

ORIGIN := 1
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$x_1 :=$  ( 0.0386 )  
0.0544  
0.0667  
0.1027  
0.1856  
0.2050  
0.2273  
0.2524  
0.2770  
0.3008  
0.3449  
0.4065  
0.4163  
0.5004  
0.5008  
0.5987  
0.6043  
0.6517  
0.7008  
0.7256  
0.7516  
0.7757  
0.7986  
0.8259  
0.8489  
0.8711  
0.8968  
0.9224  
0.9472  
( 0.9757 )

$\Lambda_{12} := 0.078$

$\Lambda_{21} := 0.112$

$i := 1 .. 30$

$x_{2_i} := 1 - x_{1_i}$

$$\gamma_{1_i} := \exp \left[ - \left[ \ln(x_{1_i} + \Lambda_{12} \cdot x_{2_i}) + x_{2_i} \cdot \left( \frac{\Lambda_{21}}{x_{2_i} + \Lambda_{21} \cdot x_{1_i}} - \frac{\Lambda_{12}}{x_{1_i} + \Lambda_{12} \cdot x_{2_i}} \right) \right] \right]$$

$$\gamma_{2_i} := \exp \left[ - \left[ \ln(x_{2_i} + \Lambda_{21} \cdot x_{1_i}) + x_{1_i} \cdot \left( \frac{\Lambda_{12}}{x_{1_i} + \Lambda_{12} \cdot x_{2_i}} - \frac{\Lambda_{21}}{x_{2_i} + \Lambda_{21} \cdot x_{1_i}} \right) \right] \right]$$

$$\text{Gex}_i := x_{1_i} \cdot \ln(\gamma_{1_i}) + x_{2_i} \cdot \ln(\gamma_{2_i})$$

$\gamma_1 =$

|    | 1      |
|----|--------|
| 1  | 15.239 |
| 2  | 12.413 |
| 3  | 10.81  |
| 4  | 7.775  |
| 5  | 4.644  |
| 6  | 4.237  |
| 7  | 3.848  |
| 8  | 3.486  |
| 9  | 3.191  |
| 10 | 2.949  |
| 11 | 2.585  |
| 12 | 2.205  |
| 13 | 2.154  |
| 14 | 1.802  |
| 15 | 1.801  |
| 16 | 1.516  |
| 17 | 1.502  |
| 18 | 1.398  |
| 19 | 1.305  |
| 20 | 1.264  |
| 21 | 1.223  |
| 22 | 1.189  |
| 23 | 1.159  |
| 24 | 1.125  |
| 25 | 1.1    |
| 26 | 1.077  |
| 27 | 1.054  |

$\gamma_2 =$

|    | 1     |
|----|-------|
| 1  | 1.013 |
| 2  | 1.023 |
| 3  | 1.032 |
| 4  | 1.064 |
| 5  | 1.158 |
| 6  | 1.184 |
| 7  | 1.216 |
| 8  | 1.255 |
| 9  | 1.295 |
| 10 | 1.337 |
| 11 | 1.424 |
| 12 | 1.567 |
| 13 | 1.592 |
| 14 | 1.852 |
| 15 | 1.853 |
| 16 | 2.288 |
| 17 | 2.319 |
| 18 | 2.619 |
| 19 | 3.022 |
| 20 | 3.276 |
| 21 | 3.589 |
| 22 | 3.937 |
| 23 | 4.332 |
| 24 | 4.915 |
| 25 | 5.534 |
| 26 | 6.289 |
| 27 | 7.443 |

$\text{Gex} =$

|    | 1     |
|----|-------|
| 1  | 0.117 |
| 2  | 0.159 |
| 3  | 0.188 |
| 4  | 0.266 |
| 5  | 0.405 |
| 6  | 0.43  |
| 7  | 0.457 |
| 8  | 0.485 |
| 9  | 0.508 |
| 10 | 0.529 |
| 11 | 0.559 |
| 12 | 0.588 |
| 13 | 0.591 |
| 14 | 0.603 |
| 15 | 0.602 |
| 16 | 0.581 |
| 17 | 0.579 |
| 18 | 0.554 |
| 19 | 0.518 |
| 20 | 0.495 |
| 21 | 0.469 |
| 22 | 0.442 |
| 23 | 0.413 |
| 24 | 0.375 |
| 25 | 0.339 |
| 26 | 0.302 |
| 27 | 0.254 |

|    |       |
|----|-------|
| 28 | 1.033 |
| 29 | 1.017 |
| 30 | 1.004 |

|    |        |
|----|--------|
| 28 | 9.055  |
| 29 | 11.354 |
| 30 | 15.694 |

|    |       |
|----|-------|
| 28 | 0.201 |
| 29 | 0.144 |
| 30 | 0.071 |

$$d_i := \frac{Gex_i}{x_{1_i} \cdot x_{2_i}}$$

$$z_i := x_{1_i} - x_{2_i}$$

$$F(z) := \begin{pmatrix} 1 \\ z \\ z^2 \\ z^3 \\ z^4 \\ z \end{pmatrix}$$

$$A := \text{linfit}(z, d, F) = \begin{pmatrix} 2.415 \\ -0.039 \\ 0.388 \\ -0.091 \\ 0.414 \end{pmatrix}$$

$$\ln \gamma_1 := \sum_{n=1}^5 [(-1)^{n-1} \cdot A_n] = 3.347$$

$$\ln \gamma_2 := \sum_{n=1}^5 (A_n) = 3.087$$