | 0.406  | 0.433  |        |        |        |        |        |
| P      | -0.169 | -0.162 | -0.121 | -0.132 | -0.059 | -0.059 | -0.053 |
| -0.060 | -0.102 | -0.109 |        |        |        |        |        |

Y - KSI

|    | C3    | C4    |
|----|-------|-------|
| PQ | 0.331 | 0.373 |
| SQ | 0.223 | 0.251 |

|    |        |        |
|----|--------|--------|
| SI | 0.403  | 0.454  |
| P  | -0.101 | -0.114 |

X - ETA

| SI2   | PQ1<br>SI3 | PQ2<br>SI4 | PQ3   | SQ1   | SQ2   | SQ3   | SI1   |
|-------|------------|------------|-------|-------|-------|-------|-------|
| BE    | 0.419      | 0.411      | 0.467 | 0.370 | 0.331 | 0.360 | 0.620 |
| 0.557 | 0.639      | 0.684      |       |       |       |       |       |
| T     | 0.162      | 0.159      | 0.181 | 0.143 | 0.128 | 0.139 | 0.240 |
| 0.215 | 0.247      | 0.265      |       |       |       |       |       |
| C     | 0.293      | 0.288      | 0.327 | 0.259 | 0.231 | 0.252 | 0.434 |
| 0.390 | 0.447      | 0.479      |       |       |       |       |       |

X - ETA

|    | P1     | P2     | P3     |
|----|--------|--------|--------|
| BE | -0.122 | -0.149 | -0.118 |
| T  | -0.047 | -0.058 | -0.046 |
| C  | -0.085 | -0.104 | -0.083 |

X - KSI

| SI2    | PQ1<br>SI3 | PQ2<br>SI4 | PQ3    | SQ1    | SQ2    | SQ3    | SI1    |
|--------|------------|------------|--------|--------|--------|--------|--------|
| PQ     | 0.677      | 0.664      | 0.754  | 0.103  | 0.092  | 0.100  | 0.562  |
| 0.505  | 0.579      | 0.620      |        |        |        |        |        |
| SQ     | 0.079      | 0.077      | 0.088  | 0.889  | 0.793  | 0.863  | 0.346  |
| 0.311  | 0.357      | 0.381      |        |        |        |        |        |
| SI     | 0.462      | 0.454      | 0.515  | 0.374  | 0.334  | 0.363  | 0.823  |
| 0.739  | 0.849      | 0.907      |        |        |        |        |        |
| P      | -0.309     | -0.303     | -0.344 | -0.229 | -0.204 | -0.222 | -0.260 |
| -0.233 | -0.268     | -0.287     |        |        |        |        |        |

X - KSI



|    | P1     | P2     | P3     |
|----|--------|--------|--------|
|    | -----  | -----  | -----  |
| PQ | -0.294 | -0.358 | -0.284 |
| SQ | -0.165 | -0.202 | -0.160 |
| SI | -0.203 | -0.248 | -0.197 |
| P  | 0.643  | 0.784  | 0.622  |

### First Order Derivatives

#### LAMBDA-Y

|      | BE     | T      | C      |
|------|--------|--------|--------|
|      | -----  | -----  | -----  |
| BE1  | 0.000  | -0.105 | -0.066 |
| BE2  | 0.000  | 0.139  | 0.055  |
| BE3  | 0.000  | -0.059 | 0.001  |
| BE4  | 0.000  | -0.047 | -0.105 |
| BE5  | 0.000  | 0.183  | 0.024  |
| BE6  | 0.000  | -0.205 | -0.199 |
| BE7  | 0.000  | -0.258 | -0.062 |
| BE8  | 0.000  | -0.316 | 0.084  |
| BE9  | 0.000  | -0.130 | 0.068  |
| BE10 | 0.000  | 0.324  | 0.208  |
| BE11 | 0.000  | 0.368  | 0.027  |
| BE12 | 0.000  | 0.324  | 0.041  |
| BE13 | 0.000  | -0.123 | 0.129  |
| BE14 | 0.000  | 0.105  | 0.143  |
| T1   | -0.040 | 0.000  | -0.019 |
| T2   | -0.050 | 0.000  | -0.025 |
| T3   | -0.032 | 0.000  | 0.042  |
| T4   | 0.115  | 0.000  | 0.006  |
| C1   | -0.014 | -0.108 | 0.000  |
| C2   | -0.047 | 0.047  | 0.000  |
| C3   | -0.024 | 0.063  | 0.000  |
| C4   | 0.079  | -0.005 | 0.000  |

#### LAMBDA-X

PQ      SQ      SI      P

|     | -----  | -----  | -----  | -----  |
|-----|--------|--------|--------|--------|
| PQ1 | 0.000  | -0.057 | -0.245 | -0.033 |
| PQ2 | 0.000  | -0.118 | 0.049  | 0.256  |
| PQ3 | 0.000  | 0.156  | 0.177  | -0.196 |
| SQ1 | -0.085 | 0.000  | -0.056 | 0.053  |
| SQ2 | -0.105 | 0.000  | -0.081 | -0.026 |
| SQ3 | 0.183  | 0.000  | 0.132  | -0.031 |
| SI1 | -0.004 | 0.008  | 0.000  | -0.080 |
| SI2 | -0.036 | -0.005 | 0.000  | -0.092 |
| SI3 | 0.000  | -0.017 | 0.000  | 0.068  |
| SI4 | 0.034  | 0.013  | 0.000  | 0.084  |
| P1  | -0.086 | -0.188 | -0.283 | 0.000  |
| P2  | -0.023 | 0.207  | 0.099  | 0.000  |
| P3  | 0.117  | -0.067 | 0.168  | 0.000  |

BETA

|       | BE    | T     | C     |
|-------|-------|-------|-------|
| ----- | ----- | ----- | ----- |
| BE    | 0.000 | 0.326 | 0.250 |
| T     | 0.000 | 0.000 | 0.000 |
| C     | 0.000 | 0.000 | 0.000 |

GAMMA

|       | PQ     | SQ     | SI     | P     |
|-------|--------|--------|--------|-------|
| ----- | -----  | -----  | -----  | ----- |
| BE    | 0.000  | 0.000  | 0.000  | 0.000 |
| T     | -0.176 | -0.160 | -0.200 | 0.292 |
| C     | 0.086  | -0.614 | -0.083 | 0.223 |

PHI

|       | PQ    | SQ    | SI    | P     |
|-------|-------|-------|-------|-------|
| ----- | ----- | ----- | ----- | ----- |
| PQ    | 0.000 |       |       |       |
| SQ    | 0.000 | 0.000 |       |       |
| SI    | 0.000 | 0.000 | 0.000 |       |
| P     | 0.000 | 0.000 | 0.000 | 0.000 |

PSI

|    | BE    | T     | C     |
|----|-------|-------|-------|
| BE | 0.000 |       |       |
| T  | 0.384 | 0.000 |       |
| C  | 0.289 | 0.000 | 0.000 |

THETA-EPS

|        | BE1    | BE2    | BE3    | BE4    | BE5    | BE6    | BE7    |
|--------|--------|--------|--------|--------|--------|--------|--------|
| BE8    | BE9    | BE10   |        |        |        |        |        |
| BE1    | 0.000  |        |        |        |        |        |        |
| BE2    | -0.358 | 0.000  |        |        |        |        |        |
| BE3    | -0.886 | -0.386 | 0.000  |        |        |        |        |
| BE4    | 0.037  | 0.197  | 0.105  | 0.000  |        |        |        |
| BE5    | 0.432  | -0.234 | 0.325  | 0.175  | 0.000  |        |        |
| BE6    | -0.122 | 0.073  | 0.041  | -0.740 | 0.024  | 0.000  |        |
| BE7    | 0.100  | 0.394  | -0.051 | 0.126  | 0.183  | 0.095  | 0.000  |
| BE8    | 0.182  | 0.505  | 0.044  | -0.161 | 0.787  | -0.440 | -0.461 |
| 0.000  |        |        |        |        |        |        |        |
| BE9    | 0.154  | -0.291 | 0.004  | 0.001  | -0.287 | 0.105  | 0.156  |
| -1.245 | 0.000  |        |        |        |        |        |        |
| BE10   | -0.334 | -0.934 | -0.391 | 0.306  | 0.134  | 0.271  | 0.002  |
| -0.426 | 0.307  | 0.000  |        |        |        |        |        |
| BE11   | 0.390  | 0.493  | 0.571  | -0.044 | -0.610 | -0.009 | 0.334  |
| 0.727  | 0.812  | 0.059  |        |        |        |        |        |
| BE12   | 0.492  | -0.339 | 0.693  | 0.047  | -1.280 | 0.161  | 0.684  |
| 0.883  | -0.121 | 0.401  |        |        |        |        |        |
| BE13   | 0.044  | 0.549  | -0.134 | 0.214  | 0.242  | 0.296  | -1.375 |
| -0.788 | -0.076 | 0.098  |        |        |        |        |        |
| BE14   | 0.130  | 0.677  | 0.244  | 0.000  | 0.278  | 0.675  | -0.404 |
| -0.442 | -0.015 | 0.138  |        |        |        |        |        |
| T1     | 0.024  | 0.086  | 0.116  | -0.138 | 0.080  | 0.191  | -0.335 |
| -0.024 | 0.038  | -0.074 |        |        |        |        |        |
| T2     | 0.005  | 0.020  | -0.230 | 0.278  | 0.086  | -0.066 | -0.319 |
| -0.507 | -0.353 | 0.200  |        |        |        |        |        |
| T3     | -0.052 | -0.001 | 0.008  | 0.076  | -0.122 | 0.107  | -0.006 |
| -0.270 | -0.290 | -0.068 |        |        |        |        |        |

|        |        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|--------|
| T4     | -0.106 | 0.131  | -0.043 | -0.101 | 0.354  | -0.305 | 0.125  |
| -0.217 | 0.090  | 0.307  |        |        |        |        |        |
| C1     | 0.000  | -0.037 | -0.062 | -0.468 | 0.131  | -0.346 | 0.207  |
| 0.281  | 0.159  | 0.141  |        |        |        |        |        |
| C2     | -0.092 | -0.075 | -0.156 | 0.157  | -0.284 | -0.125 | -0.291 |
| 0.267  | 0.065  | 0.235  |        |        |        |        |        |
| C3     | 0.008  | 0.316  | 0.151  | 0.177  | -0.436 | -0.009 | 0.330  |
| -0.020 | 0.083  | -0.197 |        |        |        |        |        |
| C4     | 0.029  | -0.240 | 0.193  | -0.211 | 0.262  | 0.056  | 0.079  |
| 0.492  | 0.260  | -0.001 |        |        |        |        |        |

THETA-EPS

| T4     | BE11<br>C1 | BE12<br>C2 | BE13   | BE14   | T1     | T2     | T3     |
|--------|------------|------------|--------|--------|--------|--------|--------|
|        | -----      | -----      | -----  | -----  | -----  | -----  | -----  |
|        | -----      | -----      |        |        |        |        |        |
| BE11   | 0.000      |            |        |        |        |        |        |
| BE12   | -1.683     | 0.000      |        |        |        |        |        |
| BE13   | 0.257      | 0.563      | 0.000  |        |        |        |        |
| BE14   | -1.244     | -0.356     | -0.485 | 0.000  |        |        |        |
| T1     | 0.059      | 0.045      | -0.329 | 0.088  | 0.000  |        |        |
| T2     | 0.502      | 0.288      | -0.222 | -0.072 | 0.342  | 0.000  |        |
| T3     | 0.203      | 0.132      | 0.011  | 0.084  | -0.340 | -0.100 | 0.000  |
| T4     | 0.140      | 0.288      | -0.058 | -0.128 | -0.021 | -0.217 | 0.321  |
| 0.000  |            |            |        |        |        |        |        |
| C1     | 0.150      | 0.113      | 0.031  | 0.189  | -0.074 | -0.013 | 0.333  |
| -0.485 | 0.000      |            |        |        |        |        |        |
| C2     | -0.090     | -0.198     | 0.184  | 0.404  | 0.161  | -0.188 | -0.066 |
| 0.182  | 0.446      | 0.000      |        |        |        |        |        |
| C3     | -0.434     | -0.296     | 0.208  | 0.066  | -0.231 | 0.170  | -0.153 |
| 0.338  | 0.224      | -0.485     |        |        |        |        |        |
| C4     | -0.306     | -0.149     | 0.380  | -0.256 | 0.123  | 0.038  | 0.134  |
| -0.246 | -0.375     | 0.028      |        |        |        |        |        |

THETA-EPS

|    | C3    | C4    |
|----|-------|-------|
|    | ----- | ----- |
| C3 | 0.000 |       |
| C4 | 0.181 | 0.000 |



|        |        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|--------|
| PQ1    | -0.089 | 0.331  | -0.572 | -0.232 | -0.015 | -0.142 | 0.008  |
| -0.159 | -0.045 | 0.031  |        |        |        |        |        |
| PQ2    | 0.408  | -0.233 | 0.503  | 0.381  | 0.027  | 0.035  | 0.009  |
| 0.051  | -0.071 | -0.009 |        |        |        |        |        |
| PQ3    | -0.257 | -0.012 | -0.183 | -0.401 | -0.059 | -0.019 | 0.037  |
| 0.010  | 0.055  | 0.107  |        |        |        |        |        |
| SQ1    | 0.629  | 0.016  | -0.201 | 0.477  | -0.130 | 0.193  | -0.114 |
| -0.035 | -0.173 | 0.131  |        |        |        |        |        |
| SQ2    | -0.499 | 0.096  | 0.071  | -0.141 | -0.076 | 0.061  | -0.049 |
| 0.320  | 0.179  | 0.030  |        |        |        |        |        |
| SQ3    | -0.259 | -0.398 | 0.457  | 0.285  | 0.345  | -0.096 | 0.099  |
| -0.172 | -0.214 | -0.320 |        |        |        |        |        |
| SI1    | 0.006  | 0.198  | -0.271 | -0.020 | 0.148  | 0.185  | -0.037 |
| -0.106 | 0.138  | -0.103 |        |        |        |        |        |
| SI2    | 0.498  | 0.370  | -0.212 | 0.443  | -0.042 | -0.313 | 0.058  |
| -0.151 | -0.341 | 0.314  |        |        |        |        |        |
| SI3    | 0.308  | 0.236  | -0.211 | 0.103  | 0.157  | -0.104 | -0.198 |
| -0.034 | -0.091 | -0.343 |        |        |        |        |        |
| SI4    | -0.531 | -0.358 | 0.173  | -0.302 | -0.251 | 0.154  | 0.136  |
| -0.095 | -0.186 | 0.249  |        |        |        |        |        |
| P1     | -0.198 | -0.214 | -0.233 | -0.014 | 0.051  | 0.060  | 0.333  |
| -0.285 | -0.363 | 0.087  |        |        |        |        |        |
| P2     | 0.501  | 0.373  | -0.583 | 0.078  | 0.087  | -0.377 | -0.058 |
| 0.117  | -0.054 | 0.194  |        |        |        |        |        |
| P3     | -0.569 | -0.531 | 0.156  | -0.264 | 0.107  | 0.171  | -0.102 |
| 0.228  | 0.279  | -0.105 |        |        |        |        |        |

THETA-DELTA-EPS

|     | C3     | C4     |
|-----|--------|--------|
|     | -----  | -----  |
| PQ1 | 0.077  | 0.143  |
| PQ2 | -0.173 | -0.020 |
| PQ3 | 0.069  | -0.123 |
| SQ1 | 0.316  | -0.157 |
| SQ2 | -0.847 | -0.090 |
| SQ3 | 0.099  | -0.048 |
| SI1 | 0.008  | 0.140  |
| SI2 | 0.067  | -0.041 |
| SI3 | 0.551  | -0.146 |
| SI4 | -0.119 | -0.057 |

|    |        |        |
|----|--------|--------|
| P1 | 0.214  | -0.139 |
| P2 | 0.092  | 0.233  |
| P3 | -0.076 | -0.241 |

THETA-DELTA

| SI2    | PQ1<br>SI3 | PQ2<br>SI4 | PQ3    | SQ1    | SQ2    | SQ3    | SI1    |
|--------|------------|------------|--------|--------|--------|--------|--------|
|        | PQ1        | 0.000      |        |        |        |        |        |
|        | PQ2        | 0.636      | 0.000  |        |        |        |        |
|        | PQ3        | -0.089     | -0.480 | 0.000  |        |        |        |
|        | SQ1        | 0.047      | -0.105 | -0.103 | 0.000  |        |        |
|        | SQ2        | 0.168      | 0.024  | -0.207 | 0.064  | 0.000  |        |
|        | SQ3        | -0.052     | -0.024 | 0.257  | -0.071 | 0.014  | 0.000  |
|        | SI1        | -0.250     | 0.058  | 0.147  | -0.055 | -0.034 | 0.097  |
|        | SI2        | -0.341     | 0.156  | -0.116 | 0.055  | -0.111 | -0.070 |
| 0.000  |            |            |        |        |        |        |        |
|        | SI3        | 0.011      | -0.104 | 0.102  | -0.083 | 0.266  | -0.175 |
| 0.042  | 0.000      |            |        |        |        |        |        |
|        | SI4        | -0.091     | 0.160  | 0.179  | 0.007  | 0.018  | 0.077  |
| -0.245 | 0.096      | 0.000      |        |        |        |        |        |
|        | P1         | -0.400     | 0.414  | 0.144  | -0.122 | 0.192  | -0.152 |
| 0.036  | -0.007     | -0.365     |        |        |        |        |        |
|        | P2         | 0.127      | 0.084  | -0.285 | 0.116  | -0.067 | 0.174  |
| -0.332 | 0.079      | 0.248      |        |        |        |        |        |
|        | P3         | 0.239      | -0.030 | -0.222 | -0.020 | -0.174 | -0.007 |
| 0.087  | 0.026      | 0.319      |        |        |        |        |        |

THETA-DELTA

|    | P1     | P2    | P3    |
|----|--------|-------|-------|
| P1 | 0.000  |       |       |
| P2 | -0.040 | 0.000 |       |
| P3 | -0.090 | 0.115 | 0.000 |

Factor Scores Regressions

## ETA

| BE8    | BE1<br>BE9 | BE2<br>BE10 | BE3    | BE4    | BE5    | BE6    | BE7    |
|--------|------------|-------------|--------|--------|--------|--------|--------|
| BE     | 0.053      | 0.070       | 0.050  | 0.083  | 0.080  | 0.074  | 0.065  |
| 0.090  | 0.052      | 0.134       |        |        |        |        |        |
| T      | -0.001     | -0.001      | -0.001 | -0.001 | -0.001 | -0.001 | -0.001 |
| -0.001 | -0.001     | -0.002      |        |        |        |        |        |
| C      | 0.010      | 0.014       | 0.010  | 0.016  | 0.015  | 0.014  | 0.013  |
| 0.017  | 0.010      | 0.026       |        |        |        |        |        |

## ETA

| T4     | BE11<br>C1 | BE12<br>C2 | BE13   | BE14   | T1     | T2     | T3     |
|--------|------------|------------|--------|--------|--------|--------|--------|
| BE     | 0.102      | 0.073      | 0.061  | 0.077  | -0.001 | -0.001 | -0.001 |
| -0.001 | 0.010      | 0.014      |        |        |        |        |        |
| T      | -0.001     | -0.001     | -0.001 | -0.001 | 0.252  | 0.285  | 0.213  |
| 0.224  | 0.036      | 0.051      |        |        |        |        |        |
| C      | 0.020      | 0.014      | 0.012  | 0.015  | 0.050  | 0.056  | 0.042  |
| 0.044  | 0.163      | 0.231      |        |        |        |        |        |

## ETA

| SQ3   | C3<br>SII | C4<br>SI2 | PQ1   | PQ2   | PQ3   | SQ1   | SQ2   |
|-------|-----------|-----------|-------|-------|-------|-------|-------|
| BE    | 0.013     | 0.012     | 0.014 | 0.009 | 0.012 | 0.007 | 0.006 |
| 0.006 | 0.014     | 0.011     |       |       |       |       |       |
| T     | 0.047     | 0.044     | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0.000 | 0.000     | 0.000     |       |       |       |       |       |
| C     | 0.214     | 0.197     | 0.003 | 0.002 | 0.002 | 0.001 | 0.001 |
| 0.001 | 0.003     | 0.002     |       |       |       |       |       |

## ETA



|    | SI3   | SI4   | P1    | P2    | P3    |
|----|-------|-------|-------|-------|-------|
| BE | 0.011 | 0.011 | 0.005 | 0.004 | 0.004 |
| T  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| C  | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 |

KSI

|       | BE1   | BE2   | BE3   | BE4   | BE5   | BE6   | BE7   |
|-------|-------|-------|-------|-------|-------|-------|-------|
| BE8   | BE9   | BE10  |       |       |       |       |       |
| PQ    | 0.008 | 0.011 | 0.008 | 0.012 | 0.012 | 0.011 | 0.010 |
| 0.014 | 0.008 | 0.020 |       |       |       |       |       |
| SQ    | 0.005 | 0.007 | 0.005 | 0.008 | 0.008 | 0.007 | 0.006 |
| 0.009 | 0.005 | 0.013 |       |       |       |       |       |
| SI    | 0.010 | 0.013 | 0.009 | 0.015 | 0.014 | 0.013 | 0.012 |
| 0.016 | 0.009 | 0.024 |       |       |       |       |       |
| P     | 0.003 | 0.004 | 0.003 | 0.005 | 0.005 | 0.004 | 0.004 |
| 0.005 | 0.003 | 0.008 |       |       |       |       |       |

KSI

|       | BE11  | BE12  | BE13  | BE14  | T1    | T2    | T3    |
|-------|-------|-------|-------|-------|-------|-------|-------|
| T4    | C1    | C2    |       |       |       |       |       |
| PQ    | 0.015 | 0.011 | 0.009 | 0.012 | 0.000 | 0.000 | 0.000 |
| 0.000 | 0.002 | 0.002 |       |       |       |       |       |
| SQ    | 0.010 | 0.007 | 0.006 | 0.007 | 0.000 | 0.000 | 0.000 |
| 0.000 | 0.001 | 0.001 |       |       |       |       |       |
| SI    | 0.018 | 0.013 | 0.011 | 0.014 | 0.000 | 0.000 | 0.000 |
| 0.000 | 0.002 | 0.003 |       |       |       |       |       |
| P     | 0.006 | 0.004 | 0.004 | 0.004 | 0.000 | 0.000 | 0.000 |
| 0.000 | 0.001 | 0.001 |       |       |       |       |       |

KSI

|     | C3  | C4  | PQ1 | PQ2 | PQ3 | SQ1 | SQ2 |
|-----|-----|-----|-----|-----|-----|-----|-----|
| SQ3 | SI1 | SI2 |     |     |     |     |     |

| PQ     | 0.002  | 0.002  | 0.363  | 0.248  | 0.310  | -0.032 | -0.027 |  |
|--------|--------|--------|--------|--------|--------|--------|--------|--|
| -0.027 | 0.042  | 0.034  |        |        |        |        |        |  |
| SQ     | 0.001  | 0.001  | -0.040 | -0.027 | -0.034 | 0.333  | 0.276  |  |
| 0.279  | 0.021  | 0.017  |        |        |        |        |        |  |
| SI     | 0.002  | 0.002  | 0.051  | 0.035  | 0.043  | 0.020  | 0.016  |  |
| 0.017  | 0.235  | 0.190  |        |        |        |        |        |  |
| P      | 0.001  | 0.001  | -0.057 | -0.039 | -0.049 | -0.023 | -0.019 |  |
| -0.019 | -0.008 | -0.007 |        |        |        |        |        |  |

### KSI

|    | SI3    | SI4    | P1     | P2     | P3     |
|----|--------|--------|--------|--------|--------|
| PQ | 0.035  | 0.033  | -0.054 | -0.040 | -0.043 |
| SQ | 0.017  | 0.017  | -0.027 | -0.021 | -0.022 |
| SI | 0.194  | 0.188  | -0.009 | -0.007 | -0.008 |
| P  | -0.007 | -0.007 | 0.432  | 0.324  | 0.345  |

### Standardized Solution

#### LAMBDA-Y

|      | BE    | T  | C  |
|------|-------|----|----|
| BE1  | 0.928 | -- | -- |
| BE2  | 0.914 | -- | -- |
| BE3  | 0.885 | -- | -- |
| BE4  | 0.862 | -- | -- |
| BE5  | 0.868 | -- | -- |
| BE6  | 0.870 | -- | -- |
| BE7  | 0.725 | -- | -- |
| BE8  | 0.710 | -- | -- |
| BE9  | 0.699 | -- | -- |
| BE10 | 0.968 | -- | -- |
| BE11 | 0.891 | -- | -- |
| BE12 | 0.852 | -- | -- |
| BE13 | 0.639 | -- | -- |

|      |       |       |       |
|------|-------|-------|-------|
| BE14 | 0.693 | --    | --    |
| T1   | --    | 0.798 | --    |
| T2   | --    | 0.809 | --    |
| T3   | --    | 0.717 | --    |
| T4   | --    | 0.821 | --    |
| C1   | --    | --    | 0.770 |
| C2   | --    | --    | 0.820 |
| C3   | --    | --    | 0.764 |
| C4   | --    | --    | 0.861 |

### LAMBDA-X

|     | PQ    | SQ    | SI    | P     |
|-----|-------|-------|-------|-------|
|     | ----- | ----- | ----- | ----- |
| PQ1 | 0.677 | --    | --    | --    |
| PQ2 | 0.664 | --    | --    | --    |
| PQ3 | 0.754 | --    | --    | --    |
| SQ1 | --    | 0.889 | --    | --    |
| SQ2 | --    | 0.793 | --    | --    |
| SQ3 | --    | 0.863 | --    | --    |
| SI1 | --    | --    | 0.823 | --    |
| SI2 | --    | --    | 0.739 | --    |
| SI3 | --    | --    | 0.849 | --    |
| SI4 | --    | --    | 0.907 | --    |
| P1  | --    | --    | --    | 0.643 |
| P2  | --    | --    | --    | 0.784 |
| P3  | --    | --    | --    | 0.622 |

### BETA

|    | BE    | T     | C     |
|----|-------|-------|-------|
|    | ----- | ----- | ----- |
| BE | --    | --    | --    |
| T  | 0.387 | --    | --    |
| C  | 0.503 | 0.509 | --    |

### GAMMA

|    | PQ    | SQ    | SI    | P     |
|----|-------|-------|-------|-------|
|    | ----- | ----- | ----- | ----- |
| BE | 0.346 | 0.220 | 0.480 | 0.177 |

T -- -- -- --  
 C -- -- -- --

Correlation Matrix of ETA and KSI

|    | BE     | T      | C      | PQ     | SQ     | SI     | P     |
|----|--------|--------|--------|--------|--------|--------|-------|
| BE | 1.000  |        |        |        |        |        |       |
| T  | 0.387  | 1.000  |        |        |        |        |       |
| C  | 0.700  | 0.704  | 1.000  |        |        |        |       |
| PQ | 0.619  | 0.240  | 0.433  | 1.000  |        |        |       |
| SQ | 0.417  | 0.161  | 0.292  | 0.116  | 1.000  |        |       |
| SI | 0.753  | 0.292  | 0.527  | 0.683  | 0.420  | 1.000  |       |
| P  | -0.190 | -0.073 | -0.133 | -0.457 | -0.257 | -0.316 | 1.000 |

PSI

Note: This matrix is diagonal.

|  | BE    | T     | C     |
|--|-------|-------|-------|
|  | 0.366 | 0.850 | 0.290 |

Regression Matrix ETA on KSI (Standardized)

|    | PQ    | SQ    | SI    | P     |
|----|-------|-------|-------|-------|
| BE | 0.346 | 0.220 | 0.480 | 0.177 |
| T  | 0.134 | 0.085 | 0.186 | 0.068 |
| C  | 0.242 | 0.154 | 0.336 | 0.124 |

Total and Indirect Effects

Total Effects of KSI on ETA

|    | PQ      | SQ      | SI      | P       |
|----|---------|---------|---------|---------|
| BE | 0.346   | 0.220   | 0.480   | 0.177   |
|    | (0.110) | (0.075) | (0.111) | (0.073) |
|    | 3.150   | 2.938   | 4.329   | 2.434   |

|   |         |         |         |         |
|---|---------|---------|---------|---------|
| T | 0.134   | 0.085   | 0.186   | 0.068   |
|   | (0.049) | (0.033) | (0.055) | (0.031) |
|   | 2.715   | 2.576   | 3.367   | 2.216   |
| C | 0.242   | 0.154   | 0.336   | 0.124   |
|   | (0.080) | (0.054) | (0.083) | (0.052) |
|   | 3.033   | 2.843   | 4.041   | 2.379   |

Indirect Effects of KSI on ETA

|    | PQ      | SQ      | SI      | P       |
|----|---------|---------|---------|---------|
|    | -----   | -----   | -----   | -----   |
| BE | --      | --      | --      | --      |
| T  | 0.134   | 0.085   | 0.186   | 0.068   |
|    | (0.049) | (0.033) | (0.055) | (0.031) |
|    | 2.715   | 2.576   | 3.367   | 2.216   |
| C  | 0.242   | 0.154   | 0.336   | 0.124   |
|    | (0.080) | (0.054) | (0.083) | (0.052) |
|    | 3.033   | 2.843   | 4.041   | 2.379   |

Total Effects of ETA on ETA

|    | BE      | T       | C     |
|----|---------|---------|-------|
|    | -----   | -----   | ----- |
| BE | --      | --      | --    |
| T  | 0.387   | --      | --    |
|    | (0.080) |         |       |
|    | 4.816   |         |       |
| C  | 0.700   | 0.509   | --    |
|    | (0.089) | (0.077) |       |
|    | 7.862   | 6.625   |       |

Largest Eigenvalue of B\*B' (Stability Index) is 0.597

Indirect Effects of ETA on ETA

|    | BE      | T     | C     |
|----|---------|-------|-------|
|    | -----   | ----- | ----- |
| BE | --      | --    | --    |
| T  | --      | --    | --    |
| C  | 0.197   | --    | --    |
|    | (0.048) |       |       |

4.141

Total Effects of ETA on Y

|      | BE      | T     | C     |
|------|---------|-------|-------|
|      | -----   | ----- | ----- |
| BE1  | 0.928   | --    | --    |
| BE2  | 0.914   | --    | --    |
|      | (0.078) |       |       |
|      | 11.678  |       |       |
| BE3  | 0.885   | --    | --    |
|      | (0.083) |       |       |
|      | 10.716  |       |       |
| BE4  | 0.862   | --    | --    |
|      | (0.072) |       |       |
|      | 11.951  |       |       |
| BE5  | 0.868   | --    | --    |
|      | (0.073) |       |       |
|      | 11.875  |       |       |
| BE6  | 0.870   | --    | --    |
|      | (0.074) |       |       |
|      | 11.689  |       |       |
| BE7  | 0.725   | --    | --    |
|      | (0.067) |       |       |
|      | 10.868  |       |       |
| BE8  | 0.710   | --    | --    |
|      | (0.061) |       |       |
|      | 11.684  |       |       |
| BE9  | 0.699   | --    | --    |
|      | (0.069) |       |       |
|      | 10.143  |       |       |
| BE10 | 0.968   | --    | --    |
|      | (0.073) |       |       |
|      | 13.214  |       |       |
| BE11 | 0.891   | --    | --    |
|      | (0.071) |       |       |
|      | 12.495  |       |       |
| BE12 | 0.852   | --    | --    |
|      | (0.073) |       |       |
|      | 11.609  |       |       |
| BE13 | 0.639   | --    | --    |

|      |         |         |         |
|------|---------|---------|---------|
|      | (0.062) |         |         |
|      | 10.359  |         |         |
| BE14 | 0.693   | --      | --      |
|      | (0.062) |         |         |
|      | 11.200  |         |         |
| T1   | 0.309   | 0.798   | --      |
|      | (0.064) |         |         |
|      | 4.816   |         |         |
| T2   | 0.313   | 0.809   | --      |
|      | (0.065) | (0.073) |         |
|      | 4.844   | 11.047  |         |
| T3   | 0.278   | 0.717   | --      |
|      | (0.058) | (0.071) |         |
|      | 4.748   | 10.120  |         |
| T4   | 0.318   | 0.821   | --      |
|      | (0.066) | (0.078) |         |
|      | 4.795   | 10.570  |         |
| C1   | 0.539   | 0.392   | 0.770   |
|      | (0.069) | (0.059) |         |
|      | 7.862   | 6.625   |         |
| C2   | 0.574   | 0.417   | 0.820   |
|      | (0.069) | (0.060) | (0.080) |
|      | 8.354   | 6.912   | 10.202  |
| C3   | 0.535   | 0.388   | 0.764   |
|      | (0.065) | (0.057) | (0.077) |
|      | 8.186   | 6.816   | 9.921   |
| C4   | 0.602   | 0.438   | 0.861   |
|      | (0.073) | (0.064) | (0.086) |
|      | 8.229   | 6.841   | 9.993   |

Indirect Effects of ETA on Y

|     | BE    | T     | C     |
|-----|-------|-------|-------|
|     | ----- | ----- | ----- |
| BE1 | --    | --    | --    |
| BE2 | --    | --    | --    |
| BE3 | --    | --    | --    |
| BE4 | --    | --    | --    |
| BE5 | --    | --    | --    |
| BE6 | --    | --    | --    |
| BE7 | --    | --    | --    |

|      |         |         |    |
|------|---------|---------|----|
| BE8  | --      | --      | -- |
| BE9  | --      | --      | -- |
| BE10 | --      | --      | -- |
| BE11 | --      | --      | -- |
| BE12 | --      | --      | -- |
| BE13 | --      | --      | -- |
| BE14 | --      | --      | -- |
| T1   | 0.309   | --      | -- |
|      | (0.064) |         |    |
|      | 4.816   |         |    |
| T2   | 0.313   | --      | -- |
|      | (0.065) |         |    |
|      | 4.844   |         |    |
| T3   | 0.278   | --      | -- |
|      | (0.058) |         |    |
|      | 4.748   |         |    |
| T4   | 0.318   | --      | -- |
|      | (0.066) |         |    |
|      | 4.795   |         |    |
| C1   | 0.539   | 0.392   | -- |
|      | (0.069) | (0.059) |    |
|      | 7.862   | 6.625   |    |
| C2   | 0.574   | 0.417   | -- |
|      | (0.069) | (0.060) |    |
|      | 8.354   | 6.912   |    |
| C3   | 0.535   | 0.388   | -- |
|      | (0.065) | (0.057) |    |
|      | 8.186   | 6.816   |    |
| C4   | 0.602   | 0.438   | -- |
|      | (0.073) | (0.064) |    |
|      | 8.229   | 6.841   |    |

Total Effects of KSI on Y

|     | PQ      | SQ      | SI      | P       |
|-----|---------|---------|---------|---------|
|     | -----   | -----   | -----   | -----   |
| BE1 | 0.321   | 0.204   | 0.446   | 0.164   |
|     | (0.102) | (0.069) | (0.103) | (0.067) |
|     | 3.150   | 2.938   | 4.329   | 2.434   |
| BE2 | 0.316   | 0.201   | 0.439   | 0.161   |
|     | (0.100) | (0.068) | (0.101) | (0.066) |



|      |         |         |         |         |
|------|---------|---------|---------|---------|
|      | 3.165   | 2.950   | 4.369   | 2.441   |
| BE3  | 0.306   | 0.195   | 0.425   | 0.156   |
|      | (0.097) | (0.066) | (0.099) | (0.064) |
|      | 3.143   | 2.933   | 4.312   | 2.431   |
| BE4  | 0.298   | 0.189   | 0.414   | 0.152   |
|      | (0.094) | (0.064) | (0.094) | (0.062) |
|      | 3.170   | 2.955   | 4.383   | 2.443   |
| BE5  | 0.300   | 0.191   | 0.417   | 0.153   |
|      | (0.095) | (0.065) | (0.095) | (0.063) |
|      | 3.169   | 2.953   | 4.379   | 2.443   |
| BE6  | 0.301   | 0.191   | 0.418   | 0.154   |
|      | (0.095) | (0.065) | (0.096) | (0.063) |
|      | 3.165   | 2.950   | 4.369   | 2.441   |
| BE7  | 0.251   | 0.159   | 0.348   | 0.128   |
|      | (0.080) | (0.054) | (0.081) | (0.053) |
|      | 3.147   | 2.936   | 4.322   | 2.433   |
| BE8  | 0.246   | 0.156   | 0.341   | 0.125   |
|      | (0.078) | (0.053) | (0.078) | (0.051) |
|      | 3.165   | 2.950   | 4.369   | 2.441   |
| BE9  | 0.242   | 0.154   | 0.336   | 0.123   |
|      | (0.077) | (0.053) | (0.079) | (0.051) |
|      | 3.128   | 2.920   | 4.272   | 2.424   |
| BE10 | 0.335   | 0.213   | 0.465   | 0.171   |
|      | (0.105) | (0.072) | (0.105) | (0.070) |
|      | 3.191   | 2.971   | 4.437   | 2.453   |
| BE11 | 0.308   | 0.196   | 0.428   | 0.157   |
|      | (0.097) | (0.066) | (0.097) | (0.064) |
|      | 3.180   | 2.962   | 4.408   | 2.448   |
| BE12 | 0.295   | 0.187   | 0.409   | 0.150   |
|      | (0.093) | (0.064) | (0.094) | (0.062) |
|      | 3.164   | 2.949   | 4.365   | 2.440   |
| BE13 | 0.221   | 0.141   | 0.307   | 0.113   |
|      | (0.071) | (0.048) | (0.072) | (0.046) |
|      | 3.134   | 2.925   | 4.288   | 2.427   |
| BE14 | 0.240   | 0.152   | 0.333   | 0.122   |
|      | (0.076) | (0.052) | (0.077) | (0.050) |
|      | 3.155   | 2.942   | 4.342   | 2.436   |
| T1   | 0.107   | 0.068   | 0.148   | 0.055   |
|      | (0.039) | (0.026) | (0.044) | (0.025) |
|      | 2.715   | 2.576   | 3.367   | 2.216   |
| T2   | 0.108   | 0.069   | 0.150   | 0.055   |

|    |         |         |         |         |
|----|---------|---------|---------|---------|
|    | (0.040) | (0.027) | (0.045) | (0.025) |
|    | 2.721   | 2.580   | 3.377   | 2.219   |
| T3 | 0.096   | 0.061   | 0.133   | 0.049   |
|    | (0.036) | (0.024) | (0.040) | (0.022) |
|    | 2.703   | 2.566   | 3.344   | 2.209   |
| T4 | 0.110   | 0.070   | 0.153   | 0.056   |
|    | (0.041) | (0.027) | (0.045) | (0.025) |
|    | 2.712   | 2.573   | 3.361   | 2.214   |
| C1 | 0.186   | 0.118   | 0.259   | 0.095   |
|    | (0.061) | (0.042) | (0.064) | (0.040) |
|    | 3.033   | 2.843   | 4.041   | 2.379   |
| C2 | 0.199   | 0.126   | 0.276   | 0.101   |
|    | (0.065) | (0.044) | (0.067) | (0.042) |
|    | 3.060   | 2.864   | 4.103   | 2.392   |
| C3 | 0.185   | 0.118   | 0.257   | 0.094   |
|    | (0.061) | (0.041) | (0.063) | (0.040) |
|    | 3.051   | 2.857   | 4.083   | 2.388   |
| C4 | 0.208   | 0.132   | 0.289   | 0.106   |
|    | (0.068) | (0.046) | (0.071) | (0.045) |
|    | 3.053   | 2.859   | 4.088   | 2.389   |

### Standardized Total and Indirect Effects

#### Standardized Total Effects of KSI on ETA

|    | PQ    | SQ    | SI    | P     |
|----|-------|-------|-------|-------|
|    | ----- | ----- | ----- | ----- |
| BE | 0.346 | 0.220 | 0.480 | 0.177 |
| T  | 0.134 | 0.085 | 0.186 | 0.068 |
| C  | 0.242 | 0.154 | 0.336 | 0.124 |

#### Standardized Indirect Effects of KSI on ETA

|    | PQ    | SQ    | SI    | P     |
|----|-------|-------|-------|-------|
|    | ----- | ----- | ----- | ----- |
| BE | --    | --    | --    | --    |
| T  | 0.134 | 0.085 | 0.186 | 0.068 |
| C  | 0.242 | 0.154 | 0.336 | 0.124 |

Standardized Total Effects of ETA on ETA

|    | BE    | T     | C     |
|----|-------|-------|-------|
|    | ----- | ----- | ----- |
| BE | --    | --    | --    |
| T  | 0.387 | --    | --    |
| C  | 0.700 | 0.509 | --    |

Standardized Indirect Effects of ETA on ETA

|    | BE    | T     | C     |
|----|-------|-------|-------|
|    | ----- | ----- | ----- |
| BE | --    | --    | --    |
| T  | --    | --    | --    |
| C  | 0.197 | --    | --    |

Standardized Total Effects of ETA on Y

|      | BE    | T     | C     |
|------|-------|-------|-------|
|      | ----- | ----- | ----- |
| BE1  | 0.928 | --    | --    |
| BE2  | 0.914 | --    | --    |
| BE3  | 0.885 | --    | --    |
| BE4  | 0.862 | --    | --    |
| BE5  | 0.868 | --    | --    |
| BE6  | 0.870 | --    | --    |
| BE7  | 0.725 | --    | --    |
| BE8  | 0.710 | --    | --    |
| BE9  | 0.699 | --    | --    |
| BE10 | 0.968 | --    | --    |
| BE11 | 0.891 | --    | --    |
| BE12 | 0.852 | --    | --    |
| BE13 | 0.639 | --    | --    |
| BE14 | 0.693 | --    | --    |
| T1   | 0.309 | 0.798 | --    |
| T2   | 0.313 | 0.809 | --    |
| T3   | 0.278 | 0.717 | --    |
| T4   | 0.318 | 0.821 | --    |
| C1   | 0.539 | 0.392 | 0.770 |
| C2   | 0.574 | 0.417 | 0.820 |
| C3   | 0.535 | 0.388 | 0.764 |

C4 0.602 0.438 0.861

Standardized Indirect Effects of ETA on Y

|      | BE    | T     | C     |
|------|-------|-------|-------|
|      | ----- | ----- | ----- |
| BE1  | --    | --    | --    |
| BE2  | --    | --    | --    |
| BE3  | --    | --    | --    |
| BE4  | --    | --    | --    |
| BE5  | --    | --    | --    |
| BE6  | --    | --    | --    |
| BE7  | --    | --    | --    |
| BE8  | --    | --    | --    |
| BE9  | --    | --    | --    |
| BE10 | --    | --    | --    |
| BE11 | --    | --    | --    |
| BE12 | --    | --    | --    |
| BE13 | --    | --    | --    |
| BE14 | --    | --    | --    |
| T1   | 0.309 | --    | --    |
| T2   | 0.313 | --    | --    |
| T3   | 0.278 | --    | --    |
| T4   | 0.318 | --    | --    |
| C1   | 0.539 | 0.392 | --    |
| C2   | 0.574 | 0.417 | --    |
| C3   | 0.535 | 0.388 | --    |
| C4   | 0.602 | 0.438 | --    |

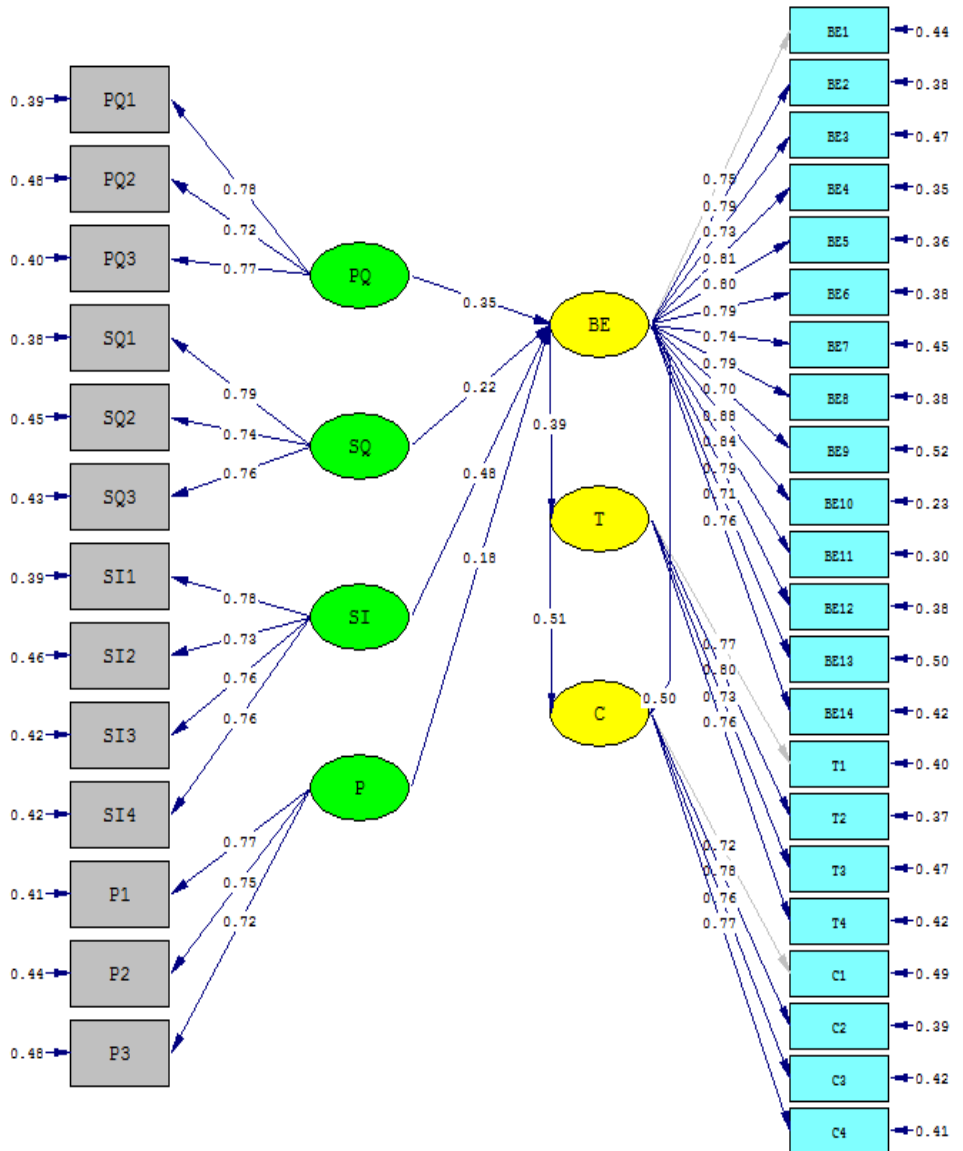
Standardized Total Effects of KSI on Y

|     | PQ    | SQ    | SI    | P     |
|-----|-------|-------|-------|-------|
|     | ----- | ----- | ----- | ----- |
| BE1 | 0.321 | 0.204 | 0.446 | 0.164 |
| BE2 | 0.316 | 0.201 | 0.439 | 0.161 |
| BE3 | 0.306 | 0.195 | 0.425 | 0.156 |
| BE4 | 0.298 | 0.189 | 0.414 | 0.152 |
| BE5 | 0.300 | 0.191 | 0.417 | 0.153 |
| BE6 | 0.301 | 0.191 | 0.418 | 0.154 |
| BE7 | 0.251 | 0.159 | 0.348 | 0.128 |
| BE8 | 0.246 | 0.156 | 0.341 | 0.125 |

|      |       |       |       |       |
|------|-------|-------|-------|-------|
| BE9  | 0.242 | 0.154 | 0.336 | 0.123 |
| BE10 | 0.335 | 0.213 | 0.465 | 0.171 |
| BE11 | 0.308 | 0.196 | 0.428 | 0.157 |
| BE12 | 0.295 | 0.187 | 0.409 | 0.150 |
| BE13 | 0.221 | 0.141 | 0.307 | 0.113 |
| BE14 | 0.240 | 0.152 | 0.333 | 0.122 |
| T1   | 0.107 | 0.068 | 0.148 | 0.055 |
| T2   | 0.108 | 0.069 | 0.150 | 0.055 |
| T3   | 0.096 | 0.061 | 0.133 | 0.049 |
| T4   | 0.110 | 0.070 | 0.153 | 0.056 |
| C1   | 0.186 | 0.118 | 0.259 | 0.095 |
| C2   | 0.199 | 0.126 | 0.276 | 0.101 |
| C3   | 0.185 | 0.118 | 0.257 | 0.094 |
| C4   | 0.208 | 0.132 | 0.289 | 0.106 |

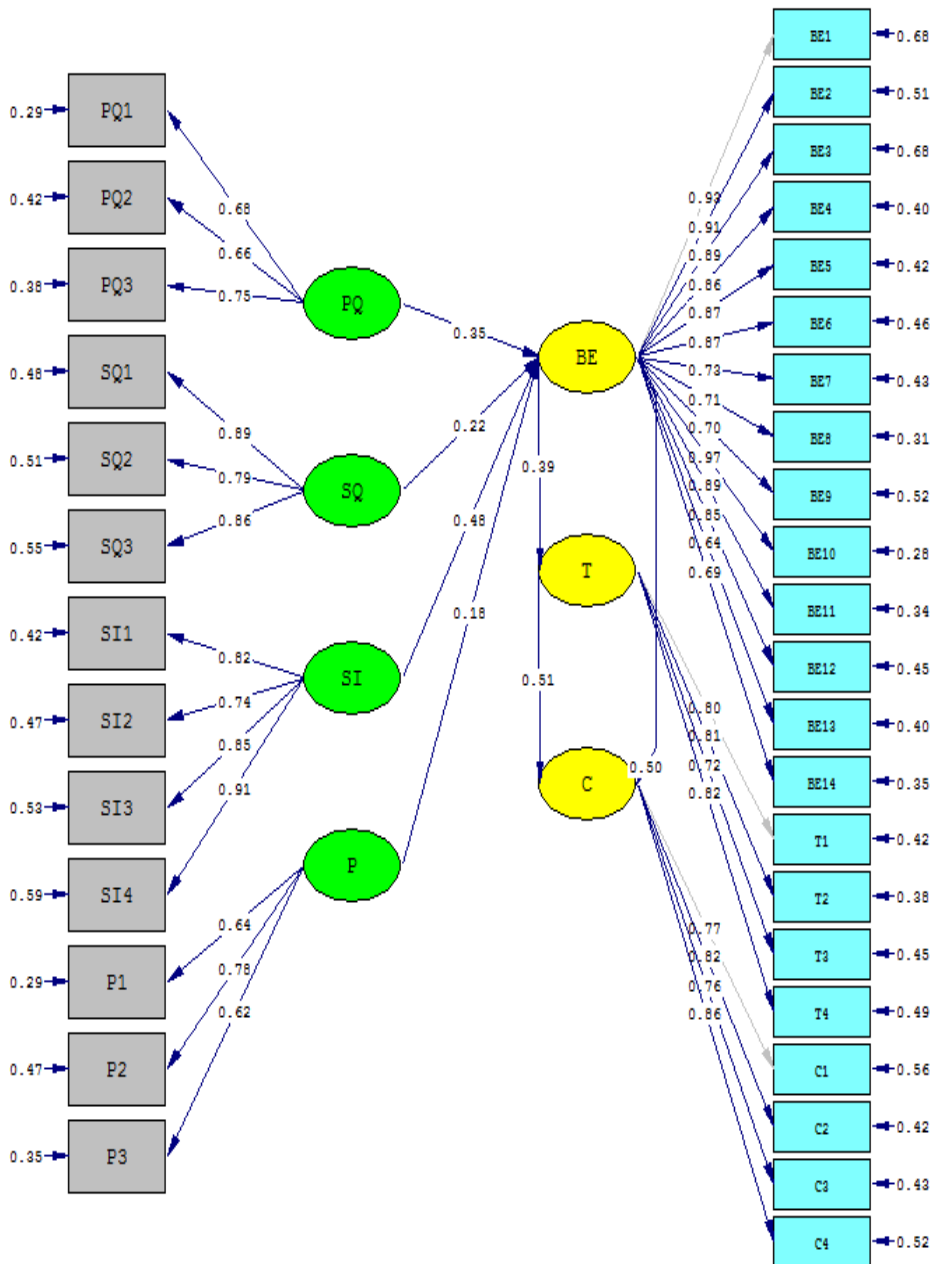
Time used: 0.296 Seconds

## Lampiran 9 Path Diagram Standardized



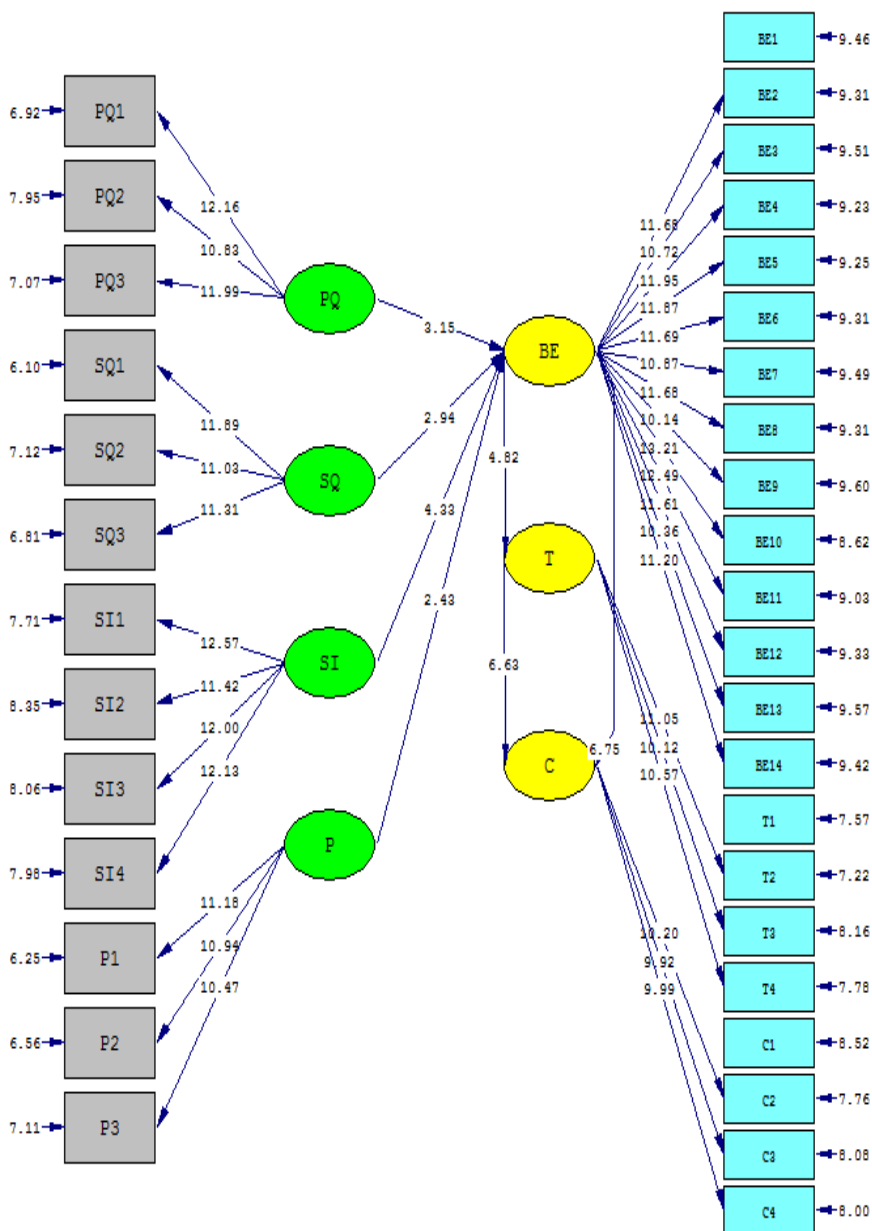
Chi-Square=2344.05, df=547, P-value=0.00000, RMSEA=0.068

## Estimates



Chi-Square=2344.05, df=547, P-value=0.00000, RMSEA=0.068

## T-Value



Chi-Square=2344.05, df=547, P-value=0.00000, RMSEA=0.068