

## รายการอ้างอิง

### ภาษาไทย

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**ภาคผนวก**

โปรแกรมการหาค่าความน่าจะเป็นของความคลาดเคลื่อนประเภทที่ 1 และอำนาจการทดสอบ

```

C.....LAMDA SKEW 0.25..L1.FOR (0.01).....
C.....MAIN PROGRAM.....
      DOUBLE PRECISION X,XX,T,XMUE,B,XBAR1,SD1,SN,XMO,TJ1,TJ2,
* TJ3,TJ4,SKEW,SXXX1,C1,C2
      REAL KU
      COMMON/DATA/X(1000)
      COMMON/SEED/IX
      DIMENSION B(1000)
      DIMENSION SKE(3),KU(3),RLM1(3),RLM2(3),RLM3(3),RLM4(3),N(8),CTL(8)
* ,CTR(8),CTW(8),SL(8),SR(8),SW(8)

      OPEN (1,FILE='C:\FOR_TRAN\CRI01')
      OPEN (2,FILE='C:\FOR_TRAN\LAMDA5')
      OPEN (6,FILE='C:\FOR_TRAN\L1')
C.....READ DATA.....
      WRITE (*,*)'ENTER VALUE VK: = 0.0 IS TYPE I, #0 IS POWER'
      READ (*,*) VK
      DO 800 L = 1,8
      READ (1,*) N(L),CTL(L),CTR(L),CTW(L),SL(L),SR(L),SW(L)
800  CONTINUE
C.....
      DO 700 L = 1,2
      READ (2,*) SKE(L),KU(L),RLM1(L),RLM2(L),RLM3(L),RLM4(L)
700  CONTINUE
C.....START.....
C.....SET INITIAL VALUE.....
      DO 1020 KS = 1,2
      DO 1010 KN = 1,8

```

IX = 973253

EX = 100.

STD = 10.

SIGNIF = 0.01

NROUND = 1000

C.....SET INITIAL COUNTER.....

TS1 = 0

TS2 = 0

TS3 = 0

TJS1 = 0

TJS2 = 0

TJS3 = 0

TMJ1 = 0

TMJ2 = 0

TMJ3 = 0

ITS1 = 0

ITS2 = 0

ITS3 = 0

ITJS1 = 0

ITJS2 = 0

ITJS3 = 0

IMJ1 = 0

IMJ2 = 0

IMJ3 = 0

C.....

SDP = STD

VCONS = VK\*(SDP/SQRT(N(KN)))

XMUE = EX

```

C.....START.....
      DO 1005 KR = 1,NROUND

          M = N(KN)

      DO 10 I = 1,M
          CALL SKEWED(KS,RLM1,RLM2,RLM3,RLM4,EX,STD,XX)

          X(I) = XX

          B(I) = X(I)+VCONS

10    CONTINUE

      CALL XBAR_SD(XBAR1,SD1,XMO,SXXX1,M,B)

C.....STUDENT T.(T).....

      TN =M

      SN = SD1/SQRT(TN)

      T = (XBAR1-XMUE)/SN

      ST = T

      IF (ST.LT.CTL(KN)) ITS1 = ITS1+1

      IF (ST.GT.CTR(KN)) ITS2 = ITS2+1

          ST_T = ABS (ST)

      IF ( ST_T.GT.CTW(KN)) ITS3 = ITS3+1

C.....JOHNSON..(T).....

      TJ1 =XBAR1-XMUE

      TJ2 = XMO/(6*(SD1**2)*M)

      TJ3 = XMO*(TJ1**2)/(3*(SD1**4))

      TJ4 = SQRT((SD1)**2/(M))

      T_JOHN = (TJ1+TJ2+TJ3)/TJ4

      TJ = T_JOHN

      IF (TJ.LT.CTL(KN)) ITJS1 = ITJS1+1

```

IF (TJ.GT.CTR(KN)) ITJS2 = ITJS2+1

    TJ\_T = ABS(TJ)

IF ( TJ\_T.GT.CTW(KN)) ITJS3 = ITJS3+1

C.....MODIFIED JOHNSON....(T+Z)/2.....

SK = (SXXX1\*M)/((M-1)\*(M-2)\*(SD1\*\*3))

C1 = SK\*(1+2\*(ST\*\*2))/(6\*SQRT(M))

C2 = (SK\*\*2)\*(ST+2\*(ST\*\*2))/(9\*M)

TMJ = ST+C1+C2

IF (TMJ.LT.SL(KN)) IMJ1 = IMJ1+1

IF (TMJ.GT.SR(KN)) IMJ2 = IMJ2+1

    TMJ\_T = ABS(TMJ)

IF (TMJ\_T.GT.SW(KN)) IMJ3 = IMJ3+1

1005 CONTINUE

TS1 = FLOAT(ITS1)/FLOAT(NROUND)

TS2 = FLOAT(ITS2)/FLOAT(NROUND)

TS3 = FLOAT(ITS3)/FLOAT(NROUND)

TJS1 = FLOAT(ITJS1)/FLOAT(NROUND)

TJS2 = FLOAT(ITJS2)/FLOAT(NROUND)

TJS3 = FLOAT(ITJS3)/FLOAT(NROUND)

TMJ1 = FLOAT(IMJ1)/FLOAT(NROUND)

TMJ2 = FLOAT(IMJ2)/FLOAT(NROUND)

TMJ3 = FLOAT(IMJ3)/FLOAT(NROUND)

```

WRITE (6,80) VK,M,SIGNIF
80  FORMAT (2X,'VK =',F3.1,2X,'M =',I3,2X,'SIG =',F3.2)
    WRITE (6,*) '..STAT:TEST.HYPO..<.....>.....#....'
    WRITE (6,60) TS1,TS2,TS3
60  FORMAT (13X,'PT =',F6.4,10X,F6.4,10X,F6.4,/)
    WRITE (6,70) TJS1,TJS2,TJS3
70  FORMAT (13X,'PJ =',F6.4,10X,F6.4,10X,F6.4,/)
    WRITE (6,130) TMJ1,TMJ2,TMJ3
130  FORMAT (13X,'PMJ =',F6.4,10X,F6.4,10X,F6.4)
C.....
1010 CONTINUE
    WRITE (6,43)
43  FORMAT(2X,'-----')
C.....
    WRITE (6,44) KS,SKE(KS),KU(KS)
44  FORMAT (2X,'KS =',I2,3X,'SKE =',F5.2,3X,'KU =',F5.2)
    WRITE (6,43)
C.....
1020 CONTINUE
    STOP
    END
C.....COMPUTE X_BAR SD.....
    SUBROUTINE XBAR_SD(XBAR1,SD1,XMO,SXXX1,M,B)
    DOUBLE PRECISION X,SX,SXX,SXX1,XBAR1,SD1,VAR,B,
    *SXXX,SXXX1,XMO
    COMMON/DATA/X(1000)
    DIMENSION B(1000)
    SX = 0.0
    SXX = 0.0
    SXX1 = 0.0

```



```

      SXXX = 0.0
      SXXX1 = 0.0
      DO 10 I = 1,M
      SX = SX+B(I)
10  CONTINUE
      XBAR = SX/M
      XBAR1 = XBAR
      DO 20 I = 1,M
      SXX =(B(I)-XBAR1)**2
      SXX1 = SXX1+SXX

      SXXX =(B(I)-XBAR1)**3
      SXXX1 = SXXX1+SXXX
20  CONTINUE
      XMOMENT = SXXX1/(M)

      VAR =(SXX1)/(M-1)
      SD = SQRT(VAR)
      SD1 = SD
      RETURN
      END
C.....GENERATE RANDOM NUMBER.....
      SUBROUTINE RAND(IX,YFL)
      REAL YFL
      IY = IX*16807
      IF (IY.LT.0) IY = IY+2147483647+1
      YFL = IY
      YFL = YFL*0.4656613E-9
      IX = IY

```

RETURN

END

C.....GENERATE SKEWED DISTRIBUTION.....

SUBROUTINE SKEWED(KS,RLM1,RLM2,RLM3,RLM4,EX,STD,XX)

DIMENSION RLM1(3),RLM2(3),RLM3(3),RLM4(3)

DOUBLE PRECISION XX

COMMON /SEED/IX

R1 = RLM1(KS)\*STD+EX

R2 = RLM2(KS)/STD

CALL RAND(IX,YFL)

XX = R1+(((YFL\*\*RLM3(KS))-((1-YFL)\*\*RLM4(KS)))/R2)

RETURN

END

ตารางที่ ก ตาราง Ramberg กำหนดพารามิเตอร์แลมดา ของการแจกแจงแลมดาของคูเกีร์  
 จำแนกตามค่าความเบ้  $\alpha_3$  และค่าความโค้ง  $\alpha_4$  เมื่อ  $\mu = 0.0$  และ  $\sigma^2 = 1.0$

| $\alpha_3 = 0.0$  |        |         |         |         | $\alpha_3 = 0.05$ |        |         |         |         | $\alpha_3 = 0.10$ |        |         |         |         |
|-------------------|--------|---------|---------|---------|-------------------|--------|---------|---------|---------|-------------------|--------|---------|---------|---------|
| $\alpha_4$        | LAM 1  | LAM 2   | LAM 3   | LAM 4   | $\alpha_4$        | LAM 1  | LAM 2   | LAM 3   | LAM 4   | $\alpha_4$        | LAM 1  | LAM 2   | LAM 3   | LAM 4   |
| 1.8               | .0     | .5778   | 1.0000  | 1.0000  | 1.8               | -1.703 | .2861   | .0000   | .9502*  | 1.8               | -1.678 | .2835   | .0000*  | .9071*  |
| 2.0               | .0     | .4952   | .5883   | .5883   | 2.0               | -1.229 | .3122   | .0505   | .7603   | 2.0               | -1.271 | .3028   | .0412   | .7373   |
| 2.2               | .0     | .4197   | .4092   | .4092   | 2.2               | -.802  | .3314   | .1128   | .5802   | 2.2               | -.872  | .3177   | .0941   | .5700   |
| 2.4               | .0     | .3533   | .3032   | .3032   | 2.4               | -.375  | .3328   | .1876   | .3941   | 2.4               | -.515  | .3164   | .1477   | .4116   |
| 2.6               | .0     | .2949   | .2303   | .2303   | 2.6               | -.143  | .2924   | .1973   | .2605   | 2.6               | -.269  | .2863   | .1678   | .2831   |
| 2.8               | .0     | .2433   | .1765   | .1765   | 2.8               | -.083  | .2429   | .1625   | .1903   | 2.8               | -.164  | .2417   | .1486   | .2033   |
| 3.0               | .0     | .1974   | .1349   | .1349   | 3.0               | -.059  | .1975   | .1276   | .1425   | 3.0               | -.117  | .1977   | .1205   | .1503   |
| 3.2               | .0     | .1563   | .1016   | .1016   | 3.2               | -.046  | .1565   | .0974   | .1061   | 3.2               | -.092  | .1572   | .0936   | .1111   |
| 3.4               | .0     | .1191   | .0742   | .0742   | 3.4               | -.038  | .1194   | .0718   | .0770   | 3.4               | -.076  | .1203   | .0698   | .0803   |
| 3.6               | .0     | .0852   | .0512   | .0512   | 3.6               | -.033  | .0856   | .0499   | .0530   | 3.6               | -.065  | .0866   | .0490   | .0552   |
| 3.8               | .0     | .0545   | .0317   | .0317   | 3.8               | -.027  | .0548   | .0311   | .0327   | 3.8               | -.057  | .0558   | .0308   | .0342   |
| 4.0               | .0     | .0262   | .0148   | .0148   | 4.0               | -.026  | .0264   | .0146   | .0153   | 4.0               | -.049  | .0276   | .0149   | .0163   |
| 4.1               | .0     | .0128   | .0140*  | .0140*  | 4.1               | -.024  | .0132   | .0184*  | .0154*  | 4.1               | -.048  | .0142   | .0149*  | .0163*  |
| 4.2               | .0     | -.0659* | -.0363* | -.0363* | 4.2               | -.024  | .0704*  | .0380*  | .0397*  | 4.2               | -.046  | .1440*  | .0762*  | .0828*  |
| 4.3               | .0     | -.0123  | -.6706* | -.6706* | 4.3               | -.022  | -.0120  | -.6386* | -.6643* | 4.3               | -.044  | -.0109  | -.5703* | -.6174* |
| 4.4               | .0     | -.0241  | -.0130  | -.0130  | 4.4               | -.022  | -.0238  | -.0126  | -.0131  | 4.4               | -.041  | -.0227  | -.0118  | -.0127  |
| 4.6               | .0     | -.0466  | -.0246  | -.0246  | 4.6               | -.018  | -.0462  | -.0240  | -.0248  | 4.6               | -.037  | -.0452  | -.0231  | -.0247  |
| 4.8               | .0     | -.0676  | -.0350  | -.0350  | 4.8               | -.019  | -.0671  | -.0342  | -.0354* | 4.8               | -.036  | -.0661  | -.0332  | -.0354* |
| 5.0               | .0     | -.0870  | -.0443  | -.0443  | 5.0               | -.016  | -.0867  | -.0435  | -.0448* | 5.0               | -.033  | -.0857  | -.0424* | -.0450* |
| 5.2               | .0     | -.1053  | -.0528  | -.0528  | 5.2               | -.016  | -.1050  | -.0519  | -.0534* | 5.2               | -.032  | -.1040  | -.0507  | -.0537* |
| 5.4               | .0     | -.1227  | -.0606  | -.0606  | 5.4               | -.015  | -.1222  | -.0596  | -.0612  | 5.4               | -.030  | -.1213  | -.0584  | -.0616  |
| 5.6               | .0     | -.1389  | -.0677  | -.0677  | 5.6               | -.014  | -.1386  | -.0667  | -.0684  | 5.6               | -.028  | -.1375  | -.0654  | -.0688  |
| 5.8               | .0     | -.1541  | -.0742  | -.0742  | 5.8               | -.014  | -.1538  | -.0731  | -.0750  | 5.8               | -.027  | -.1530  | -.0719  | -.0755  |
| 6.0               | .0     | -.1686  | -.0802  | -.0802  | 6.0               | -.013  | -.1682  | -.0791  | -.0810  | 6.0               | -.027  | -.1674* | -.0778  | -.0816  |
| 6.2               | .0     | -.1823  | -.0858  | -.0858  | 6.2               | -.012  | -.1820  | -.0847  | -.0866  | 6.2               | -.025  | -.1811  | -.0834  | -.0872  |
| 6.4               | .0     | -.1954  | -.0910  | -.0910  | 6.4               | -.012  | -.1950  | -.0899  | -.0918  | 6.4               | -.024  | -.1943  | -.0886  | -.0925  |
| 6.6               | .0     | -.2077  | -.0958  | -.0958  | 6.6               | -.012  | -.2074  | -.0947  | -.0967  | 6.6               | -.023  | -.2066  | -.0934  | -.0973  |
| 6.8               | .0     | -.2194  | -.1003  | -.1003  | 6.8               | -.011  | -.2192  | -.0992  | -.1012  | 6.8               | -.023  | -.2184  | -.0979  | -.1019  |
| 7.0               | .0     | -.2306  | -.1045  | -.1045  | 7.0               | -.011  | -.2303  | -.1034  | -.1054  | 7.0               | -.022  | -.2297  | -.1021  | -.1062  |
| 7.2               | .0     | -.2414  | -.1085  | -.1085  | 7.2               | -.010  | -.2411  | -.1074  | -.1094  | 7.2               | -.021  | -.2405  | -.1061  | -.1102  |
| 7.4               | .0     | -.2518  | -.1123  | -.1123  | 7.4               | -.010  | -.2515  | -.1112  | -.1132  | 7.4               | -.020  | -.2507  | -.1099  | -.1139  |
| 7.6               | .0     | -.2615  | -.1158  | -.1158  | 7.6               | -.009  | -.2613  | -.1147  | -.1167  | 7.6               | -.020  | -.2606  | -.1134  | -.1175  |
| 7.8               | .0     | -.2709  | -.1191  | -.1191  | 7.8               | -.009  | -.2707  | -.1180  | -.1201  | 7.8               | -.020  | -.2699  | -.1167  | -.1208  |
| 8.0               | .0     | -.2800  | -.1223  | -.1223  | 8.0               | -.008  | -.2797  | -.1212  | -.1232  | 8.0               | -.019  | -.2791  | -.1199  | -.1240  |
| 8.2               | .0     | -.2887  | -.1253  | -.1253  | 8.2               | -.006  | -.2884  | -.1242  | -.1262  | 8.2               | -.019  | -.2878  | -.1229  | -.1270  |
| 8.4               | .0     | -.2969  | -.1281  | -.1281  | 8.4               | -.006  | -.2963  | -.1270  | -.1291  | 8.4               | -.018  | -.2961  | -.1258  | -.1298  |
| 8.6               | .0     | -.3050  | -.1308  | -.1308  | 8.6               | -.005  | -.3048  | -.1297  | -.1318  | 8.6               | -.017  | -.3041  | -.1285  | -.1325  |
| 8.8               | .0     | -.3128  | -.1334  | -.1334  | 8.8               | -.005  | -.3125  | -.1323  | -.1343  | 8.8               | -.017  | -.3119  | -.1311  | -.1351  |
| 9.0               | .0     | -.3203  | -.1359  | -.1359  | 9.0               | -.004  | -.3201  | -.1348  | -.1368  | 9.0               | -.017  | -.3193  | -.1335  | -.1376  |
| $\alpha_3 = 0.15$ |        |         |         |         | $\alpha_3 = 0.20$ |        |         |         |         | $\alpha_3 = 0.25$ |        |         |         |         |
| $\alpha_4$        | LAM 1  | LAM 2   | LAM 3   | LAM 4   | $\alpha_4$        | LAM 1  | LAM 2   | LAM 3   | LAM 4   | $\alpha_4$        | LAM 1  | LAM 2   | LAM 3   | LAM 4   |
| 1.8               | -1.655 | .2811   | .0000*  | .8700*  | 2.0               | -1.387 | .2841   | .0212   | .7090   | 2.0               | -1.465 | .2748   | .0105   | .7034   |
| 2.0               | -1.323 | .2934   | .0314   | .7204   | 2.2               | -1.011 | .2947   | .0638   | .5571   | 2.2               | -1.084 | .2847   | .0506   | .5548   |
| 2.2               | -.940  | .3056   | .0782   | .5623   | 2.4               | -.706  | .2919   | .1013   | .4246   | 2.4               | -.790  | .2820   | .0843   | .4294   |
| 2.4               | -.617  | .3031   | .1215   | .4194   | 2.6               | -.471  | .2718   | .1233   | .3126   | 2.6               | -.558  | .2650   | .1062   | .3226   |
| 2.6               | -.376  | .2791   | .1435   | .2994   | 2.8               | -.322  | .2374   | .1221   | .2273   | 2.8               | -.398  | .2349   | .1099   | .2385   |
| 2.8               | -.244  | .2397   | .1350   | .2156   | 3.0               | -.237  | .1983   | .1065   | .1672   | 3.0               | -.298  | .1987   | .0996   | .1763   |
| 3.0               | -.177  | .1980   | .1135   | .1586   | 3.2               | -.187  | .1599   | .0866   | .1230   | 3.2               | -.237  | .1619   | .0831   | .1300   |
| 3.2               | -.138  | .1584   | .0901   | .1167   | 3.4               | -.154  | .1240   | .0667   | .0889   | 3.4               | -.196  | .1266   | .0653   | .0942   |
| 3.4               | -.114  | .1219   | .0682   | .0843   | 3.6               | -.132  | .0908   | .0482   | .0615   | 3.6               | -.167  | .0937   | .0481   | .0656   |
| 3.6               | -.098  | .0884   | .0485   | .0581   | 3.8               | -.116  | .0601   | .0314   | .0389   | 3.8               | -.147  | .0632   | .0321   | .0421   |
| 3.8               | -.086  | .0577   | .0310   | .0363   | 4.0               | -.103  | .0318   | .0164   | .0198   | 4.0               | -.131  | .0351   | .0176   | .0224   |
| 4.0               | -.076  | .0294   | .0155   | .0178   | 4.1               | -.097  | .0185   | -.9467* | .0113   | 4.1               | -.126  | .0217   | .0108   | .0136   |
| 4.1               | -.073  | .0160   | .8378*  | .9564*  | 4.2               | -.093  | .5707*  | .2894*  | .3429*  | 4.2               | -.118  | .8889*  | .4408*  | .5667*  |
| 4.2               | -.069  | .3217*  | .1667*  | .1890*  | 4.3               | -.089  | -.6641* | -.3342* | -.3929* | 4.3               | -.113  | -.3476* | -.1713* | -.2103* |
| 4.3               | -.066  | -.9113* | -.4680* | -.5278* | 4.4               | -.085  | -.0185  | -.9261* | -.0108  | 4.4               | -.108  | -.0154  | -.7540* | -.9175* |
| 4.4               | -.063  | -.0210  | -.0107  | -.0120  | 4.6               | -.079  | -.0410  | -.0202  | -.0233  | 4.6               | -.099  | -.0380  | -.0184  | -.0220  |
| 4.6               | -.056  | -.0435  | -.0218  | -.0242  | 4.8               | -.074  | -.0622  | -.0302  | -.0345  | 4.8               | -.094  | -.0591  | -.0282  | -.0334  |
| 4.8               | -.055  | -.0644  | -.0318  | -.0351  | 5.0               | -.069  | -.0818  | -.0392  | -.0444  | 5.0               | -.087  | -.0790  | -.0373  | -.0436  |
| 5.0               | -.051  | -.0842  | -.0410  | -.0449  | 5.2               | -.065  | -.1003  | -.0475  | -.0534  | 5.2               | -.082  | -.0974  | -.0455  | -.0527  |
| 5.2               | -.048  | -.1025  | -.0493  | -.0537  | 5.4               | -.061  | -.1176  | -.0551  | -.0615  | 5.4               | -.077  | -.1149  | -.0531  | -.0610  |
| 5.4               | -.045  | -.1198  | -.0569  | -.0617  | 5.6               | -.058  | -.1339  | -.0621  | -.0689  | 5.6               | -.073  | -.1312  | -.0601  | -.0685  |
| 5.6               | -.043  | -.1361  | -.0639  | -.0690  | 5.8               | -.055  | -.1494  | -.0686  | -.0757  | 5.8               | -.070  | -.1467  | -.0665  | -.0754  |
| 5.8               | -.042  | -.1514  | -.0703  | -.0757  | 6.0               | -.053  | -.1639  | -.0745  | -.0819  | 6.0               | -.067  | -.1613  | -.0725  | -.0817  |
| 6.0               | -.040  | -.1660  | -.0763  | -.0819  | 6.2               | -.051  | -.1778  | -.0801  | -.0877  | 6.2               | -.064  | -.1753  | -.0781  | -.0876  |
| 6.2               | -.038  | -.1798  | -.0819  | -.0876  | 6.4               | -.049  | -.1909  | -.0853  | -.0930  | 6.4               | -.062  | -.1885  | -.0833  | -.0930  |
| 6.4               | -.037  | -.1928  | -.0870  | -.0929  | 6.6               | -.047  | -.2034  | -.0901  | -.0980  | 6.6               | -.059  | -.2010  | -.0882  | -.0980  |
| 6.6               | -.035  | -.2053  | -.0919  | -.0978  | 6.8               | -.045  | -.2153  | -.0947  | -.1026  | 6.8               | -.058  | -.2129  | -.0927  | -.1027  |
| 6.8               | -.034  | -.2172  | -.0964  | -.1024  | 7.0               | -.044  | -.2265  | -.0989  | -.1069  | 7.0               | -.055  | -.2242  | -.0970  | -.1070  |
| 7.0               | -.033  | -.2284  | -.1006  | -.1067  | 7.2               | -.043  | -.2374  | -.1029  | -.1110  | 7.2               | -.054  | -.2350  | -.1010  | -.1111  |
| 7.2               | -.032  | -.2392  | -.1046  | -.1107  | 7.4               | -.041  | -.2477  | -.1067  | -.1148  | 7.4               | -.052  | -.2455  | -.1048  | -.1150  |
| 7.4               | -.031  | -.2496  | -.1084  | -.1145  | 7.6               | -.040  | -.2577  | -.1103  | -.1184  | 7.6               | -.051  | -.2554  | -.1084  | -.1186  |
| 7.6               | -.030  | -.2593  | -.1119  | -.1180  | 7.8               | -.039  | -.2671  | -.1136  | -.1218  | 7.8               | -.049  | -.2649  | -.1118  | -.1220  |
| 7.8               | -.029  | -.2688  | -.1153  | -.1214  | 8.0               | -.038  | -.2762  | -.1168  | -.1250  | 8.0               | -.048  | -.2742  | -.1151  | -.1252  |
| 8.0               | -.028  | -.2780  | -.1185  | -.1246  | 8.2               | -.037  | -.2850  | -.1199  | -.1280  | 8.2               | -.047  | -.2829  | -.1181  | -.1283  |
| 8.2               | -.028  | -.2866  | -.1215  | -.1276  | 8.4               | -.036  | -.2935  | -.1228  | -.1309  | 8.4               | -.046  | -.2914  | -.1210  | -.1312  |
| 8.4               | -.027  | -.2948  | -.1243  | -.1304  | 8.6               | -.035  | -.3014  | -.1255  | -.1336  | 8.6               | -.044  | -.2995  | -.1238  | -.1339  |
| 8.6               | -.027  | -.3031  | -.1271  | -.1332  | 8.8               | -.035  | -.3092  | -.1281  | -.1362  | 8.8               | -.044  | -.3072  | -.1264  | -.1365  |
| 8.8               | -.026  | -.3108  | -.1297  | -.1357  | 9.0               | -.034  | -.3168  | -.1306  | -.1387  | 9.0               | -.043  | -.3147  | -.1289  | -.1390  |
| 9.0               | -.025  | -.3183  | -.1322  | -.1382  | 9.2               | -.034  | -.3241  | -.1330  | -.1411  | 9.2               | -.042  | -.3220  | -.1313  | -.1414  |

ตารางที่ ก (ต่อ)

| $\alpha_3 = 0.30$ |        |         |         |         | $\alpha_3 = 0.35$ |        |         |         |         | $\alpha_3 = 0.40$ |        |         |         |         |
|-------------------|--------|---------|---------|---------|-------------------|--------|---------|---------|---------|-------------------|--------|---------|---------|---------|
| $\alpha_4$        | LAM 1  | LAM 2   | LAM 3   | LAM 4   | $\alpha_4$        | LAM 1  | LAM 2   | LAM 3   | LAM 4   | $\alpha_4$        | LAM 1  | LAM 2   | LAM 3   | LAM 4   |
| 2.0               | -1.550 | .2660   | .0000   | .7020   | 2.0               | -1.539 | .2639   | .0000*  | .6836*  | 2.2               | -1.354 | .2582   | .0129   | .5683   |
| 2.2               | -1.164 | .2755   | .0380   | .5556   | 2.2               | -1.252 | .2668   | .0256   | .5599   | 2.4               | -1.043 | .2580   | .0430   | .4500   |
| 2.4               | -.871  | .2733   | .0695   | .4348   | 2.4               | -.955  | .2653   | .0559   | .4415   | 2.6               | -.808  | .2473   | .0648   | .3527   |
| 2.6               | -.642  | .2586   | .0911   | .3324   | 2.6               | -.724  | .2528   | .0775   | .3423   | 2.8               | -.627  | .2273   | .0767   | .2720   |
| 2.8               | -.474  | .2323   | .0983   | .2495   | 2.8               | -.550  | .2298   | .0873   | .2606   | 3.0               | -.494  | .2000   | .0782   | .2069   |
| 3.0               | -.362  | .1991   | .0925   | .1859   | 3.0               | -.427  | .1996   | .0854   | .1961   | 3.2               | -.400  | .1690   | .0718   | .1555   |
| 3.2               | -.288  | .1641   | .0796   | .1377   | 3.2               | -.343  | .1665   | .0750   | .1462   | 3.4               | -.333  | .1371   | .0609   | .1149   |
| 3.4               | -.239  | .1298   | .0640   | .1003   | 3.4               | -.285  | .1333   | .0625   | .1072   | 3.6               | -.284  | .1060   | .0482   | .0824   |
| 3.6               | -.204  | .0973   | .0481   | .0704   | 3.6               | -.243  | .1014   | .0482   | .0760   | 3.8               | -.248  | .0764   | .0351   | .0558   |
| 3.8               | -.179  | .0671   | .0330   | .0460   | 3.8               | -.213  | .0714   | .0340   | .0505   | 4.0               | -.222  | .0485   | .0223   | .0337   |
| 4.0               | -.160  | .0389   | .0190   | .0255   | 4.0               | -.191  | .0434   | .0206   | .0293   | 4.2               | -.200  | .0224   | .0103   | .0149   |
| 4.2               | -.144  | .0127   | .0175*  | .0035*  | 4.2               | -.172  | .0173   | .0158   | .0112   | 4.3               | -.190  | .0100   | .0597*  | .6521*  |
| 4.3               | -.138  | .0789*  | .0380*  | .0489*  | 4.3               | -.163  | .0470*  | .2293*  | .3090*  | 4.4               | -.182  | -.0397* | .0182*  | -.0254* |
| 4.4               | -.131  | -.0116  | -.5554* | -.7057* | 4.4               | -.156  | -.7105* | -.3332* | -.4431* | 4.5               | -.174  | -.0136  | -.6204* | -.8533* |
| 4.5               | -.129  | -.0231  | -.0110  | -.0139  | 4.5               | -.151  | -.0182  | -.0723* | -.0115  | 4.6               | -.166  | -.0248  | -.0113  | -.0153  |
| 4.6               | -.121  | -.0343  | -.0163  | -.0203  | 4.6               | -.142  | -.0298  | -.0139  | -.0180  | 4.8               | -.155  | -.0462  | -.0209  | -.0277  |
| 4.8               | -.113  | -.0554  | -.0260  | -.0319  | 4.8               | -.132  | -.0511  | -.0236  | -.0300  | 5.0               | -.146  | -.0662  | -.0297  | -.0387  |
| 5.0               | -.105  | -.0752  | -.0350  | -.0423  | 5.0               | -.124  | -.0710  | -.0325  | -.0407  | 5.2               | -.136  | -.0850  | -.0379  | -.0485  |
| 5.2               | -.100  | -.0939  | -.0432  | -.0517  | 5.2               | -.117  | -.0898  | -.0407  | -.0503  | 5.4               | -.129  | -.1027  | -.0455  | -.0574  |
| 5.4               | -.094  | -.1114  | -.0508  | -.0601  | 5.4               | -.110  | -.1074  | -.0483  | -.0589  | 5.6               | -.122  | -.1194  | -.0525  | -.0654  |
| 5.6               | -.089  | -.1279  | -.0578  | -.0678  | 5.6               | -.105  | -.1240  | -.0553  | -.0668  | 5.8               | -.115  | -.1352  | -.0591  | -.0727  |
| 5.8               | -.085  | -.1435  | -.0643  | -.0748  | 5.8               | -.100  | -.1396  | -.0618  | -.0739  | 6.0               | -.111  | -.1501  | -.0651  | -.0794  |
| 6.0               | -.081  | -.1582  | -.0703  | -.0812  | 6.0               | -.096  | -.1545  | -.0678  | -.0805  | 6.2               | -.106  | -.1643  | -.0708  | -.0856  |
| 6.2               | -.078  | -.1722  | -.0759  | -.0872  | 6.2               | -.091  | -.1685  | -.0735  | -.0865  | 6.4               | -.102  | -.1778  | -.0768  | -.0913  |
| 6.4               | -.075  | -.1854  | -.0811  | -.0927  | 6.4               | -.088  | -.1818  | -.0787  | -.0921  | 6.6               | -.098  | -.1906  | -.0811  | -.0966  |
| 6.6               | -.072  | -.1979  | -.0860  | -.0977  | 6.6               | -.085  | -.1945  | -.0836  | -.0973  | 6.8               | -.094  | -.2026  | -.0857  | -.1014  |
| 6.8               | -.069  | -.2100  | -.0906  | -.1025  | 6.8               | -.082  | -.2067  | -.0883  | -.1021  | 7.0               | -.091  | -.2142  | -.0901  | -.1060  |
| 7.0               | -.067  | -.2214  | -.0949  | -.1069  | 7.0               | -.079  | -.2181  | -.0926  | -.1066  | 7.2               | -.089  | -.2253  | -.0942  | -.1103  |
| 7.2               | -.065  | -.2325  | -.0990  | -.1111  | 7.2               | -.077  | -.2291  | -.0967  | -.1108  | 7.4               | -.086  | -.2359  | -.0981  | -.1143  |
| 7.4               | -.063  | -.2427  | -.1028  | -.1149  | 7.4               | -.074  | -.2396  | -.1006  | -.1147  | 7.6               | -.083  | -.2459  | -.1018  | -.1180  |
| 7.6               | -.061  | -.2528  | -.1064  | -.1186  | 7.6               | -.072  | -.2496  | -.1042  | -.1184  | 7.8               | -.081  | -.2558  | -.1053  | -.1216  |
| 7.8               | -.060  | -.2623  | -.1098  | -.1220  | 7.8               | -.070  | -.2593  | -.1077  | -.1219  | 8.0               | -.079  | -.2650  | -.1086  | -.1249  |
| 8.0               | -.058  | -.2716  | -.1131  | -.1253  | 8.0               | -.068  | -.2685  | -.1109  | -.1252  | 8.2               | -.077  | -.2741  | -.1118  | -.1281  |
| 8.2               | -.056  | -.2805  | -.1162  | -.1284  | 8.2               | -.066  | -.2775  | -.1141  | -.1283  | 8.4               | -.075  | -.2827  | -.1148  | -.1311  |
| 8.4               | -.055  | -.2889  | -.1191  | -.1313  | 8.4               | -.065  | -.2860  | -.1170  | -.1313  | 8.6               | -.073  | -.2908  | -.1176  | -.1339  |
| 8.6               | -.054  | -.2971  | -.1219  | -.1341  | 8.6               | -.064  | -.2942  | -.1198  | -.1341  | 8.8               | -.072  | -.2988  | -.1203  | -.1366  |
| 8.8               | -.053  | -.3050  | -.1246  | -.1367  | 8.8               | -.062  | -.3020  | -.1225  | -.1367  | 9.0               | -.070  | -.3064  | -.1229  | -.1391  |
| 9.0               | -.052  | -.3125  | -.1271  | -.1392  | 9.0               | -.060  | -.3096  | -.1251  | -.1392  | 9.2               | -.069  | -.3139  | -.1254  | -.1416  |
| 9.2               | -.051  | -.3197  | -.1295  | -.1416  | 9.2               | -.059  | -.3172  | -.1276  | -.1417  | 9.4               | -.067  | -.3210  | -.1278  | -.1439  |
| $\alpha_3 = 0.45$ |        |         |         |         | $\alpha_3 = 0.50$ |        |         |         |         | $\alpha_3 = 0.55$ |        |         |         |         |
| $\alpha_4$        | LAM 1  | LAM 2   | LAM 3   | LAM 4   | $\alpha_4$        | LAM 1  | LAM 2   | LAM 3   | LAM 4   | $\alpha_4$        | LAM 1  | LAM 2   | LAM 3   | LAM 4   |
| 2.2               | -1.471 | .2500   | .0000   | .5812   | 2.4               | -1.245 | .2445   | .0178   | .4788   | 2.4               | -1.370 | .2379   | .4463*  | .4931   |
| 2.4               | -1.134 | .2511   | .0305   | .4608   | 2.6               | -.987  | .2376   | .0410   | .3770   | 2.6               | -1.087 | .2331   | .0292   | .3920   |
| 2.6               | -.894  | .2424   | .0528   | .3641   | 2.8               | -.790  | .2225   | .0561   | .2969   | 2.8               | -.878  | .2202   | .0459   | .3109   |
| 2.8               | -.707  | .2248   | .0663   | .2840   | 3.0               | -.639  | .2006   | .0630   | .2307   | 3.0               | -.716  | .2009   | .0551   | .2440   |
| 3.0               | -.565  | .2003   | .0707   | .2184   | 3.2               | -.525  | .1742   | .0625   | .1768   | 3.2               | -.593  | .1767   | .0572   | .1889   |
| 3.2               | -.460  | .1716   | .0674   | .1657   | 3.4               | -.444  | .1454   | .0566   | .1332   | 3.4               | -.499  | .1497   | .0538   | .1438   |
| 3.4               | -.384  | .1412   | .0590   | .1236   | 3.6               | -.376  | .1163   | .0476   | .0979   | 3.6               | -.428  | .1217   | .0467   | .1070   |
| 3.6               | -.329  | .1110   | .0480   | .0897   | 3.8               | -.329  | .0877   | .0469   | .0689   | 3.8               | -.372  | .0940   | .0367   | .0767   |
| 3.8               | -.287  | .0818   | .0361   | .0619   | 4.0               | -.290  | .0604   | .0259   | .0447   | 4.0               | -.330  | .0670   | .0275   | .0514   |
| 4.0               | -.255  | .0542   | .0241   | .0388   | 4.2               | -.262  | .0345   | .0149   | .0243   | 4.2               | -.298  | .0413   | .0172   | .0301   |
| 4.2               | -.230  | .0282   | .0126   | .0193   | 4.3               | -.244  | .0221   | .0582*  | .0152   | 4.4               | -.265  | .0170   | .7149*  | .0118   |
| 4.3               | -.221  | .0158   | .7045*  | .0106   | 4.4               | -.238  | .0101   | .4383*  | .6815*  | 4.5               | -.257  | .5355*  | .2258*  | .3644*  |
| 4.4               | -.208  | .4102*  | .1833*  | .2691*  | 4.5               | -.228  | -.1612* | -.0700* | -.1066* | 4.6               | -.247  | -.5954* | -.2515* | -.3975* |
| 4.5               | -.200  | -.7861* | -.3505* | -.5065* | 4.6               | -.219  | -.0128  | -.5570* | -.8334* | 4.7               | -.237  | -.0169  | -.7160* | -.0111  |
| 4.6               | -.192  | -.0191  | -.8511* | -.0121  | 4.8               | -.202  | -.0344  | -.0149  | -.0216  | 4.8               | -.227  | -.0276  | -.0117  | -.0178  |
| 4.8               | -.178  | -.0406  | -.0180  | -.0249  | 5.0               | -.188  | -.0546  | -.0236  | -.0333  | 5.0               | -.213  | -.0480  | -.0203  | -.0300  |
| 5.0               | -.165  | -.0607  | -.0248  | -.0362  | 5.2               | -.177  | -.0737  | -.0317  | -.0438  | 5.2               | -.200  | -.0671  | -.0283  | -.0408  |
| 5.2               | -.157  | -.0796  | -.0349  | -.0464  | 5.4               | -.167  | -.0917  | -.0393  | -.0532  | 5.4               | -.187  | -.0852  | -.0359  | -.0505  |
| 5.4               | -.147  | -.0975  | -.0425  | -.0555  | 5.6               | -.157  | -.1087  | -.0464  | -.0617  | 5.6               | -.177  | -.1024  | -.0430  | -.0593  |
| 5.6               | -.140  | -.1142  | -.0495  | -.0637  | 5.8               | -.150  | -.1246  | -.0529  | -.0694  | 5.8               | -.165  | -.1184  | -.0495  | -.0672  |
| 6.0               | -.132  | -.1302  | -.0561  | -.0712  | 6.0               | -.142  | -.1398  | -.0591  | -.0764  | 6.0               | -.161  | -.1338  | -.0557  | -.0745  |
| 6.2               | -.127  | -.1453  | -.0622  | -.0781  | 6.2               | -.137  | -.1542  | -.0648  | -.0829  | 6.2               | -.153  | -.1483  | -.0615  | -.0811  |
| 6.4               | -.121  | -.1595  | -.0679  | -.0844  | 6.4               | -.131  | -.1679  | -.0702  | -.0889  | 6.4               | -.147  | -.1620  | -.0669  | -.0872  |
| 6.6               | -.116  | -.1731  | -.0733  | -.0902  | 6.6               | -.126  | -.1809  | -.0753  | -.0944  | 6.6               | -.141  | -.1753  | -.0721  | -.0929  |
| 6.8               | -.112  | -.1860  | -.0783  | -.0956  | 6.8               | -.122  | -.1933  | -.0800  | -.0995  | 6.8               | -.136  | -.1878  | -.0769  | -.0981  |
| 7.0               | -.108  | -.1983  | -.0830  | -.1006  | 7.0               | -.117  | -.2050  | -.0845  | -.1042  | 7.0               | -.131  | -.1997  | -.0814  | -.1030  |
| 7.2               | -.104  | -.2098  | -.0874  | -.1052  | 7.2               | -.114  | -.2163  | -.0887  | -.1087  | 7.2               | -.127  | -.2111  | -.0857  | -.1075  |
| 7.4               | -.101  | -.2211  | -.0916  | -.1096  | 7.4               | -.110  | -.2270  | -.0927  | -.1128  | 7.4               | -.123  | -.2218  | -.0897  | -.1117  |
| 7.6               | -.097  | -.2316  | -.0955  | -.1136  | 7.6               | -.107  | -.2374  | -.0965  | -.1167  | 7.6               | -.119  | -.2322  | -.0935  | -.1157  |
| 7.8               | -.095  | -.2419  | -.0992  | -.1175  | 7.8               | -.104  | -.2473  | -.1001  | -.1204  | 7.8               | -.115  | -.2422  | -.0972  | -.1194  |
| 8.0               | -.092  | -.2518  | -.1028  | -.1211  | 8.0               | -.101  | -.2567  | -.1035  | -.1238  | 8.0               | -.113  | -.2519  | -.1006  | -.1230  |
| 8.2               | -.090  | -.2611  | -.1061  | -.1245  | 8.2               | -.098  | -.2659  | -.1067  | -.1271  | 8.2               | -.110  | -.2610  | -.1039  | -.1263  |
| 8.4               | -.088  | -.2702  | -.1093  | -.1277  | 8.4               | -.095  | -.2745  | -.1098  | -.1301  | 8.4               | -.107  | -.2698  | -.1070  | -.1294  |
| 8.6               | -.085  | -.2789  | -.1124  | -.1307  | 8.6               | -.094  | -.2830  | -.1127  | -.1331  | 8.6               | -.104  | -.2784  | -.1100  | -.1324  |
| 8.8               | -.084  | -.2871  | -.1152  | -.1336  | 8.8               | -.091  | -.2910  | -.1155  | -.1358  | 8.8               | -.102  | -.2864  | -.1128  | -.1352  |
| 9.0               | -.081  | -.2952  | -.1180  | -.1363  | 9.0               | -.089  | -.2986  | -.1181  | -.1384  | 9.0               | -.100  | -.2943  | -.1155  | -.1379  |
| 9.2               | -.080  | -.3029  | -.1206  | -.1389  | 9.2               | -.088  | -.3064  | -.1207  | -.1410  | 9.2               | -.097  | -.3019  | -.1181  | -.1404  |
| 9.4               | -.078  | -.3102  | -.1231  | -.1413  | 9.4               | -.086  | -.3134  | -.1231  | -.1433  | 9.4               | -.095  | -.3092  | -.1206  | -.1428  |
| 9.6               | -.076  | -.3176  | -.1256  | -.1437  | 9.6               | -.084  | -.3206  | -.1255  | -.1456  | 9.6               | -.094  | -.3164  | -.1230  | -.1452  |



ตารางที่ ก (ต่อ)

| α <sub>3</sub> = 1.20 |        |         |         |         | α <sub>3</sub> = 1.30 |        |         |          |         | α <sub>3</sub> = 1.40 |        |         |         |         |
|-----------------------|--------|---------|---------|---------|-----------------------|--------|---------|----------|---------|-----------------------|--------|---------|---------|---------|
| α <sub>4</sub>        | LAN 1  | LAN 2   | LAN 3   | LAN 4   | α <sub>4</sub>        | LAN 1  | LAN 2   | LAN 3    | LAN 4   | α <sub>4</sub>        | LAN 1  | LAN 2   | LAN 3   | LAN 4   |
| 4.2                   | -1.183 | .1407   | -.0000* | -.1997  | 4.6                   | -1.156 | .1244   | -.0000*  | -.1679  | 5.0                   | -1.132 | -.1092  | -.0000* | -.1411  |
| 4.4                   | -1.083 | .1278   | -.5096* | -.1675  | 4.8                   | -1.084 | .1129   | -.3174*  | -.1435  | 5.2                   | -1.106 | -.1011  | -.0787* | -.1268  |
| 4.6                   | -.965  | .1113   | -.9968* | -.1329  | 5.0                   | -.975  | .0968   | -.7225*  | -.1130  | 5.4                   | -1.001 | -.0855  | -.4546* | -.0991  |
| 4.8                   | -.870  | .0941   | -.0122  | -.1036  | 5.2                   | -.886  | .0802   | -.9035*  | -.0870  | 5.6                   | -.916  | -.0697  | -.6296* | -.0754  |
| 5.0                   | -.792  | .0764   | -.0124  | -.0784  | 5.4                   | -.812  | .0634   | -.9148*  | -.0645  | 5.8                   | -.844  | -.0538  | -.6530* | -.0547  |
| 5.2                   | -.723  | .0586   | -.0112  | -.0565  | 5.6                   | -.749  | .0466   | -.7959*  | -.0447  | 6.0                   | -.782  | -.0379  | -.5603* | -.0365  |
| 5.4                   | -.668  | .0408   | -.8705* | -.0372  | 5.8                   | -.695  | .0300   | -.5783*  | -.0273  | 6.2                   | -.729  | -.0222  | -.3785* | -.0204  |
| 5.6                   | -.615  | .0233   | -.5411* | -.0202  | 6.0                   | -.604  | .0286*  | -.66195* | -.0239* | 6.3                   | -.706  | -.0145  | -.2611* | -.0130  |
| 5.7                   | -.597  | .0146   | -.3525* | -.0124  | 6.1                   | -.617  | -.0446* | -.0100*  | -.0375* | 6.4                   | -.683  | -.6822* | -.1292* | -.5987* |
| 5.8                   | -.577  | .6088*  | -.1515* | -.5050* | 6.2                   | -.616  | -.0526* | -.0118*  | -.0442* | 6.5                   | -.660  | -.1226* | -.0244* | -.1052* |
| 5.9                   | -.558  | -.2319* | -.0594* | -.1884* | 6.3                   | -.585  | -.0104  | -.2450*  | -.8504* | 6.6                   | -.643  | -.8266* | -.1702* | -.6968* |
| 6.0                   | -.562  | -.0962* | -.0245* | -.0784* | 6.4                   | -.572  | -.0182  | -.4399*  | -.0146  | 6.8                   | -.607  | -.0230  | -.5060* | -.0187  |
| 6.2                   | -.508  | -.0268  | -.7343* | -.0206  | 6.6                   | -.535  | -.0333  | -.8469*  | -.0333  | 7.0                   | -.575  | -.0373  | -.8670* | -.0293  |
| 6.4                   | -.481  | -.0424  | -.0120  | -.0315  | 6.8                   | -.510  | -.0480  | -.0127   | -.0360  | 7.2                   | -.547  | -.0510  | -.0124  | -.0389  |
| 6.6                   | -.454  | -.0575  | -.0168  | -.0414  | 7.0                   | -.485  | -.0622  | -.0170   | -.0453  | 7.4                   | -.521  | -.0645  | -.0163  | -.0478  |
| 6.8                   | -.432  | -.0719  | -.0215  | -.0504  | 7.2                   | -.463  | -.0758  | -.0213   | -.0538  | 7.6                   | -.498  | -.0775  | -.0202  | -.0559  |
| 7.0                   | -.412  | -.0860  | -.0262  | -.0587  | 7.4                   | -.442  | -.0890  | -.0256   | -.0616  | 7.8                   | -.475  | -.0900  | -.0242  | -.0633* |
| 7.2                   | -.394  | -.0993  | -.0308  | -.0662  | 7.6                   | -.424  | -.1017  | -.0298   | -.0688  | 8.0                   | -.458  | -.1020  | -.0280  | -.0702  |
| 7.4                   | -.378  | -.1123  | -.0353  | -.0732  | 7.8                   | -.407  | -.1140  | -.0340   | -.0754  | 8.2                   | -.440  | -.1137  | -.0319  | -.0766  |
| 7.6                   | -.362  | -.1247  | -.0397  | -.0796  | 8.0                   | -.392  | -.1258  | -.0380   | -.0816  | 8.4                   | -.423  | -.1250  | -.0357  | -.0825* |
| 7.8                   | -.349  | -.1366  | -.0439  | -.0856  | 8.2                   | -.378  | -.1372  | -.0420   | -.0873  | 8.6                   | -.410  | -.1358  | -.0393  | -.0881* |
| 8.0                   | -.337  | -.1480  | -.0480  | -.0911  | 8.4                   | -.365  | -.1480  | -.0458   | -.0926  | 8.8                   | -.395  | -.1463  | -.0430  | -.0932  |
| 8.2                   | -.325  | -.1589  | -.0519  | -.0962  | 8.6                   | -.353  | -.1584  | -.0495   | -.0975  | 9.0                   | -.382  | -.1564  | -.0465  | -.0980  |
| 8.4                   | -.314  | -.1695  | -.0558  | -.1010  | 8.8                   | -.342  | -.1687  | -.0531   | -.1022  | 9.2                   | -.372  | -.1662  | -.0499  | -.1026  |
| 8.6                   | -.305  | -.1796  | -.0594  | -.1055  | 9.0                   | -.332  | -.1784  | -.0566   | -.1065  | 9.4                   | -.361  | -.1756  | -.0532  | -.1068  |
| 8.8                   | -.296  | -.1896  | -.0630  | -.1098  | 9.2                   | -.322  | -.1878  | -.0600   | -.1106  | 9.6                   | -.351  | -.1846  | -.0564  | -.1108  |
| 9.0                   | -.287  | -.1990  | -.0664  | -.1137  | 9.4                   | -.314  | -.1969  | -.0632   | -.1145  | 9.8                   | -.342  | -.1935  | -.0595  | -.1146  |
| 9.2                   | -.280  | -.2082  | -.0697  | -.1175  | 9.6                   | -.305  | -.2057  | -.0664   | -.1181  | 10.0                  | -.333  | -.2018  | -.0625  | -.1181  |
| 9.4                   | -.273  | -.2168  | -.0728  | -.1210  | 9.8                   | -.296  | -.2141  | -.0694   | -.1215  | 10.2                  | -.325  | -.2102  | -.0655  | -.1215  |
| 9.6                   | -.265  | -.2253  | -.0759  | -.1243  | 10.0                  | -.291  | -.2223  | -.0723   | -.1248  | 10.4                  | -.317  | -.2181  | -.0683  | -.1247  |
| 9.8                   | -.259  | -.2335  | -.0788  | -.1275  | 10.2                  | -.284  | -.2304  | -.0752   | -.1279  | 10.6                  | -.310  | -.2257  | -.0710  | -.1277  |
| 10.0                  | -.254  | -.2414  | -.0816  | -.1305  | 10.4                  | -.277  | -.2379  | -.0779   | -.1308  | 10.8                  | -.303  | -.2332  | -.0737  | -.1306  |
| 10.2                  | -.246  | -.2490  | -.0843  | -.1333  | 10.6                  | -.272  | -.2453  | -.0805   | -.1336  | 11.0                  | -.297  | -.2405  | -.0762  | -.1334* |
| 10.4                  | -.242  | -.2564  | -.0870  | -.1360  | 10.8                  | -.266  | -.2525  | -.0831   | -.1362  | 11.2                  | -.291  | -.2475  | -.0787  | -.1360* |
| 10.6                  | -.237  | -.2636  | -.0895  | -.1386  | 11.0                  | -.261  | -.2595  | -.0855   | -.1388* | 11.4                  | -.285  | -.2542  | -.0811  | -.1385* |
| 10.8                  | -.233  | -.2704  | -.0919  | -.1410  | 11.2                  | -.256  | -.2662  | -.0879   | -.1412  | 11.6                  | -.279  | -.2609  | -.0835  | -.1409  |
| 11.0                  | -.228  | -.2772  | -.0943  | -.1434  | 11.4                  | -.251  | -.2728  | -.0902   | -.1435  | 11.8                  | -.274  | -.2671  | -.0857  | -.1431  |
| 11.2                  | -.224  | -.2837  | -.0966  | -.1456  | 11.6                  | -.246  | -.2792  | -.0925   | -.1457  | 12.0                  | -.269  | -.2734  | -.0879  | -.1453  |
| 11.4                  | -.220  | -.2901  | -.0988  | -.1478  | 11.8                  | -.242  | -.2852  | -.0946   | -.1478  | 12.2                  | -.265  | -.2794  | -.0900  | -.1474  |
| α <sub>3</sub> = 0.90 |        |         |         |         | α <sub>3</sub> = 1.00 |        |         |          |         | α <sub>3</sub> = 1.10 |        |         |         |         |
| α <sub>4</sub>        | LAN 1  | LAN 2   | LAN 3   | LAN 4   | α <sub>4</sub>        | LAN 1  | LAN 2   | LAN 3    | LAN 4   | α <sub>4</sub>        | LAN 1  | LAN 2   | LAN 3   | LAN 4   |
| 3.2                   | -1.277 | .1880   | -.0000  | -.3160  | 3.4                   | -1.253 | .1772   | -.0000*  | -.2854* | 3.8                   | -1.215 | -.1582  | -.0000* | -.2379  |
| 3.4                   | -1.065 | .1751   | -.0133  | -.2548  | 3.6                   | -1.169 | .1664   | -.4828*  | -.2490  | 4.0                   | -1.108 | -.1459  | -.6035* | -.2013  |
| 3.6                   | -.833  | .1586   | -.0218  | -.2039  | 3.8                   | -1.010 | .1509   | -.0141   | -.1996  | 4.2                   | -.974  | -.1294  | -.0125  | -.1607  |
| 3.8                   | -.814  | .1397   | -.0260  | -.1615  | 4.0                   | -.886  | .1333   | -.0193   | -.1588  | 4.4                   | -.869  | -.1117  | -.0157  | -.1267  |
| 4.0                   | -.717  | .1193   | -.0269  | -.1258  | 4.2                   | -.787  | .1142   | -.0212   | -.1244  | 4.6                   | -.781  | -.0932  | -.0165  | -.0977  |
| 4.2                   | -.639  | .0979   | -.0251  | -.0953  | 4.4                   | -.704  | .0943   | -.0206   | -.0950  | 4.8                   | -.708  | -.0743  | -.0154  | -.0727  |
| 4.4                   | -.575  | .0762   | -.0214  | -.0693  | 4.6                   | -.638  | .0741   | -.0182   | -.0697  | 5.0                   | -.647  | -.0552  | -.0128  | -.0508  |
| 4.6                   | -.522  | .0547   | -.0164  | -.0468  | 4.8                   | -.581  | .0539   | -.0144   | -.0477  | 5.2                   | -.596  | -.0365  | -.0168* | -.0318  |
| 4.8                   | -.478  | .0337   | -.0106  | -.0273  | 5.0                   | -.533  | .0340   | -.0095*  | -.0285  | 5.4                   | -.552  | -.0181  | -.0139* | -.0150  |
| 5.0                   | -.439  | -.0132  | -.4328* | -.0102  | 5.2                   | -.492  | .0146   | -.4383*  | -.0117  | 5.5                   | -.532  | -.9038* | -.2484* | -.7342* |
| 5.1                   | -.422  | .3339*  | -.1111* | -.2526* | 5.3                   | -.474  | .5192*  | -.1584*  | -.4061* | 5.6                   | -.513  | -.0997* | -.0279* | -.0795* |
| 5.2                   | -.407  | -.6388* | -.2154* | -.4735* | 5.4                   | -.445  | -.0317* | -.0101*  | -.0242* | 5.7                   | -.497  | -.8629* | -.2479* | -.6726* |
| 5.3                   | -.394  | -.0159  | -.5428* | -.0116  | 5.5                   | -.442  | -.0132  | -.4176*  | -.9946* | 5.8                   | -.481  | -.0173  | -.5046* | -.0132  |
| 5.4                   | -.375  | -.0252  | -.8694* | -.0180  | 5.6                   | -.429  | -.0222  | -.7097*  | -.0164  | 6.0                   | -.451  | -.0340  | -.0103  | -.0251  |
| 5.6                   | -.353  | -.0432  | -.0152  | -.0298* | 5.8                   | -.403  | -.0395  | -.0129   | -.0282* | 6.2                   | -.427  | -.0501  | -.0155  | -.0358  |
| 5.8                   | -.334  | -.0605  | -.0215  | -.0405  | 6.0                   | -.379  | -.0562  | -.0187   | -.0388  | 6.4                   | -.403  | -.0656  | -.0208  | -.0455  |
| 6.0                   | -.317  | -.0768  | -.0275  | -.0500  | 6.2                   | -.358  | -.0721  | -.0244   | -.0484  | 6.6                   | -.384  | -.0805  | -.0259  | -.0544  |
| 6.2                   | -.301  | -.0924  | -.0334  | -.0587  | 6.4                   | -.341  | -.0873  | -.0299   | -.0571  | 6.8                   | -.366  | -.0947  | -.0309  | -.0624  |
| 6.4                   | -.287  | -.1073  | -.0390  | -.0666  | 6.6                   | -.325  | -.1019  | -.0352   | -.0651  | 7.0                   | -.350  | -.1084  | -.0358  | -.0698  |
| 6.6                   | -.273  | -.1215  | -.0444  | -.0738  | 6.8                   | -.309  | -.1158  | -.0404   | -.0723  | 7.2                   | -.335  | -.1214  | -.0405  | -.0766  |
| 6.8                   | -.262  | -.1352  | -.0495  | -.0805  | 7.0                   | -.297  | -.1291  | -.0453   | -.0790  | 7.4                   | -.322  | -.1341  | -.0451  | -.0829  |
| 7.0                   | -.252  | -.1481  | -.0544  | -.0866  | 7.2                   | -.285  | -.1419  | -.0500   | -.0852  | 7.6                   | -.311  | -.1460  | -.0494  | -.0887  |
| 7.2                   | -.242  | -.1606  | -.0591  | -.0923  | 7.4                   | -.275  | -.1540  | -.0545   | -.0909  | 7.8                   | -.299  | -.1577  | -.0537  | -.0941  |
| 7.4                   | -.233  | -.1723  | -.0635  | -.0975  | 7.6                   | -.265  | -.1658  | -.0589   | -.0962  | 8.0                   | -.289  | -.1687  | -.0577  | -.0991  |
| 7.6                   | -.225  | -.1838  | -.0678  | -.1024  | 7.8                   | -.256  | -.1769  | -.0630   | -.1011  | 8.2                   | -.280  | -.1794  | -.0616  | -.1038  |
| 7.8                   | -.218  | -.1947  | -.0718  | -.1070  | 8.0                   | -.248  | -.1878  | -.0670   | -.1058  | 8.4                   | -.271  | -.1896  | -.0653  | -.1062  |
| 8.0                   | -.212  | -.2051  | -.0756  | -.1113  | 8.2                   | -.241  | -.1980  | -.0707   | -.1101  | 8.6                   | -.263  | -.1994  | -.0689  | -.1123  |
| 8.2                   | -.205  | -.2151  | -.0793  | -.1153  | 8.4                   | -.233  | -.2079  | -.0744   | -.1141  | 8.8                   | -.256  | -.2090  | -.0724* | -.1162  |
| 8.4                   | -.199  | -.2246  | -.0828  | -.1190  | 8.6                   | -.227  | -.2174  | -.0778   | -.1179  | 9.0                   | -.249  | -.2180  | -.0757  | -.1198  |
| 8.6                   | -.194  | -.2340  | -.0862  | -.1226  | 8.8                   | -.220  | -.2267  | -.0812   | -.1215  | 9.2                   | -.242  | -.2267  | -.0788  | -.1232  |
| 8.8                   | -.189  | -.2428  | -.0894  | -.1259  | 9.0                   | -.215  | -.2356  | -.0844   | -.1249  | 9.4                   | -.236  | -.2351  | -.0819  | -.1265  |
| 9.0                   | -.185  | -.2514  | -.0924  | -.1291  | 9.2                   | -.210  | -.2440  | -.0874   | -.1281  | 9.6                   | -.231  | -.2435  | -.0848  | -.1296  |
| 9.2                   | -.180  | -.2597  | -.0954  | -.1321  | 9.4                   | -.204  | -.2522  | -.0904   | -.1311  | 9.8                   | -.226  | -.2513  | -.0876  | -.1325  |
| 9.4                   | -.176  | -.2676  | -.0982  | -.1349  | 9.6                   | -.200  | -.2602  | -.0932   | -.1340  | 10.0                  | -.221  | -.2593  | -.0903  | -.1353  |
| 9.6                   | -.172  | -.2753  | -.1009  | -.1376  | 9.8                   | -.195  | -.2678  | -.0959   | -.1367  | 10.2                  | -.216  | -.2664  | -.0930  | -.1379  |
| 9.8                   | -.168  | -.2827  | -.1035  | -.1402  | 10.0                  | -.191  | -.2752  | -.0985   | -.1393  | 10.4                  | -.211  | -.2735  | -.0955  | -.1404  |
| 10.0                  | -.165  | -.2900  | -.1060  | -.1427  | 10.2                  | -.187  | -.2824  | -.1010   | -.1418  | 10.6                  | -.207  | -.2804  | -.0979  | -.1428  |
| 10.2                  | -.162  | -.2969  | -.1084  | -.1450  | 10.4                  | -.184  | -.2893  | -.1034   | -.1442  | 10.8                  | -.203  | -.2870  | -.1002  | -.1451  |
| 10.4                  | -.159  | -.3035  | -.1107  | -.1472  | 10.6                  | -.180  | -.2959  | -.1057   | -.1464  | 11.0                  | -.199  | -.2936  | -.1025  | -.1473  |

ตารางที่ ก (ต่อ)

| σ <sub>3</sub> = 1.50 |        |         |         |         | σ <sub>3</sub> = 1.60 |        |         |         |         | σ <sub>3</sub> = 1.70 |        |         |         |         |
|-----------------------|--------|---------|---------|---------|-----------------------|--------|---------|---------|---------|-----------------------|--------|---------|---------|---------|
| α <sub>4</sub>        | LAN 1  | LAN 2   | LAN 3   | LAN 4   | α <sub>4</sub>        | LAN 1  | LAN 2   | LAN 3   | LAN 4   | α <sub>4</sub>        | LAN 1  | LAN 2   | LAN 3   | LAN 4   |
| 5.4                   | -1.112 | .0951   | .0000*  | -.1182  | 6.0                   | -1.088 | .0757   | .0000*  | .0896   | 6.6                   | -1.064 | .0580   | .0000*  | .0657   |
| 5.6                   | -1.103 | .0886   | .0000*  | .1083   | 6.2                   | -1.078 | .0698   | .0000   | .0810   | 6.8                   | -1.057 | .0525   | .0000   | .0588   |
| 5.8                   | -1.042 | .0773   | .1949*  | .0899   | 6.4                   | -1.011 | .0573   | .1699*  | .0630   | 7.0                   | -1.001 | .0412   | .1027*  | .0441   |
| 6.0                   | -.957  | .0622   | .3907*  | .0677   | 6.6                   | -.937  | .0430   | .2684*  | .0449   | 7.2                   | -.935  | .0275   | .1513*  | .0280   |
| 6.2                   | -.885  | .0471   | .4441*  | .0483   | 6.8                   | -.875  | .0287   | .2597*  | .0285   | 7.4                   | -.878  | .0142   | .1142*  | .0138   |
| 6.4                   | -.824  | .0321   | .3885*  | .0313   | 7.0                   | -.746  | .0422*  | .63565* | .0378*  | 7.5                   | -.852  | .07546* | .0696*  | .0719*  |
| 6.6                   | -.688  | .0566*  | .0104*  | .0494*  | 7.1                   | -.796  | .77738* | .0969*  | .7177*  | 7.6                   | -.825  | -.0250* | -.2601* | -.0232* |
| 6.7                   | -.747  | .9962*  | .1538*  | .9059*  | 7.2                   | -.771  | -.0341* | -.4634* | -.0309* | 7.7                   | -.806  | -.5469* | -.0619* | -.5000* |
| 6.8                   | -.714  | -.0290* | -.4897* | -.0256* | 7.3                   | -.751  | -.5924* | -.0858* | -.5279* | 7.8                   | -.784  | -.0119  | -.1463* | -.0107  |
| 6.9                   | -.704  | -.4446* | -.0768* | -.3882* | 7.4                   | -.731  | -.0127  | -.1942* | -.0111  | 8.0                   | -.745  | -.0245  | -.3423* | -.0212  |
| 7.0                   | -.684  | -.0115  | -.2088* | -.9875* | 7.6                   | -.693  | -.0258  | -.4383* | -.0218  | 8.2                   | -.709  | -.0367  | -.5705* | -.0308  |
| 7.2                   | -.647  | -.0254  | -.4989* | -.0210  | 7.8                   | -.659  | -.0386  | -.7111* | -.0316  | 8.4                   | -.678  | -.0487  | -.8225* | -.0397  |
| 7.4                   | -.615  | -.0390  | -.8156* | -.0312  | 8.0                   | -.630  | -.0511  | -.0100  | -.0406  | 8.6                   | -.650  | -.0603  | -.0109  | -.0478  |
| 7.6                   | -.585  | -.0520  | -.0115  | -.0404* | 8.2                   | -.602  | -.0633  | -.0131  | -.0489  | 8.8                   | -.622  | -.0717  | -.0138  | -.0553* |
| 7.8                   | -.558  | -.0648  | -.0150  | -.0489  | 8.4                   | -.577  | -.0752  | -.0163  | -.0566* | 9.0                   | -.598  | -.0827  | -.0167  | -.0623  |
| 8.0                   | -.536  | -.0767  | -.0184  | -.0565  | 8.6                   | -.553  | -.0866  | -.0196  | -.0636  | 9.2                   | -.578  | -.0933  | -.0196  | -.0668  |
| 8.2                   | -.514  | -.0891  | -.0221  | -.0640  | 8.8                   | -.534  | -.0972  | -.0227  | -.0699  | 9.4                   | -.557  | -.1036  | -.0226  | -.0748  |
| 8.4                   | -.494  | -.1007  | -.0257  | -.0707  | 9.0                   | -.515  | -.1084  | -.0261  | -.0763  | 9.6                   | -.538  | -.1136  | -.0256  | -.0804  |
| 8.6                   | -.476  | -.1118  | -.0292  | -.0769  | 9.2                   | -.496  | -.1187  | -.0294  | -.0819  | 9.8                   | -.521  | -.1233  | -.0286  | -.0857  |
| 8.8                   | -.459  | -.1225  | -.0327  | -.0826  | 9.4                   | -.480  | -.1288  | -.0326  | -.0872  | 10.0                  | -.505  | -.1329  | -.0316  | -.0907  |
| 9.0                   | -.443  | -.1330  | -.0362  | -.0880  | 9.6                   | -.465  | -.1385  | -.0358  | -.0922  | 10.2                  | -.485  | -.1420  | -.0346  | -.0953  |
| 9.2                   | -.429  | -.1431  | -.0396  | -.0931  | 9.8                   | -.452  | -.1480  | -.0389  | -.0969  | 10.4                  | -.476  | -.1509  | -.0375  | -.0997  |
| 9.4                   | -.416  | -.1528  | -.0429  | -.0978  | 10.0                  | -.438  | -.1572  | -.0420  | -.1013  | 10.6                  | -.463  | -.1594  | -.0403  | -.1038  |
| 9.6                   | -.404  | -.1622  | -.0461  | -.1022  | 10.2                  | -.426  | -.1659  | -.0450  | -.1054  | 10.8                  | -.451  | -.1677  | -.0431  | -.1077  |
| 9.8                   | -.392  | -.1713  | -.0493  | -.1064  | 10.4                  | -.415  | -.1745  | -.0479  | -.1093  | 11.0                  | -.440  | -.1758  | -.0458  | -.1114  |
| 10.0                  | -.382  | -.1803  | -.0524  | -.1104  | 10.6                  | -.404  | -.1828  | -.0508  | -.1130  | 11.2                  | -.429  | -.1837  | -.0485  | -.1149  |
| 10.2                  | -.372  | -.1887  | -.0553  | -.1141  | 10.8                  | -.394  | -.1908  | -.0536  | -.1165  | 11.4                  | -.419  | -.1913  | -.0511  | -.1182  |
| 10.4                  | -.363  | -.1969  | -.0582  | -.1176  | 11.0                  | -.385  | -.1986  | -.0563  | -.1198  | 11.6                  | -.410  | -.1988  | -.0537  | -.1214  |
| 10.6                  | -.354  | -.2049  | -.0611  | -.1209  | 11.2                  | -.377  | -.2062  | -.0589  | -.1230  | 11.8                  | -.401  | -.2059  | -.0562  | -.1244  |
| 10.8                  | -.346  | -.2127  | -.0638  | -.1241  | 11.4                  | -.368  | -.2135  | -.0615  | -.1260  | 12.0                  | -.392  | -.2128  | -.0586  | -.1272  |
| 11.0                  | -.338  | -.2202  | -.0665  | -.1271  | 11.6                  | -.360  | -.2206  | -.0640  | -.1288  | 12.2                  | -.384  | -.2195  | -.0610  | -.1299  |
| 11.2                  | -.331  | -.2273  | -.0690  | -.1299  | 11.8                  | -.352  | -.2275  | -.0665  | -.1315  | 12.4                  | -.377  | -.2261  | -.0633  | -.1325  |
| 11.4                  | -.325  | -.2339  | -.0713  | -.1325  | 12.0                  | -.346  | -.2341  | -.0688  | -.1341  | 12.6                  | -.369  | -.2326  | -.0656  | -.1350  |
| 11.6                  | -.317  | -.2414  | -.0740  | -.1353  | 12.2                  | -.339  | -.2407  | -.0711  | -.1366  | 12.8                  | -.362  | -.2388  | -.0678  | -.1374  |
| 11.8                  | -.311  | -.2478  | -.0763  | -.1377  | 12.4                  | -.333  | -.2471  | -.0734  | -.1390  | 13.0                  | -.356  | -.2450  | -.0700  | -.1397  |
| 12.0                  | -.305  | -.2544  | -.0786  | -.1401  | 12.6                  | -.328  | -.2527  | -.0753  | -.1411  | 13.2                  | -.350  | -.2508  | -.0720  | -.1419  |
| 12.2                  | -.300  | -.2607  | -.0808  | -.1424  | 12.8                  | -.321  | -.2592  | -.0777  | -.1434  | 13.4                  | -.344  | -.2566  | -.0741  | -.1440  |
| 12.4                  | -.295  | -.2662  | -.0827  | -.1444  | 13.0                  | -.316  | -.2650  | -.0797  | -.1455  | 13.6                  | -.338  | -.2622  | -.0761  | -.1460  |
| 12.6                  | -.289  | -.2726  | -.0851  | -.1466  | 13.2                  | -.311  | -.2706  | -.0817  | -.1475  | 13.8                  | -.333  | -.2675  | -.0780  | -.1479* |
| 12.8                  | -.284  | -.2789  | -.0874  | -.1487  | 13.4                  | -.306  | -.2761  | -.0836  | -.1494  | 14.0                  | -.328  | -.2728  | -.0800  | -.1497* |
| 13.0                  | -.279  | -.2851  | -.0896  | -.1507  | 13.6                  | -.301  | -.2816  | -.0854  | -.1513  | 14.2                  | -.323  | -.2781  | -.0820  | -.1515* |
| 13.2                  | -.274  | -.2913  | -.0917  | -.1526  | 13.8                  | -.296  | -.2871  | -.0872  | -.1532  | 14.4                  | -.318  | -.2834  | -.0840  | -.1533* |
| 13.4                  | -.269  | -.2975  | -.0937  | -.1545  | 14.0                  | -.291  | -.2926  | -.0889  | -.1551  | 14.6                  | -.313  | -.2887  | -.0860  | -.1551* |
| 13.6                  | -.264  | -.3037  | -.0956  | -.1564  | 14.2                  | -.286  | -.2981  | -.0906  | -.1570  | 14.8                  | -.308  | -.2940  | -.0880  | -.1569* |
| 13.8                  | -.259  | -.3099  | -.0974  | -.1583  | 14.4                  | -.281  | -.3036  | -.0923  | -.1589  | 15.0                  | -.303  | -.2993  | -.0900  | -.1587* |
| 14.0                  | -.254  | -.3161  | -.0992  | -.1602  | 14.6                  | -.276  | -.3091  | -.0939  | -.1608  | 15.2                  | -.298  | -.3046  | -.0920  | -.1605* |
| 14.2                  | -.249  | -.3223  | -.1009  | -.1621  | 14.8                  | -.271  | -.3146  | -.0955  | -.1627  | 15.4                  | -.293  | -.3099  | -.0940  | -.1623* |
| 14.4                  | -.244  | -.3285  | -.1026  | -.1640  | 15.0                  | -.266  | -.3201  | -.0970  | -.1646  | 15.6                  | -.288  | -.3152  | -.0960  | -.1641* |
| 14.6                  | -.239  | -.3347  | -.1042  | -.1659  | 15.2                  | -.261  | -.3256  | -.0985  | -.1665  | 15.8                  | -.283  | -.3205  | -.0980  | -.1659* |
| 14.8                  | -.234  | -.3409  | -.1058  | -.1678  | 15.4                  | -.256  | -.3311  | -.1000  | -.1684  | 16.0                  | -.278  | -.3258  | -.1000  | -.1677* |
| 15.0                  | -.229  | -.3471  | -.1073  | -.1697  | 15.6                  | -.251  | -.3366  | -.1015  | -.1703  | 16.2                  | -.273  | -.3311  | -.1020  | -.1695* |
| 15.2                  | -.224  | -.3533  | -.1088  | -.1716  | 15.8                  | -.246  | -.3421  | -.1029  | -.1722  | 16.4                  | -.268  | -.3364  | -.1040  | -.1713* |
| 15.4                  | -.219  | -.3595  | -.1102  | -.1735  | 16.0                  | -.241  | -.3476  | -.1043  | -.1741  | 16.6                  | -.263  | -.3417  | -.1060  | -.1731* |
| 15.6                  | -.214  | -.3657  | -.1116  | -.1754  | 16.2                  | -.236  | -.3531  | -.1057  | -.1760  | 16.8                  | -.258  | -.3470  | -.1080  | -.1749* |
| 15.8                  | -.209  | -.3719  | -.1129  | -.1773  | 16.4                  | -.231  | -.3586  | -.1070  | -.1779  | 17.0                  | -.253  | -.3523  | -.1100  | -.1767* |
| 16.0                  | -.204  | -.3781  | -.1142  | -.1792  | 16.6                  | -.226  | -.3641  | -.1083  | -.1798  | 17.2                  | -.248  | -.3576  | -.1120  | -.1785* |
| 16.2                  | -.199  | -.3843  | -.1155  | -.1811  | 16.8                  | -.221  | -.3696  | -.1096  | -.1817  | 17.4                  | -.243  | -.3629  | -.1140  | -.1803* |
| 16.4                  | -.194  | -.3905  | -.1168  | -.1830  | 17.0                  | -.216  | -.3751  | -.1109  | -.1836  | 17.6                  | -.238  | -.3682  | -.1160  | -.1821* |
| 16.6                  | -.189  | -.3967  | -.1181  | -.1849  | 17.2                  | -.211  | -.3806  | -.1121  | -.1855  | 17.8                  | -.233  | -.3735  | -.1180  | -.1839* |
| 16.8                  | -.184  | -.4029  | -.1193  | -.1868  | 17.4                  | -.206  | -.3861  | -.1134  | -.1874  | 18.0                  | -.228  | -.3788  | -.1200  | -.1857* |
| 17.0                  | -.179  | -.4091  | -.1206  | -.1887  | 17.6                  | -.201  | -.3916  | -.1146  | -.1893  | 18.2                  | -.223  | -.3841  | -.1220  | -.1875* |
| 17.2                  | -.174  | -.4153  | -.1218  | -.1906  | 17.8                  | -.196  | -.3971  | -.1158  | -.1912  | 18.4                  | -.218  | -.3894  | -.1240  | -.1893* |
| 17.4                  | -.169  | -.4215  | -.1230  | -.1925  | 18.0                  | -.191  | -.4026  | -.1170  | -.1931  | 18.6                  | -.213  | -.3947  | -.1260  | -.1911* |
| 17.6                  | -.164  | -.4277  | -.1242  | -.1944  | 18.2                  | -.186  | -.4081  | -.1182  | -.1950  | 18.8                  | -.208  | -.4000  | -.1280  | -.1929* |
| 17.8                  | -.159  | -.4339  | -.1254  | -.1963  | 18.4                  | -.181  | -.4136  | -.1194  | -.1969  | 19.0                  | -.203  | -.4053  | -.1300  | -.1947* |
| 18.0                  | -.154  | -.4401  | -.1266  | -.1982  | 18.6                  | -.176  | -.4191  | -.1206  | -.1988  | 19.2                  | -.198  | -.4106  | -.1320  | -.1965* |
| 18.2                  | -.149  | -.4463  | -.1278  | -.2001  | 18.8                  | -.171  | -.4246  | -.1218  | -.2007  | 19.4                  | -.193  | -.4159  | -.1340  | -.1983* |
| 18.4                  | -.144  | -.4525  | -.1289  | -.2020  | 19.0                  | -.166  | -.4301  | -.1229  | -.2026  | 19.6                  | -.188  | -.4212  | -.1360  | -.2001* |
| 18.6                  | -.139  | -.4587  | -.1301  | -.2039  | 19.2                  | -.161  | -.4356  | -.1241  | -.2045  | 19.8                  | -.183  | -.4265  | -.1380  | -.2019* |
| 18.8                  | -.134  | -.4649  | -.1312  | -.2058  | 19.4                  | -.156  | -.4411  | -.1252  | -.2064  | 20.0                  | -.178  | -.4318  | -.1400  | -.2037* |
| 19.0                  | -.129  | -.4711  | -.1324  | -.2077  | 19.6                  | -.151  | -.4466  | -.1264  | -.2083  | 20.2                  | -.173  | -.4371  | -.1420  | -.2055* |
| 19.2                  | -.124  | -.4773  | -.1335  | -.2096  | 19.8                  | -.146  | -.4521  | -.1275  | -.2102  | 20.4                  | -.168  | -.4424  | -.1440  | -.2073* |
| 19.4                  | -.119  | -.4835  | -.1346  | -.2115  | 20.0                  | -.141  | -.4576  | -.1287  | -.2121  | 20.6                  | -.163  | -.4477  | -.1460  | -.2091* |
| 19.6                  | -.114  | -.4897  | -.1357  | -.2134  | 20.2                  | -.136  | -.4631  | -.1298  | -.2140  | 20.8                  | -.158  | -.4530  | -.1480  | -.2109* |
| 19.8                  | -.109  | -.4959  | -.1368  | -.2153  | 20.4                  | -.131  | -.4686  | -.1309  | -.2159  | 21.0                  | -.153  | -.4583  | -.1500  | -.2127* |
| 20.0                  | -.104  | -.5021  | -.1379  | -.2172  | 20.6                  | -.126  | -.4741  | -.1320  | -.2178  | 21.2                  | -.148  | -.4636  | -.1520  | -.2145* |
| 20.2                  | -.099  | -.5083  | -.1389  | -.2191  | 20.8                  | -.121  | -.4796  | -.1331  | -.2197  | 21.4                  | -.143  | -.4689  | -.1540  | -.2163* |
| 20.4                  | -.094  | -.5145  | -.1400  | -.2210  | 21.0                  | -.116  | -.4851  | -.1342  | -.2216  | 21.6                  | -.138  | -.4742  | -.1560  | -.2181* |
| 20.6                  | -.089  | -.5207  | -.1410  | -.2229  | 21.2                  | -.111  | -.4906  | -.1352  | -.2235  | 21.8                  | -.133  | -.4795  | -.1580  | -.2199* |
| 20.8                  | -.084  | -.5269  | -.1420  | -.2248  | 21.4                  | -.106  | -.4961  | -.1363  | -.2254  | 22.0                  | -.128  | -.4848  | -.1600  | -.2217* |
| 21.0                  | -.079  | -.5331  | -.1430  | -.2267  | 21.6                  | -.101  | -.5016  | -.1373  | -.2273  | 22.2                  | -.123  | -.4901  | -.1620  | -.2235* |
| 21.2                  | -.074  | -.5393  | -.1440  | -.2286  | 21.8                  | -.096  |         |         |         |                       |        |         |         |         |

## ประวัติผู้เขียน

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