รายการอ้างอิง

ภาษาไทย

ภรมนัส ประยูรรัตน. (2535). *การเปรียบเทียบวิธีการประมาณช่วงความเชื่อมั่นสำหรับความแปรปรวนของการแจกแจงปกติ*. วิทยานิพนธ์ปริญญามหาบัณฑิต ภาควิชาสถิติ บัณฑิตวิทยาลัย จุฬาลงกรณ์มหาวิทยาลัย.

จินตนา เสริมพงษ์พันธ์. (2539). *ทฤษฎีและตัวอย่างโจทย์ สถิติและความน่าจะเป็น*. กรุงเทพมหานคร:แมค กรอ-ฮิล.

ภาวนา มาศผล.(2540). *การประมาณช่วงความเชื่อมั่นของสัมประสิทธิ์การถดถอยพหุ เมื่อเกิดความสัมพันธ์ระหว่างตัวแปรอิสระ*. วิทยานิพนธ์ปริญญามหาบัณฑิต ภาควิชาสถิติ บัณฑิตวิทยาลัย จุฬาลงกรณ์มหาวิทยาลัย.

ธนภัทร ศรภักดี. (2544). *ช่วงความเชื่อมั่นสำหรับค่าเฉลี่ยร่วมของ 2 กลุ่มประชากรที่มีการแจกแจงปกติ*. วิทยานิพนธ์ปริญญามหาบัณฑิต ภาควิชาสถิติ คณะพาณิชยศาสตร์และการบัญชี จุฬาลงกรณ์มหาวิทยาลัย.

วีรวรรณ ศักดาจิวะเจริญ. (2544). *ช่วงความเชื่อมั่นสำหรับค่าเฉลี่ยของประชากรที่มีการแจกแจงแบบเบ้ขวา*. วิทยานิพนธ์ปริญญามหาบัณฑิต ภาควิชาสถิติ คณะพาณิชยศาสตร์และการบัญชี จุฬาลงกรณ์มหาวิทยาลัย.

กัลยา วานิชย์บัญชา. (2545). *หลักสถิติ*. พิมพ์ครั้งที่ 7. กรุงเทพมหานคร: โรงพิมพ์จุฬาลงกรณ์มหาวิทยาลัย.

ราตรี จรัสมาธุสร. (2547).*ช่วงความเชื่อมั่นสำหรับอัตราส่วนความน่าจะเป็นในตัวแบบการถดถอยโลจิสติก*.วิทยานิพนธ์ปริญญามหาบัณฑิต ภาควิชาสถิติ คณะพาณิชยศาสตร์และการบัญชี จุฬาลงกรณ์มหาวิทยาลัย.

ปุณยนุช พินชู. (2548). *การเปรียบเทียบค่าความคลาดเคลื่อนประเภทที่ 1 และอำนาจการทดสอบของวิธีการเปรียบเทียบค่าเฉลี่ยรายคู่ สำหรับแผนการทดลองแบบสุ่มสมบูรณ์*. วิทยานิพนธ์ปริญญามหาบัณฑิต ภาควิชาวิจัยและจิตวิทยาการศึกษา คณะครุศาสตร์ จุฬาลงการณ์มหาวิทยาลัย.

สุชาดา บวรกิติวงศ์. (2548). *สถิติประยุกต์ทางพฤติกรรมศาสตร์*. กรุงเทพมหานคร: โรงพิมพ์จุฬาลงกรณ์มหาวิทยาลัย.

ชิธิมาโวร์ บุญมา. (2549). *การเปรียบเทียบค่าความคลาดเคลื่อนประเภทที่ 1 และอำนาจการทดสอบของวิธีการเปรียบเทียบเชิงซ้อนที่ไม่มีเงื่อนไขเกี่ยวกับการเท่ากันของค่าความแปรปรวน สำหรับแผนการทดลองแบบสุ่มสมบูรณ์.* วิทยานิพนธ์ปริญญามหาบัณฑิต ภาควิชาวิจัยและจิตวิทยาการศึกษา คณะครุศาสตร์ จุฬาลงการณ์มหาวิทยาลัย.

ปุณยนุช พินชู และ สุชาดา บวรกิติวงศ์. (2549). ความคลาดเคลื่อนประเภทที่ 1 และอำนาจการทดสอบในการเปรียบเทียบรายคู่ภายหลังด้วยการใช้โปรแกรมแมทแล็บ. *วารสารครุศาสตร์* _35 (2 ตุลาคม – ธันวาคม).

ลัญฉกร วุฒิสิทธิกุลกิจ และคณะ.(2549). *การใช้งานโปรแกรม MATLAB เบื้องต้น.* กรุงเทพมหานคร: โรงพิมพ์จุฬาลงกรณ์.

อวยพร เรืองตระกูล.(2549). *สถิติประยุกต์ทางพฤติกรรมศาสตร์ 1.* เอกสารประกอบการเรียน.

วราฤทธิ์ พานิชกิจโกศลกุล.(2550). การเปรียบเทียบวิธีการประมาณช่วงความเชื่อมั่นของพารามิเตอร์ของการแจกแจงแบบเลขชี้กำลัง เมื่อข้อมูลมีค่าผิดปกติ. *วารสารวิจัยและพัฒนา มจธ* _30 (2 เมษายน-มิถุนายน).

ภาษาอังกฤษ

Cohen, A. (1972). Improved confidence interval for the variance of a normal distribution. *J.Am.Statist.Assoc.*

Fairweather, W. R.(1972). A method of obtaining an exact confidence interval for the common mean of several normal populations. *Applied Statistics* 21.

Glass and Others.(1981). Meta-Analysis in Social Research. *Sage Publications.*

Glass, McGaw and Smith.(1981). Meta-Analysis in Social Research.

Crivelli Et AL. (1995). Confidence interval in ridge regression by bootstrapping the dependent variable: A Simulation Study. *Communications in Statistics.*

Thompson, B. (2007). Effect sizes, confidence intervals and confidence intervals for effect sizes. *Psychology in Schools* Vol. 44.

Viechtbauer, W. (2007). Approximate confidence interval for standardized effect sizes in two-independent and two-dependent samples design. *Journal of Educational and Behavioral Statistics(March).*

ภาคผนวก

ภาคผนวก ก

ตัวอย่างคำสั่ง : การหาความยาวช่วงความเชื่อมั่นของขนาดอิทธิพลมาตรฐานของกลุ่มตัวอย่างสองกลุ่มที่เป็นอิสระกันและมีขนาดเท่ากัน ($n_C = n_E$)

<u>กรณีกลุ่มตัวอย่างมีความเบ้ =0.25, ความโด่ง =2 และ alpha = .05</u>

```
% function x = turkey_lamp(lambda1,lambda2,lambda3,lambda4)
% Independence.....
% Case
clear all
alpha = 0.05;
nE = 4;
nC = 4;
lambda1 = [-1.465 ];
lambda2 = [0.2748 ];
lambda3 = [0.0105 ];
lambda4 = [0.7034 ];
for loop_2 = 1:3000
p1 = rand(1,nE); % ----- Uniform Random
p2 = rand(1,nC); % ----- Uniform Random
     X1 = lambda1+abs(p1.^lambda3-(1-p1.^lambda4))/lambda2;
     X2 = lambda1+abs(p2.^lambda3-(1-p2.^lambda4))/lambda2;
  %% -------- 10 formula ------
XE = X1(1,:);
XC = X2(1,:);
S1_square = var(XE);
S2_square = var(XC);
Sp = sqrt(((nE-1)*S1_square+(nC-1)*S2_square)/(nE+nC-2));
q = 100*(1-alpha/2);
d = (mean(XE)-mean(XC))/Sp;
```

```
m = nE+nC-2;
cm = 1-(3/(4*m-1));
g = cm*(mean(XE)-mean(XC))/Sp;
n_cap = nE*nC/(nE+nC); %---- n_cap => n~
N = nE+nC;
%1. ----- gB --------
gB(loop_2,1) = cm*(D_bar/SD)+q*sqrt(((cm^2*m*(1+n_cap*gD^2))/
                (m-2)*  n_cap)-gD^2);
gB(loop_2,2) = cm*(D_bar/SD)-q*sqrt(((cm^2*m*(1+n_cap*gD^2))/
                (m-2)*n_cap)-gD^2);
gB1(loop_2) = gB(loop_2,1) - gB(loop_2,2);
%2. ----- dB -------
dB(loop_2,1) = D_bar/SD+q*sqrt((m*(1+n_cap*dD^2)/((m-2)*n_cap))-(dD^2/cm^2));
dB(loop_2,2) = D_bar/SD-q*sqrt((m*(1+n_cap*dD^2)/((m-2)*n_cap))-(dD^2/cm^2));
dB1(loop_2) = dB(loop_2,1) - dB(loop_2,2);
%3. ----- gU -------
gU(loop_2,1) = cm*(D_bar/SD)+q*sqrt(1/n_cap+(1-(m-2)/(m*cm^2))*gD^2);
gU(loop_2,2) = cm*(D_bar/SD)-q*sqrt(1/n_cap+(1-(m-2)/(m*cm^2))*gD^2);
gU1(loop_2) = gU(loop_2,1) - gU(loop_2,2);
%4. ----- dU -------
dU(loop_2,1) = D_bar/SD+q*sqrt((1/n_cap*cm^2)+(1-(m-2)/(m*cm^2))*dD^2);
dU(loop_2,2) = D_bar/SD-q*sqrt((1/n_cap*cm^2)+(1-(m-2)/(m*cm^2))*dD^2);
dU1(loop_2) = dU(loop_2,1) - dU(loop_2,2);
%5. ----- gL1 -------
gL1(loop_2,1) = cm*(D_bar/SD)+q*sqrt(1/n_cap+gD^2/(2*m));
gL1(loop_2,2) = cm*(D_bar/SD)-q*sqrt(1/n_cap+gD^2/(2*m));
gL1_1(loop_2) = gL1(loop_2,1) - gL1(loop_2,2);
```

```
%6. ----- dL1 -------
dL1(loop_2,1) = D_bar/SD+q*sqrt(1/n_cap+dD^2/(2*m));
dL1(loop_2,2) = D_bar/SD-q*sqrt(1/n_cap+dD^2/(2*m));
dL1_1(loop_2) = dL1(loop_2,1)-dL1(loop_2,2);
%7. ----- gL2 -------
gL2(loop_2,1) = cm*(D_bar/SD)+q*sqrt(1/n_cap+gD^2/(2*N));
gL2(loop_2,2) = cm*(D_bar/SD)-q*sqrt(1/n_cap+gD^2/(2*N));
gL2_1(loop_2) = gL2(loop_2,1) - gL2(loop_2,2);
%8. ----- dL2 -------
dL2(loop_2,1) = D_bar/SD+q*sqrt(1/n_cap+dD^2/(2*N));
dL2(loop_2,2) = D_bar/SD-q*sqrt(1/n_cap+dD^2/(2*N));
dL2_1(loop_2) = dL2(loop_2,1)-dL2(loop_2,2);
%9. ----- gH -------
a = sqrt(2);
Zg = sqrt(2)*log10((gD/a)+(sqrt((gD^2/a^2)+1)));
gH(loop_2,1) = a*sinh(Zg/sqrt(2))+q*sqrt(1/N);
gH(loop_2,2) = a*sinh(Zg/sqrt(2))-q*sqrt(1/N);
gH1(loop_2) = gH(loop_2,1)-gH(loop_2,2);
%10. ----- dH -------
a = sqrt(2);
Zd = sqrt(2)*log10((dD/a)+(sqrt((dD^2/a^2)+1)));
dH(loop_2,1) = a*sinh(Zd/sqrt(2))+q*sqrt(1/N);
dH(loop_2,2) = a*sinh(Zd/sqrt(2))-q*sqrt(1/N);
dH1(loop_2) = dH(loop_2,1)-dH(loop_2,2);
% ????????????? = (n1X1 + n2X2) / n1+n2
total_avg = (n1*mean(X1)+n2*mean(X2))/(n1+n2);
total_avgm = mean(total_avg);
end
```

```
%1. ----- gB --------
gBm(1,1) = mean(gB(:,1));
gBm(1,2) = mean(gB(:,2));
gBd = gBm(1,1)-gBm(1,2);
%2. ----- dB -------
dBm(1,1) = mean(dB(:,1));
dBm(1,2) = mean(dB(:,2));
dBd = dBm(1,1)-dBm(1,2);
%3. ----- gU -------
gUm(1,1) = mean(gU(:,1));
gUm(1,2) = mean(gU(:,2));
gUd = gUm(1,1)-gUm(1,2);
%4. ----- dU -------
dUm(1,1) = mean(dU(:,1));
dUm(1,2) = mean(dU(:,2));
dUd = dUm(1,1)-dUm(1,2);
%5. ----- gL1 -------
gL1m(1,1) = mean(gL1(:,1));
gL1m(1,2) = mean(gL1(:,2));
gL1d = gL1m(1,1)-gL1m(1,2);
%6. ----- dL1 -------
dL1m(1,1) = mean(dL1(:,1));
dL1m(1,2) = mean(dL1(:,2));
dL1d = dL1m(1,1)-dL1m(1,2);
%7. ----- gL2 -------
gL2m(1,1) = mean(gL2(:,1));
gL2m(1,2) = mean(gL2(:,2));
gL2d = gL2m(1,1)-gL2m(1,2);
```

```
%8. ----- dL2 -------
dL2m(1,1) = mean(dL2(:,1));
dL2m(1,2) = mean(dL2(:,2));
dL2d = dL2m(1,1)-dL2m(1,2);
%9. ----- gH -------
gHm(1,1) = mean(gH(:,1));
gHm(1,2) = mean(gH(:,2));
gHd = gHm(1,1)-gHm(1,2);
%10. ----- dH -------
dHm(1,1) = mean(dH(:,1));
dHm(1,2) = mean(dH(:,2));
dHd = dHm(1,1)-dHm(1,2);
CL = [gBd dBd gUd dUd gL1d dL1d gL2d dL2d gHd dHd total_avgm];
M = [gB1;dB1;gU1;dU1;gL1_1;dL1_1;gL2_1;dL2_1;gH1;dH1]';
M1 = [dU1;gH1;dH1]';
p1 = anova1(M1);
```

ภาคผนวก ข

ตัวอย่างคำสั่ง : การหาความยาวช่วงความเชื่อมั่นของขนาดอิทธิพลมาตรฐานของกลุ่มตัวอย่างสองกลุ่มที่เป็นอิสระกันและมีขนาดเท่ากัน ($n_C : n_E$= 1:3)

<u>กรณีกลุ่มตัวอย่างมีความเบ้ =0.25, ความโด่ง =4 และ alpha = .05</u>

```
% function x = turkey_lamp(lambda1,lambda2,lambda3,lambda4)
% Independence.....
% Case
clear all
alpha = 0.05;
nE = 2;
nC = 6;
lambda1 = [-0.1310 ];
lambda2 = [0.0351 ];
lambda3 = [0.0176 ];
lambda4 = [0.0224 ];
for loop_2 = 1:3000
p1 = rand(1,nE); % ----- Uniform Random
p2 = rand(1,nC); % ----- Uniform Random
      X1 = lambda1+abs(p1.^lambda3-(1-p1.^lambda4))/lambda2;
      X2 = lambda1+abs(p2.^lambda3-(1-p2.^lambda4))/lambda2;
  %% -------- 10 formula ------
XE = X1(1,:);
XC = X2(1,:);
S1_square = var(XE);
S2_square = var(XC);
Sp = sqrt(((nE-1)*S1_square+(nC-1)*S2_square)/(nE+nC-2));
q = 100*(1-alpha/2);
d = (mean(XE)-mean(XC))/Sp;
```

```
m = nE+nC-2;
cm = 1-(3/(4*m-1));
g = cm*(mean(XE)-mean(XC))/Sp;
n_cap = nE*nC/(nE+nC); %---- n_cap => n~
N = nE+nC;
%1. ----- gB --------
gB(loop_2,1) = cm*(D_bar/SD)+q*sqrt(((cm^2*m*(1+n_cap*gD^2))/
                (m-2)*  n_cap)-gD^2);
gB(loop_2,2) = cm*(D_bar/SD)-q*sqrt(((cm^2*m*(1+n_cap*gD^2))/
                (m-2)*n_cap)-gD^2);
gB1(loop_2) = gB(loop_2,1) - gB(loop_2,2);
%2. ----- dB -------
dB(loop_2,1) = D_bar/SD+q*sqrt((m*(1+n_cap*dD^2)/((m-2)*n_cap))-(dD^2/cm^2));
dB(loop_2,2) = D_bar/SD-q*sqrt((m*(1+n_cap*dD^2)/((m-2)*n_cap))-(dD^2/cm^2));
dB1(loop_2) = dB(loop_2,1) - dB(loop_2,2);
%3. ----- gU -------
gU(loop_2,1) = cm*(D_bar/SD)+q*sqrt(1/n_cap+(1-(m-2)/(m*cm^2))*gD^2);
gU(loop_2,2) = cm*(D_bar/SD)-q*sqrt(1/n_cap+(1-(m-2)/(m*cm^2))*gD^2);
gU1(loop_2) = gU(loop_2,1) - gU(loop_2,2);
%4. ----- dU -------
dU(loop_2,1) = D_bar/SD+q*sqrt((1/n_cap*cm^2)+(1-(m-2)/(m*cm^2))*dD^2);
dU(loop_2,2) = D_bar/SD-q*sqrt((1/n_cap*cm^2)+(1-(m-2)/(m*cm^2))*dD^2);
dU1(loop_2) = dU(loop_2,1) - dU(loop_2,2);
%5. ----- gL1 -------
gL1(loop_2,1) = cm*(D_bar/SD)+q*sqrt(1/n_cap+gD^2/(2*m));
gL1(loop_2,2) = cm*(D_bar/SD)-q*sqrt(1/n_cap+gD^2/(2*m));
gL1_1(loop_2) = gL1(loop_2,1) - gL1(loop_2,2);
```

```
%6. ----- dL1 -------
dL1(loop_2,1) = D_bar/SD+q*sqrt(1/n_cap+dD^2/(2*m));
dL1(loop_2,2) = D_bar/SD-q*sqrt(1/n_cap+dD^2/(2*m));
dL1_1(loop_2) = dL1(loop_2,1)-dL1(loop_2,2);
%7. ----- gL2 -------
gL2(loop_2,1) = cm*(D_bar/SD)+q*sqrt(1/n_cap+gD^2/(2*N));
gL2(loop_2,2) = cm*(D_bar/SD)-q*sqrt(1/n_cap+gD^2/(2*N));
gL2_1(loop_2) = gL2(loop_2,1) - gL2(loop_2,2);
%8. ----- dL2 -------
dL2(loop_2,1) = D_bar/SD+q*sqrt(1/n_cap+dD^2/(2*N));
dL2(ioop_2,2) = D_bar/SD-q*sqrt(1/n_cap+dD^2/(2*N));
dL2_1(loop_2) = dL2(loop_2,1)-dL2(loop_2,2);
%9. ----- gH -------
a = sqrt(2);
Zg = sqrt(2)*log10((gD/a)+(sqrt((gD^2/a^2)+1)));
gH(loop_2,1) = a*sinh(Zg/sqrt(2))+q*sqrt(1/N);
gH(loop_2,2) = a*sinh(Zg/sqrt(2))-q*sqrt(1/N);
gH1(loop_2) = gH(loop_2,1)-gH(loop_2,2);
%10. ----- dH -------
a = sqrt(2);
Zd = sqrt(2)*log10((dD/a)+(sqrt((dD^2/a^2)+1)));
dH(loop_2,1) = a*sinh(Zd/sqrt(2))+q*sqrt(1/N);
dH(loop_2,2) = a*sinh(Zd/sqrt(2))-q*sqrt(1/N);
dH1(loop_2) = dH(loop_2,1)-dH(loop_2,2);
% ?????????? = (n1X1 + n2X2) / n1+n2
total_avg = (n1*mean(X1)+n2*mean(X2))/(n1+n2);
total_avgm = mean(total_avg);
end
```

```
%1. ----- gB --------
gBm(1,1) = mean(gB(:,1));
gBm(1,2) = mean(gB(:,2));
gBd = gBm(1,1)-gBm(1,2);
%2. ----- dB -------
dBm(1,1) = mean(dB(:,1));
dBm(1,2) = mean(dB(:,2));
dBd = dBm(1,1)-dBm(1,2);
%3. ----- gU -------
gUm(1,1) = mean(gU(:,1));
gUm(1,2) = mean(gU(:,2));
gUd = gUm(1,1)-gUm(1,2);
%4. ----- dU -------
dUm(1,1) = mean(dU(:,1));
dUm(1,2) = mean(dU(:,2));
dUd = dUm(1,1)-dUm(1,2);
%5. ----- gL1 -------
gL1m(1,1) = mean(gL1(:,1));
gL1m(1,2) = mean(gL1(:,2));
gL1d = gL1m(1,1)-gL1m(1,2);
%6. ----- dL1 -------
dL1m(1,1) = mean(dL1(:,1));
dL1m(1,2) = mean(dL1(:,2));
dL1d = dL1m(1,1)-dL1m(1,2);
%7. ----- gL2 -------
gL2m(1,1) = mean(gL2(:,1));
gL2m(1,2) = mean(gL2(:,2));
gL2d = gL2m(1,1)-gL2m(1,2);
```

```
%8. ----- dL2 -------
dL2m(1,1) = mean(dL2(:,1));
dL2m(1,2) = mean(dL2(:,2));
dL2d = dL2m(1,1)-dL2m(1,2);
%9. ----- gH -------
gHm(1,1) = mean(gH(:,1));
gHm(1,2) = mean(gH(:,2));
gHd = gHm(1,1)-gHm(1,2);
%10. ----- dH -------
dHm(1,1) = mean(dH(:,1));
dHm(1,2) = mean(dH(:,2));
dHd = dHm(1,1)-dHm(1,2);
CL = [gBd dBd gUd dUd gL1d dL1d gL2d dL2d gHd dHd total_avgm];
M = [gB1;dB1;gU1;dU1;gL1_1;dL1_1;gL2_1;dL2_1;gH1;dH1]';
M1 = [dU1;gH1;dH1]';
p1 = anova1(M1);
```

ภาคผนวก ค

ตัวอย่างคำสั่ง : การหาความยาวช่วงความเชื่อมั่นของขนาดอิทธิพลมาตรฐานของกลุ่มตัวอย่างสองกลุ่มที่เป็นอิสระกันและมีขนาดเท่ากัน (n_C : n_E= 1:7)

<u>กรณีกลุ่มตัวอย่างมีความเบ้ =0.25, ความโด่ง =6 และ alpha = 0.05</u>

```
% function x = turkey_lamp(lambda1,lambda2,lambda3,lambda4)
% Independence.....
% Case
% alpha = 0.1;
% nE = 4;
% nC = 4;
clear all
alpha = 0.05;
nE = 2;
nC = 14;
lambda1 = [-0.0670 ];
lambda2 = [-0.1613 ];
lambda3 = [-0.0725 ];
lambda4 = [-0.0817 ];
for loop_2 = 1:3000
p1 = rand(1,nE); % ----- Uniform Random
p2 = rand(1,nC); % ----- Uniform Random
     X1 = lambda1+abs(p1.^lambda3-(1-p1.^lambda4))/lambda2;
     X2 = lambda1+abs(p2.^lambda3-(1-p2.^lambda4))/lambda2;
 %% -------- 10 formula ------
XE = X1(1,:);
XC = X2(1,:);
S1_square = var(XE);
```

```
S2_square = var(XC);
Sp = sqrt(((nE-1)*S1_square+(nC-1)*S2_square)/(nE+nC-2));
q = 100*(1-alpha/2);
d = (mean(XE)-mean(XC))/Sp;
m = nE+nC-2;
cm = 1-(3/(4*m-1));
g = cm*(mean(XE)-mean(XC))/Sp;
n_cap = nE*nC/(nE+nC); %---- n_cap => n~
N = nE+nC;
%1. ----- gB --------
gB(loop_2,1) = cm*(D_bar/SD)+q*sqrt(((cm^2*m*(1+n_cap*gD^2))/
               (m-2)*  n_cap)-gD^2);
gB(loop_2,2) = cm*(D_bar/SD)-q*sqrt(((cm^2*m*(1+n_cap*gD^2))/
               (m-2)*n_cap)-gD^2);
gB1(loop_2) = gB(loop_2,1) - gB(loop_2,2);
%2. ----- dB -------
dB(loop_2,1) = D_bar/SD+q*sqrt((m*(1+n_cap*dD^2)/((m-2)*n_cap))-(dD^2/cm^2));
dB(loop_2,2) = D_bar/SD-q*sqrt((m*(1+n_cap*dD^2)/((m-2)*n_cap))-(dD^2/cm^2));
dB1(loop_2) = dB(loop_2,1) - dB(loop_2,2);
%3. ----- gU -------
gU(loop_2,1) = cm*(D_bar/SD)+q*sqrt(1/n_cap+(1-(m-2)/(m*cm^2))*gD^2);
gU(loop_2,2) = cm*(D_bar/SD)-q*sqrt(1/n_cap+(1-(m-2)/(m*cm^2))*gD^2);
gU1(loop_2) = gU(loop_2,1) - gU(loop_2,2);
%4. ----- dU -------
dU(loop_2,1) = D_bar/SD+q*sqrt((1/n_cap*cm^2)+(1-(m-2)/(m*cm^2))*dD^2);
dU(loop_2,2) = D_bar/SD-q*sqrt((1/n_cap*cm^2)+(1-(m-2)/(m*cm^2))*dD^2);
dU1(loop_2) = dU(loop_2,1) - dU(loop_2,2);
%5. ----- gL1 -------
gL1(loop_2,1) = cm*(D_bar/SD)+q*sqrt(1/n_cap+gD^2/(2*m));
gL1(loop_2,2) = cm*(D_bar/SD)-q*sqrt(1/n_cap+gD^2/(2*m));
```

```
gL1_1(loop_2) = gL1(loop_2,1) - gL1(loop_2,2);
%6. ----- dL1 -------
dL1(loop_2,1) = D_bar/SD+q*sqrt(1/n_cap+dD^2/(2*m));
dL1(loop_2,2) = D_bar/SD-q*sqrt(1/n_cap+dD^2/(2*m));
dL1_1(loop_2) = dL1(loop_2,1)-dL1(loop_2,2);
%7. ----- gL2 -------
gL2(loop_2,1) = cm*(D_bar/SD)+q*sqrt(1/n_cap+gD^2/(2*N));
gL2(loop_2,2) = cm*(D_bar/SD)-q*sqrt(1/n_cap+gD^2/(2*N));
gL2_1(loop_2) = gL2(loop_2,1) - gL2(loop_2,2);
%8. ----- dL2 -------
dL2(loop_2,1) = D_bar/SD+q*sqrt(1/n_cap+dD^2/(2*N));
dL2(loop_2,2) = D_bar/SD-q*sqrt(1/n_cap+dD^2/(2*N));
dL2_1(loop_2) = dL2(loop_2,1)-dL2(loop_2,2);
%9. ----- gH -------
a = sqrt(2);
Zg = sqrt(2)*log10((gD/a)+(sqrt((gD^2/a^2)+1)));
gH(loop_2,1) = a*sinh(Zg/sqrt(2))+q*sqrt(1/N);
gH(loop_2,2) = a*sinh(Zg/sqrt(2))-q*sqrt(1/N);
gH1(loop_2) = gH(loop_2,1)-gH(loop_2,2);
%10. ----- dH -------
a = sqrt(2);
Zd = sqrt(2)*log10((dD/a)+(sqrt((dD^2/a^2)+1)));
dH(loop_2,1) = a*sinh(Zd/sqrt(2))+q*sqrt(1/N);
dH(loop_2,2) = a*sinh(Zd/sqrt(2))-q*sqrt(1/N);
dH1(loop_2) = dH(loop_2,1)-dH(loop_2,2);
% ???????????? = (n1X1 + n2X2) / n1+n2
total_avg = (n1*mean(X1)+n2*mean(X2))/(n1+n2);
total_avgm = mean(total_avg);
end
```

```
%1. ----- gB --------
gBm(1,1) = mean(gB(:,1));
gBm(1,2) = mean(gB(:,2));
gBd = gBm(1,1)-gBm(1,2);
%2. ----- dB -------
dBm(1,1) = mean(dB(:,1));
dBm(1,2) = mean(dB(:,2));
dBd = dBm(1,1)-dBm(1,2);
%3. ----- gU -------
gUm(1,1) = mean(gU(:,1));
gUm(1,2) = mean(gU(:,2));
gUd = gUm(1,1)-gUm(1,2);
%4. ----- dU -------
dUm(1,1) = mean(dU(:,1));
dUm(1,2) = mean(dU(:,2));
dUd = dUm(1,1)-dUm(1,2);
%5. ----- gL1 -------
gL1m(1,1) = mean(gL1(:,1));
gL1m(1,2) = mean(gL1(:,2));
gL1d = gL1m(1,1)-gL1m(1,2);
%6. ----- dL1 -------
dL1m(1,1) = mean(dL1(:,1));
dL1m(1,2) = mean(dL1(:,2));
dL1d = dL1m(1,1)-dL1m(1,2);
%7. ----- gL2 -------
gL2m(1,1) = mean(gL2(:,1));
gL2m(1,2) = mean(gL2(:,2));
gL2d = gL2m(1,1)-gL2m(1,2);
```

```
%8. ----- dL2 -------
dL2m(1,1) = mean(dL2(:,1));
dL2m(1,2) = mean(dL2(:,2));
dL2d = dL2m(1,1)-dL2m(1,2);
%9. ----- gH -------
gHm(1,1) = mean(gH(:,1));
gHm(1,2) = mean(gH(:,2));
gHd = gHm(1,1)-gHm(1,2);
%10. ----- dH -------
dHm(1,1) = mean(dH(:,1));
dHm(1,2) = mean(dH(:,2));
dHd = dHm(1,1)-dHm(1,2);
CL = [gBd dBd gUd dUd gL1d dL1d gL2d dL2d gHd dHd total_avgm];
M = [gB1;dB1;gU1;dU1;gL1_1;dL1_1;gL2_1;dL2_1;gH1;dH1]';
M1 = [dU1;gH1;dH1]';
p1 = anova1(M1);
```

ภาคผนวก ง

ตัวอย่างคำสั่ง : การหาความยาวช่วงความเชื่อมั่นของขนาดอิทธิพลมาตรฐานของกลุ่มตัวอย่างสองกลุ่มที่ไม่เป็นอิสระกัน

กรณีกลุ่มตัวอย่างมีความเบ้ =0. 5, ความโด่ง =4 และ alpha = 0.05

```
% function x = turkey_lamp(lambda1,lambda2,lambda3,lambda4)
% Non Independence.....
clear all
alpha = 0.05;
n1 = 8;
n2 = 8;
n = 8;
lambda1 = [-0.2900 ];
lambda2 = [0.0604 ];
lambda3 = [0.0259 ];
lambda4 = [0.0447 ];
for loop_2 = 1:3000
   p1 = rand(1,n1);
   p2 = rand(1,n2);
      X1 = lambda1+abs(p1.^lambda3-(1-p1.^lambda4))/lambda2;
      X2 = lambda1+abs(p2.^lambda3-(1-p2.^lambda4))/lambda2;
%% -------- 10 formula ------
X1 = X1(1,:);
X2 = X2(1,:);
D = X2-X1;
SD = std(D);
m = n-1;
cm = 1-(3/(4*m-1));
D_bar = mean(X2)-mean(X1);
```

```
n_cap = n;%---- n_cap => n~
gD = cm*(D_bar/SD);
dD = D_bar/SD;
q = 100*(1-alpha/2);
N = n;
%1. ----- gB --------
gB(loop_2,1)=cm*(D_bar/SD)+q*sqrt(((cm^2*m*(1+n_cap*gD^2))/(m-2)*n_cap)-gD^2);
gB(loop_2,2)= cm*(D_bar/SD)-q*sqrt(((cm^2*m*(1+n_cap*gD^2))/(m-2)*n_cap)-gD^2);
gB1(loop_2) = gB(loop_2,1) - gB(loop_2,2);
%2. ----- dB -------
dB(loop_2,1) = D_bar/SD+q*sqrt((m*(1+n_cap*dD^2)/((m-2)*n_cap))-(dD^2/cm^2));
dB(loop_2,2) = D_bar/SD-q*sqrt((m*(1+n_cap*dD^2)/((m-2)*n_cap))-(dD^2/cm^2));
dB1(loop_2) = dB(loop_2,1) - dB(loop_2,2);
%3. ----- gU -------
gU(loop_2,1) = cm*(D_bar/SD)+q*sqrt(1/n_cap+(1-(m-2)/(m*cm^2))*gD^2);
gU(loop_2,2) = cm*(D_bar/SD)-q*sqrt(1/n_cap+(1-(m-2)/(m*cm^2))*gD^2);
gU1(loop_2) = gU(loop_2,1) - gU(loop_2,2);
%4. ----- dU -------
dU(loop_2,1) = D_bar/SD+q*sqrt((1/n_cap*cm^2)+(1-(m-2)/(m*cm^2))*dD^2);
dU(loop_2,2) = D_bar/SD-q*sqrt((1/n_cap*cm^2)+(1-(m-2)/(m*cm^2))*dD^2);
dU1(loop_2) = dU(loop_2,1) - dU(loop_2,2);
%5. ----- gL1 -------
gL1(loop_2,1) = cm*(D_bar/SD)+q*sqrt(1/n_cap+gD^2/(2*m));
gL1(loop_2,2) = cm*(D_bar/SD)-q*sqrt(1/n_cap+gD^2/(2*m));
gL1_1(loop_2) = gL1(loop_2,1) - gL1(loop_2,2);
%6. ----- dL1 -------
dL1(loop_2,1) = D_bar/SD+q*sqrt(1/n_cap+dD^2/(2*m));
dL1(loop_2,2) = D_bar/SD-q*sqrt(1/n_cap+dD^2/(2*m));
dL1_1(loop_2) = dL1(loop_2,1)-dL1(loop_2,2);
```

```
%7. ----- gL2 -------
gL2(loop_2,1) = cm*(D_bar/SD)+q*sqrt(1/n_cap+gD^2/(2*N));
gL2(loop_2,2) = cm*(D_bar/SD)-q*sqrt(1/n_cap+gD^2/(2*N));
gL2_1(loop_2) = gL2(loop_2,1) - gL2(loop_2,2);
%8. ----- dL2 -------
dL2(loop_2,1) = D_bar/SD+q*sqrt(1/n_cap+dD^2/(2*N));
dL2(loop_2,2) = D_bar/SD-q*sqrt(1/n_cap+dD^2/(2*N));
dL2_1(loop_2) = dL2(loop_2,1)-dL2(loop_2,2);
%9. ----- gH -------
a = sqrt(2);
Zg = sqrt(2)*log10((gD/a)+(sqrt((gD^2/a^2)+1)));
gH(loop_2,1) = a*sinh(Zg/sqrt(2))+q*sqrt(1/N);
gH(loop_2,2) = a*sinh(Zg/sqrt(2))-q*sqrt(1/N);
gH1(loop_2) = gH(loop_2,1)-gH(loop_2,2);
%10. ----- dH -------
a = sqrt(2);
Zd = sqrt(2)*log10((dD/a)+(sqrt((dD^2/a^2)+1)));
dH(loop_2,1) = a*sinh(Zd/sqrt(2))+q*sqrt(1/N);
dH(loop_2,2) = a*sinh(Zd/sqrt(2))-q*sqrt(1/N);
dH1(loop_2) = dH(loop_2,1)-dH(loop_2,2);
% ???????????? = (n1X1 + n2X2) / n1+n2
total_avg = (n1*mean(X1)+n2*mean(X2))/(n1+n2);
total_avgm = mean(total_avg);
end
%1. ----- gB --------
gBm(1,1) = mean(gB(:,1));
gBm(1,2) = mean(gB(:,2));
gBd = gBm(1,1)-gBm(1,2);
```

```
%2. ----- dB -------
dBm(1,1) = mean(dB(:,1));
dBm(1,2) = mean(dB(:,2));
dBd = dBm(1,1)-dBm(1,2);
%3. ----- gU -------
gUm(1,1) = mean(gU(:,1));
gUm(1,2) = mean(gU(:,2));
gUd = gUm(1,1)-gUm(1,2);
%4. ----- dU -------
dUm(1,1) = mean(dU(:,1));
dUm(1,2) = mean(dU(:,2));
dUd = dUm(1,1)-dUm(1,2);
%5. ----- gL1 -------
gL1m(1,1) = mean(gL1(:,1));
gL1m(1,2) = mean(gL1(:,2));
gL1d = gL1m(1,1)-gL1m(1,2);
%6. ----- dL1 -------
dL1m(1,1) = mean(dL1(:,1));
dL1m(1,2) = mean(dL1(:,2));
dL1d = dL1m(1,1)-dL1m(1,2);
%7. ----- gL2 -------
gL2m(1,1) = mean(gL2(:,1));
gL2m(1,2) = mean(gL2(:,2));
gL2d = gL2m(1,1)-gL2m(1,2);
%8. ----- dL2 -------
dL2m(1,1) = mean(dL2(:,1));
dL2m(1,2) = mean(dL2(:,2));
dL2d = dL2m(1,1)-dL2m(1,2);
```

```
%9. ----- gH -------
gHm(1,1) = mean(gH(:,1));
gHm(1,2) = mean(gH(:,2));
gHd = gHm(1,1)-gHm(1,2);
%10. ----- dH -------
dHm(1,1) = mean(dH(:,1));
dHm(1,2) = mean(dH(:,2));
dHd = dHm(1,1)-dHm(1,2);
CL = [gBd dBd gUd dUd gL1d dL1d gL2d dL2d gHd dHd total_avgm];
M = [gB1;dB1;gU1;dU1;gL1_1;dL1_1;gL2_1;dL2_1;gH1;dH1]';
M1 = [dU1;gH1;dH1]';
p1 = anova1(M1);
```

ภาคผนวก จ

ตาราง จ. ค่าพารามิเตอร์ของการแจกแจงแลมดาของตูกี จำแนกตามความเบ้(α_3) ความโด่ง (α_4) เมื่อ $\mu = 0$ และ $\sigma^2 = 1$

$\alpha_3 = 0.0$

α_4	LAM 1	LAM 2	LAM 3	LAM 4
1.8	.0	.5774	1.0000	1.0000
2.0	.0	.4952	.5843	.5843
2.2	.0	.4397	.4092	.4092
2.4	.0	.3993	.3032	.3032
2.6	.0	.2949	.2303	.2303
2.8	.0	.2433	.1765	.1765
3.0	.0	.1974	.1349	.1349
3.2	.0	.1563	.1016	.1016
3.4	.0	.1191	.0742	.0742
3.6	.0	.0852	.0512	.0512
3.8	.0	.0545	.0317	.0317
4.0	.0	.0262	.0148	.0148
4.1	.0	.0128	.7160-	.7160-
4.2	.0	-.0659-	-.0363-	-.0363-
4.3	.0	-.0323	-.6706-	-.6706-
4.4	.0	-.0241	-.0130	-.0130
4.6	.0	-.0466	-.0246	-.0246
4.8	.0	-.0676	-.0350	-.0350
5.0	.0	-.0870	-.0443	-.0443
5.2	.0	-.1053	-.0528	-.0528
5.4	.0	-.1227	-.0606	-.0606
5.6	.0	-.1389	-.0677	-.0677
5.8	.0	-.1541	-.0742	-.0742
6.0	.0	-.1686	-.0802	-.0802
6.2	.0	-.1823	-.0858	-.0858
6.4	.0	-.1954	-.0910	-.0910
6.6	.0	-.2077	-.0958	-.0958
6.8	.0	-.2194	-.1003	-.1003
7.0	.0	-.2306	-.1045	-.1045
7.2	.0	-.2414	-.1085	-.1085
7.4	.0	-.2518	-.1123	-.1123
7.6	.0	-.2615	-.1158	-.1158
7.8	.0	-.2709	-.1191	-.1191
8.0	.0	-.2800	-.1223	-.1223
8.2	.0	-.2887	-.1253	-.1253
8.4	.0	-.2969	-.1281	-.1281
8.6	.0	-.3050	-.1308	-.1308
8.8	.0	-.3128	-.1334	-.1334
9.0	.0	-.3203	-.1359	-.1359

$\alpha_3 = 0.05$

α_4	LAM 1	LAM 2	LAM 3	LAM 4
1.8	-1.703	.2661	.0000	.9502-
2.0	-1.229	.2122	.0505	.7603
2.2	-.802	.3314	.1128	.5602
2.4	-.375	.3228	.1674	.3941
2.6	-.143	.2924	.1973	.2605
2.8	-.043	.2429	.1625	.1903
3.0	-.059	.1975	.1276	.1425
3.2	-.046	.1565	.0974	.1061
3.4	-.038	.1194	.0718	.0770
3.6	-.033	.0856	.0499	.0530
3.8	-.077	.0548	.0311	.0327
4.0	-.026	.0264	.0146	.0153
4.1	-.024	.0132	.7164-	.7504-
4.2	-.024	.0704-	.0380-	.0397-
4.3	-.022	-.0120	-.6384-	-.6643-
4.4	-.022	-.0238	-.0126	-.0131
4.6	-.018	-.0462	-.0240	-.0248
4.8	-.019	-.0671	-.0342	-.0354
5.0	-.016	-.0867	-.0435	-.0448
5.2	-.016	-.1050	-.0519	-.0534
5.4	-.015	-.1222	-.0596	-.0612
5.6	-.014	-.1386	-.0667	-.0684
5.8	-.014	-.1538	-.0731	-.0750
6.0	-.013	-.1682	-.0791	-.0810
6.2	-.012	-.1820	-.0847	-.0866
6.4	-.012	-.1950	-.0899	-.0918
6.6	-.012	-.2074	-.0947	-.0967
6.8	-.011	-.2192	-.0992	-.1012
7.0	-.011	-.2303	-.1034	-.1054
7.2	-.010	-.2411	-.1074	-.1094
7.4	-.010	-.2515	-.1112	-.1132
7.6	-.975-	-.2613	-.1147	-.1167
7.8	-.999-	-.2707	-.1180	-.1201
8.0	-.926-	-.2797	-.1212	-.1233
8.2	-.906-	-.2884	-.1242	-.1262
8.4	-.931-	-.2968	-.1270	-.1291
8.6	-.912-	-.3048	-.1297	-.1318
8.8	-.852-	-.3125	-.1323	-.1343
9.0	-.837-	-.3201	-.1348	-.1368

$\alpha_3 = 0.10$

α_4	LAM 1	LAM 2	LAM 3	LAM 4
1.8	-1.674	.2435	.0000-	.9011-
2.0	-1.271	.3026	.0412	.7373
2.2	-.872	.3177	.0941	.5709
2.4	-.515	.3164	.1477	.4134
2.6	-.269	.2863	.1678	.2831
2.8	-.164	.2417	.1486	.2033
3.0	-.117	.1977	.1205	.1503
3.2	-.092	.1572	.0936	.1111
3.4	-.076	.1203	.0698	.0803
3.6	-.065	.0866	.0490	.0552
3.8	-.057	.0558	.0306	.0342
4.0	-.049	.0276	.0149	.0163
4.1	-.048	.0142	.7606-	.8302-
4.2	-.046	.1440-	.0762-	.0628-
4.3	-.044	-.0109	-.5703-	-.6374-
4.4	-.041	-.0227	-.0118	-.0122
4.6	-.037	-.0452	-.0231	-.0247
4.8	-.036	-.0661	-.0332	-.0354
5.0	-.033	-.0857	-.0424	-.0455
5.2	-.032	-.1040	-.0507	-.0537
5.4	-.030	-.1213	-.0584	-.0614
5.6	-.028	-.1375	-.0654	-.0684
5.8	-.027	-.1530	-.0719	-.0751
6.0	-.027	-.1674	-.0778	-.0816
6.2	-.025	-.1811	-.0834	-.0872
6.4	-.024	-.1943	-.0886	-.0925
6.6	-.023	-.2066	-.0934	-.0973
6.8	-.023	-.2184	-.0979	-.1019
7.0	-.022	-.2297	-.1021	-.1062
7.2	-.021	-.2405	-.1061	-.1102
7.4	-.020	-.2507	-.1099	-.1139
7.6	-.020	-.2606	-.1134	-.1175
7.8	-.02v	-.2699	-.1167	-.1208
8.0	-.019	-.2791	-.1199	-.1240
8.2	-.019	-.2878	-.1229	-.1270
8.4	-.018	-.2961	-.1258	-.1298
8.6	-.017	-.3041	-.1285	-.1325
8.8	-.017	-.3119	-.1311	-.1351
9.0	-.017	-.3193	-.1335	-.1376

$\alpha_3 = 0.15$

α_4	LAM 1	LAM 2	LAM 3	LAM 4
1.8	-1.655	.2611	.0000-	.8700-
2.0	-1.323	.2934	.0314	.7294
2.2	-.940	.3056	.0752-	.5623
2.4	-.617	.3031	.1215	.4194
2.6	-.376	.2791	.1435	.2994
2.8	-.244	.2397	.1350	.2156
3.0	-.177	.1980	.1135	.1586
3.2	-.136	.1584	.0901	.1167
3.4	-.114	.1219	.0682	.0843
3.6	-.098	.0884	.0485	.0581
3.8	-.086	.0577	.0310	.0363
4.0	-.076	.0294	.0155	.0178
4.1	-.073	.0160	.8378-	.9566-
4.2	-.069	.3217-	.1667-	.1890-
4.3	-.066	-.9113-	-.4660-	-.5276-
4.4	-.063	-.0210	-.0107	-.0120
4.6	-.058	-.0435	-.0218	-.0242
4.8	-.055	-.0644	-.0318	-.0351
5.0	-.051	-.0842	-.0410	-.0449
5.2	-.048	-.1025	-.0493	-.0537
5.4	-.045	-.1198	-.0569	-.0617
5.6	-.043	-.1361	-.0639	-.0690
5.8	-.042	-.1514	-.0703	-.0757
6.0	-.040	-.1660	-.0763	-.0819
6.2	-.038	-.1798	-.0819	-.0876
6.4	-.037	-.1928	-.0870	-.0929
6.6	-.035	-.2053	-.0919	-.0978
6.8	-.034	-.2172	-.0964	-.1024
7.0	-.033	-.2284	-.1006	-.1067
7.2	-.032	-.2392	-.1046	-.1107
7.4	-.031	-.2496	-.1084	-.1145
7.6	-.030	-.2593	-.1119	-.1180
7.8	-.029	-.2688	-.1153	-.1214
8.0	-.028	-.2780	-.1185	-.1246
8.2	-.028	-.2866	-.1215	-.1276
8.4	-.027	-.2948	-.1243	-.1304
8.6	-.027	-.3031	-.1271	-.1333
8.8	-.026	-.3104	-.1297	-.1357
9.0	-.025	-.3183	-.1322	-.1382

$\alpha_3 = 0.20$

α_4	LAM 1	LAM 2	LAM 3	LAM 4
2.0	-1.367	.2841	.0212	.7090
2.2	-1.011	.2947	.0624	.5571
2.4	-.706	.2919	.1013	.4246
2.6	-.471	.2718	.1233	.3120
2.8	-.322	.2374	.1221	.2273
3.0	-.237	.1943	.1065	.1672
3.2	-.187	.1559	.0866	.1230
3.4	-.154	.1240	.0667	.0889
3.6	-.132	.0908	.0482	.0615
3.8	-.116	.0601	.0314	.0389
4.0	-.103	.0318	.0166	.0198
4.1	-.097	.0185-	.9467-	.0113
4.2	-.093	.5707-	.2894-	.3429-
4.3	-.089	-.6641-	-.3342-	-.3929-
4.4	-.085	-.0165	-.9261-	-.0108
4.6	-.079	-.0410	-.0202	-.0233
4.8	-.074	-.0622	-.0302	-.0345
5.0	-.069	-.0818	-.0392	-.0444
5.2	-.065	-.1003	-.0475	-.0534
5.4	-.061	-.1176	-.0553	-.0615
5.6	-.058	-.1339	-.0623	-.0689
5.8	-.055	-.1494	-.0686	-.0757
6.0	-.053	-.1639	-.0745	-.0819
6.2	-.051	-.1776	-.0801	-.0877
6.4	-.049	-.1909	-.0853	-.0930
6.6	-.047	-.2034	-.0901	-.0980
6.8	-.045	-.2153	-.0947	-.1026
7.0	-.044	-.2265	-.0989	-.1069
7.2	-.043	-.2374	-.1029	-.1110
7.4	-.041	-.2477	-.1067	-.1148
7.6	-.040	-.2577	-.1103	-.1184
7.8	-.039	-.2671	-.1136	-.1218
8.0	-.038	-.2762	-.1168	-.1250
8.2	-.037	-.2850	-.1199	-.1280
8.4	-.036	-.2935	-.1228	-.1309
8.6	-.035	-.3016	-.1255	-.1336
8.8	-.035	-.3092	-.1281	-.1362
9.0	-.034	-.3168	-.1306	-.1387
9.2	-.034	-.3241	-.1330	-.1411

$\alpha_3 = 0.25$

α_4	LAM 1	LAM 2	LAM 3	LAM 4
2.0	-1.445	.2748	.0105	.7034
2.2	-1.084	.2847	.0506	.5544
2.4	-.790	.2820	.0843	.4294
2.6	-.558	.2650	.1062	.3226
2.8	-.398	.2349	.1099	.2385
3.0	-.298	.1967	.0996	.1743
3.2	-.237	.1619	.0831	.1300
3.4	-.196	.1266	.0653	.0943
3.6	-.167	.0937	.0481	.0656
3.8	-.147	.0632	.0321	.0421
4.0	-.131	.0351	.0176	.0224
4.1	-.126	.0217	.0108	.0136
4.2	-.118	.8869-	.4908-	.5467-
4.3	-.113	-.3476-	-.1713-	-.2103-
4.4	-.108	-.0156	-.7540-	-.9175-
4.6	-.099	-.0380	-.0184	-.0220
4.8	-.094	-.0591	-.0282	-.0334
5.0	-.087	-.0790	-.0373	-.0436
5.2	-.082	-.0978	-.0455	-.0527
5.4	-.077	-.1159	-.0531	-.0610
5.6	-.073	-.1312	-.0601	-.0685
5.8	-.070	-.1467	-.0665	-.0754
6.0	-.067	-.1613	-.0725	-.0817
6.2	-.064	-.1753	-.0781	-.0876
6.4	-.062	-.1885	-.0833	-.0930
6.6	-.059	-.2010	-.0882	-.0980
6.8	-.058	-.2129	-.0927	-.1027
7.0	-.055	-.2242	-.0970	-.1070
7.2	-.054	-.2350	-.1010	-.1111
7.4	-.052	-.2455	-.1048	-.1150
7.6	-.051	-.2556	-.1084	-.1186
7.8	-.049	-.2653	-.1118	-.1220
8.0	-.048	-.2746	-.1151	-.1252
8.2	-.047	-.2835	-.1181	-.1283
8.4	-.046	-.2916	-.1210	-.1312
8.6	-.044	-.2995	-.1238	-.1339
8.8	-.044	-.3072	-.1264	-.1365
9.0	-.043	-.3147	-.1289	-.1390
9.2	-.042	-.3220	-.1313	-.1414

ตาราง จ. (ต่อ)

$a_3 = 0.30$

a_4	Lin 1	Lin 2	Lin 3	Lin 4
2.0	-1.550	.2640	.0000	.7020
2.2	-1.144	.2755	.0380	.5556
2.4	-.871	.2733	.0695	.4348
2.6	-.642	.2546	.0911	.3324
2.8	-.474	.2323	.0983	.2495
3.0	-.342	.1991	.0925	.1859
3.2	-.288	.1641	.0796	.1377
3.4	-.239	.1298	.0640	.1003
3.6	-.204	.0973	.0481	.0704
3.8	-.179	.0671	.0330	.0460
4.0	-.160	.0389	.0190	.0255
4.2	-.144	.0127	.6175+	.0035+
4.3	-.138	.0789+	.0380+	.0489+
4.4	-.131	-.0116	-.5554+	-.7057+
4.5	-.129	-.0231	-.0110	-.0139
4.6	-.121	-.0343	-.0163	-.0203
4.8	-.113	-.0554	-.0260	-.0319
5.0	-.105	-.0752	-.0350	-.0423
5.2	-.100	-.0939	-.0432	-.0517
5.4	-.093	-.1114	-.0508	-.0601
5.6	-.085	-.1279	-.0578	-.0678
5.8	-.085	-.1435	-.0643	-.0748
6.0	-.081	-.1582	-.0703	-.0812
6.2	-.078	-.1722	-.0759	-.0872
6.4	-.075	-.1854	-.0811	-.0927
6.6	-.072	-.1979	-.0860	-.0977
6.8	-.069	-.2100	-.0906	-.1025
7.0	-.067	-.2218	-.0949	-.1069
7.2	-.065	-.2325	-.0990	-.1111
7.4	-.063	-.2427	-.1028	-.1149
7.6	-.061	-.2528	-.1064	-.1186
7.8	-.060	-.2623	-.1098	-.1220
8.0	-.058	-.2716	-.1131	-.1253
8.2	-.056	-.2805	-.1162	-.1284
8.4	-.055	-.2889	-.1191	-.1313
8.6	-.054	-.2971	-.1219	-.1341
8.8	-.053	-.3050	-.1246	-.1367
9.0	-.052	-.3125	-.1271	-.1392
9.2	-.051	-.3197	-.1295	-.1416

$a_3 = 0.35$

a_4	Lin 1	Lin 2	Lin 3	Lin 4
2.0	-1.539	.2639	.0000+	.6836+
2.2	-1.252	.2668	.0256	.5599
2.4	-.955	.2653	.0559	.4415
2.6	-.724	.2528	.0775	.3423
2.8	-.550	.2296	.0873	.2606
3.0	-.427	.1996	.0854	.1961
3.2	-.343	.1665	.0758	.1462
3.4	-.285	.1333	.0625	.1072
3.6	-.243	.1016	.0482	.0760
3.8	-.213	.0716	.0340	.0505
4.0	-.191	.0434	.0206	.0293
4.2	-.172	.0173	.0158+	.0112
4.3	-.163	.4870+	.2293+	.3090+
4.4	-.156	-.7105+	-.3332+	-.4431+
4.5	-.151	-.0182	-.8723+	-.0115
4.6	-.142	-.0298	-.0139	-.0180
4.8	-.132	-.0511	-.0236	-.0300
5.0	-.124	-.0710	-.0325	-.0407
5.2	-.117	-.0898	-.0407	-.0503
5.4	-.110	-.1074	-.0483	-.0589
5.6	-.105	-.1240	-.0553	-.0668
5.8	-.100	-.1396	-.0616	-.0739
6.0	-.096	-.1545	-.0678	-.0805
6.2	-.091	-.1685	-.0735	-.0865
6.4	-.088	-.1816	-.0787	-.0921
6.6	-.085	-.1945	-.0836	-.0973
6.8	-.082	-.2067	-.0883	-.1021
7.0	-.079	-.2181	-.0926	-.1066
7.2	-.077	-.2291	-.0967	-.1108
7.4	-.074	-.2396	-.1006	-.1147
7.6	-.072	-.2496	-.1042	-.1184
7.8	-.070	-.2593	-.1077	-.1219
8.0	-.068	-.2685	-.1109	-.1252
8.2	-.066	-.2775	-.1141	-.1283
8.4	-.065	-.2860	-.1170	-.1313
8.6	-.064	-.2942	-.1198	-.1341
8.8	-.062	-.3020	-.1225	-.1367
9.0	-.060	-.3096	-.1251	-.1392
9.2	-.059	-.3172	-.1276	-.1417

$a_3 = 0.40$

a_4	Lin 1	Lin 2	Lin 3	Lin 4
2.2	-1.354	.2582	.0129	.5441
2.4	-1.043	.2580	.0430	.4501
2.6	-.808	.2473	.0648	.3521
2.8	-.627	.2273	.0767	.2721
3.0	-.494	.2000	.0782	.2064
3.2	-.400	.1690	.0716	.1555
3.4	-.333	.1371	.0609	.1144
3.6	-.284	.1060	.0482	.0820
3.8	-.248	.0764	.0351	.0559
4.0	-.222	.0485	.0223	.033
4.2	-.200	.0224	.0103	.014
4.3	-.190	.0100	.4597+	.452
4.4	-.182	-.0357+	-.0182+	-.025
4.5	-.174	-.0136	-.6204+	-.853
4.6	-.166	-.0248	-.0113	-.015
4.8	-.155	-.0462	-.0209	-.027
5.0	-.146	-.0662	-.0297	-.038
5.2	-.136	-.0850	-.0379	-.048
5.4	-.129	-.1027	-.0455	-.057
5.6	-.122	-.1194	-.0525	-.065
5.8	-.115	-.1352	-.0591	-.072
6.0	-.111	-.1501	-.0651	-.079
6.2	-.106	-.1643	-.0708	-.085
6.4	-.102	-.1778	-.0761	-.091
6.6	-.098	-.1906	-.0811	-.096
6.8	-.094	-.2026	-.0857	-.101
7.0	-.091	-.2142	-.0901	-.106
7.2	-.089	-.2253	-.0942	-.110
7.4	-.086	-.2359	-.0981	-.114
7.6	-.083	-.2459	-.1018	-.118
7.8	-.081	-.2558	-.1053	-.121
8.0	-.079	-.2650	-.1086	-.124
8.2	-.077	-.2741	-.1118	-.128
8.4	-.075	-.2827	-.1148	-.131
8.6	-.073	-.2908	-.1176	-.133
8.8	-.072	-.2958	-.1203	-.136
9.0	-.070	-.3064	-.1229	-.139
9.2	-.069	-.3139	-.1254	-.141
9.4	-.067	-.3210	-.1278	-.143

$a_3 = 0.45$

a_4	Lin 1	Lin 2	Lin 3	Lin 4
2.2	-1.471	.2500	.0000	.5812
2.4	-1.138	.2511	.0305	.4608
2.6	-.899	.2424	.0528	.3641
2.8	-.707	.2248	.0663	.2850
3.0	-.565	.2003	.0707	.2184
3.2	-.460	.1716	.0674	.1657
3.4	-.384	.1412	.0590	.1236
3.6	-.329	.1110	.0480	.0897
3.8	-.287	.0818	.0361	.0619
4.0	-.255	.0542	.0241	.0386
4.2	-.230	.0282	.0126	.0193
4.3	-.221	.0158	.7045+	.0106
4.4	-.208	.4102+	.1833+	.2691+
4.5	-.200	-.7861+	-.3505+	-.5065+
4.6	-.192	-.0191	-.8511+	-.0121
4.8	-.178	-.0406	-.0180	-.0245
5.0	-.165	-.0607	-.0268	-.0362
5.2	-.157	-.0796	-.0349	-.0466
5.4	-.147	-.0975	-.0425	-.0555
5.6	-.140	-.1142	-.0495	-.0637
5.8	-.132	-.1302	-.0561	-.0712
6.0	-.127	-.1453	-.0622	-.0781
6.2	-.121	-.1595	-.0679	-.0844
6.4	-.116	-.1731	-.0733	-.0902
6.6	-.112	-.1860	-.0783	-.0956
6.8	-.108	-.1983	-.0830	-.1006
7.0	-.104	-.2098	-.0874	-.1052
7.2	-.101	-.2211	-.0916	-.1096
7.4	-.097	-.2316	-.0955	-.1136
7.6	-.095	-.2419	-.0992	-.1175
7.8	-.092	-.2518	-.1029	-.1211
8.0	-.090	-.2611	-.1061	-.1245
8.2	-.088	-.2702	-.1093	-.1277
8.4	-.085	-.2789	-.1124	-.1307
8.6	-.084	-.2871	-.1152	-.1336
8.8	-.081	-.2952	-.1180	-.1363
9.0	-.080	-.3029	-.1206	-.1389
9.2	-.078	-.3102	-.1231	-.1413
9.4	-.076	-.3176	-.1256	-.1437

$a_3 = 0.50$

a_4	Lin 1	Lin 2	Lin 3	Lin 4
2.4	-1.245	.2445	.0178	.4748
2.6	-.987	.2376	.0410	.3770
2.8	-.790	.2225	.0561	.2969
3.0	-.635	.2006	.0630	.2307
3.2	-.525	.1762	.0625	.1768
3.4	-.440	.1454	.0566	.1332
3.6	-.376	.1163	.0476	.0979
3.8	-.329	.0877	.0369	.0689
4.0	-.290	.0604	.0259	.0447
4.2	-.262	.0345	.0149	.0243
4.3	-.248	.0221	.9582+	.0152
4.4	-.238	.0101	.4383+	.6815+
4.5	-.226	-.1612+	-.0700+	-.1066+
4.6	-.219	-.0128	-.5570+	-.8336+
4.8	-.202	-.0344	-.0148	-.0216
5.0	-.186	-.0546	-.0236	-.0333
5.2	-.177	-.0737	-.0317	-.0438
5.4	-.167	-.0917	-.0393	-.0532
5.6	-.157	-.1087	-.0464	-.0617
5.8	-.150	-.1246	-.0529	-.0694
6.0	-.142	-.1396	-.0591	-.0764
6.2	-.137	-.1542	-.0648	-.0829
6.4	-.131	-.1679	-.0702	-.0889
6.6	-.126	-.1809	-.0753	-.0944
6.8	-.122	-.1933	-.0800	-.0995
7.0	-.117	-.2050	-.0845	-.1042
7.2	-.113	-.2163	-.0887	-.1087
7.4	-.110	-.2270	-.0927	-.1128
7.6	-.107	-.2374	-.0965	-.1167
7.8	-.104	-.2473	-.1001	-.1204
8.0	-.101	-.2567	-.1035	-.1238
8.2	-.098	-.2659	-.1067	-.1271
8.4	-.095	-.2745	-.1098	-.1301
8.6	-.094	-.2830	-.1127	-.1331
8.8	-.091	-.2910	-.1155	-.1358
9.0	-.089	-.2986	-.1181	-.1384
9.2	-.088	-.3064	-.1207	-.1410
9.4	-.086	-.3134	-.1231	-.1433
9.6	-.084	-.3206	-.1255	-.1456

$a_3 = 0.55$

a_4	Lin 1	Lin 2	Lin 3	Lin
2.4	-1.370	.2379	.4663+	.693
2.6	-1.047	.2331	.0292	.392
2.8	-.818	.2202	.0459	.310
3.0	-.716	.2009	.0551	.244
3.2	-.593	.1767	.0572	.188
3.4	-.499	.1497	.0538	.143
3.6	-.428	.1217	.0467	.107
3.8	-.372	.0940	.0376	.076
4.0	-.330	.0670	.0275	.051
4.2	-.298	.0413	.0172	.030
4.4	-.265	.0170	.7149+	.011
4.5	-.257	.5355+	.2258+	.344
4.6	-.247	-.5454+	-.2515+	-.397
4.7	-.237	-.0169	-.7160+	-.011
4.8	-.227	-.0276	-.0117	-.017
5.0	-.213	-.0480	-.0203	-.030
5.2	-.200	-.0671	-.0283	-.040
5.4	-.187	-.0852	-.0358	-.050
5.6	-.177	-.1024	-.0430	-.059
5.8	-.165	-.1184	-.0495	-.067
6.0	-.161	-.1338	-.0557	-.074
6.2	-.153	-.1483	-.0615	-.081
6.4	-.147	-.1620	-.0669	-.087
6.6	-.141	-.1753	-.0721	-.092
6.8	-.136	-.1876	-.0769	-.098
7.0	-.131	-.1997	-.0814	-.103
7.2	-.127	-.2111	-.0857	-.107
7.4	-.123	-.2218	-.0897	-.111
7.6	-.119	-.2322	-.0935	-.115
7.8	-.115	-.2422	-.0972	-.119
8.0	-.113	-.2519	-.1006	-.123
8.2	-.110	-.2610	-.1039	-.126
8.4	-.107	-.2698	-.1070	-.129
8.6	-.104	-.2784	-.1100	-.132
8.8	-.102	-.2864	-.1128	-.135
9.0	-.100	-.2943	-.1155	-.137
9.2	-.097	-.3019	-.1181	-.140
9.4	-.095	-.3092	-.1206	-.142
9.6	-.094	-.3164	-.1230	-.145

ตาราง จ. (ต่อ)

$\alpha_3 = 0.60$

α_4	Lag 1	Lag 2	Lag 3	Lag 4
2.4	-1.411	.2347	.0000*	.4553*
2.6	-1.194	.2284	.0171	.4098
2.8	-.972	.2180	.0355	.3265
3.0	-.800	.2009	.0467	.2583
3.2	-.665	.1791	.0514	.2020
3.4	-.562	.1539	.0504	.1556
3.6	-.482	.1273	.0454	.1171
3.8	-.420	.1005	.0379	.0856
4.0	-.372	.0760	.0289	.0589
4.2	-.335	.0486	.0194	.0366
4.4	-.302	.0244	.5911*	.0175
4.5	-.289	.0128	.5215*	.0965*
4.6	-.277	.1492*	.0611*	.3925*
4.7	-.266	-.9531*	-.3916*	-.6425*
4.8	-.256	-.0202	-.8326*	-.0174
5.0	-.238	-.0407	-.0168	-.0261
5.2	-.222	-.0600	-.0248	-.0373
5.4	-.209	-.0782	-.0323	-.0474
5.6	-.197	-.0956	.0394	-.0565
5.8	-.187	-.1118	-.0460	-.0647
6.0	-.179	-.1273	-.0522	-.0722
6.2	-.171	-.1419	-.0580	-.0790
6.4	-.163	-.1559	-.0635	-.0853
6.6	-.157	-.1691	-.9686	-.0911
6.8	-.151	-.1816	-.0735	-.0965
7.0	-.146	-.1936	-.0781	-.1015
7.2	-.141	-.2052	-.0824	-.1061
7.4	-.137	-.2163	-.0865	-.1105
7.6	-.132	-.2267	-.0904	-.1145
7.8	-.128	-.2368	-.0941	-.1183
8.0	-.124	-.2465	-.0976	-.1219
8.2	-.121	-.2557	-.1009	-.1253
8.4	-.118	-.2647	-.1041	-.1285
8.6	-.115	-.2732	-.1071	-.1315
8.8	-.113	-.2815	-.1100	-.1344
9.0	-.110	-.2894	-.1127	-.1371
9.2	-.108	-.2970	-.1153	-.1397
9.4	-.105	-.3045	-.1179	-.1422
9.6	-.103	-.3116	-.1203	-.1445

$\alpha_3 = 0.65$

α_4	Lag 1	Lag 2	Lag 3	Lag 4
2.6	-1.329	.2240	.3906*	.4316
2.8	-1.076	.2157	.0246	.3443
3.0	-.869	.2010	.0380	.2742
3.2	-.744	.1812	.0449	.2162
3.4	-.630	.1583	.0468	.1682
3.6	-.542	.1330	.0435	.1283
3.8	-.472	.1072	.0377	.0952
4.0	-.418	.0813	.0300	.0674
4.2	-.374	.0564	.0215	.0440
4.4	-.338	.0323	.0126	.0239
4.5	-.324	.0207	.6137*	.0150
4.6	-.310	.9399*	.3719*	.6660*
4.7	-.297	-.1593*	-.0634*	-.1106*
4.8	-.285	-.0123	-.9221*	-.8393*
5.0	-.265	-.0338	-.0132	-.0216
5.2	-.248	-.0524	-.0211	-.0334
5.4	-.231	-.0707	-.0286	-.0438
5.6	-.219	-.0880	-.0356	-.0532
5.8	-.209	-.1046	-.0422	-.0618
6.0	-.198	-.1201	-.0484	-.0695
6.2	-.189	-.1350	-.0543	-.0766
6.4	-.181	-.1491	-.0598	-.0831
6.6	-.174	-.1625	-.0650	-.0891
6.8	-.167	-.1753	-.0700	-.0946
7.0	-.161	-.1874	-.0746	-.0997
7.2	-.155	-.1991	-.0790	-.1045
7.4	-.150	-.2100	-.0831	-.1089
7.6	-.145	-.2208	-.0871	-.1131
7.8	-.141	-.2309	-.0908	-.1170
8.0	-.137	-.2407	-.0944	-.1207
8.2	-.134	-.2501	-.0977	-.1242
8.4	-.130	-.2591	-.1010	-.1274
8.6	-.127	-.2677	-.1040	-.1305
8.8	-.124	-.2761	-.1069	-.1335
9.0	-.121	-.2840	-.1097	-.1362
9.2	-.119	-.2919	-.1124	-.1389
9.4	-.116	-.2994	-.1150	-.1414
9.6	-.114	-.3065	-.1174	-.1438
9.8	-.112	-.3136	-.1198	-.1461

$\alpha_3 = 0.70$

α_4	Lag 1	Lag 2	Lag 3	Lag 4
2.6	-1.348	.2217	.0000*	.4353*
2.8	-1.194	.2132	.0130	.3651
3.0	-.967	.2008	.0286	.2918
3.2	-.826	.1833	.0378	.2319
3.4	-.704	.1621	.0416	.1821
3.6	-.606	.1385	.0409	.1406
3.8	-.529	.1139	.0369	.1060
4.0	-.467	.0869	.0307	.0768
4.2	-.419	.0643	.0232	.0522
4.4	-.379	.0406	.0151	.0312
4.6	-.344	.0176	.6767*	.0130
4.7	-.331	.6799*	.2607*	.4872*
4.8	-.317	-.2917*	-.9512*	-.2750*
4.9	-.305	-.0144	-.5574*	-.9893*
5.0	-.294	-.0265	-.9565*	-.0166
5.2	-.276	-.0491	-.0173	-.0269
5.4	-.259	-.0626	-.0247	-.0398
5.6	-.243	-.0802	-.0317	-.0496
5.8	-.229	-.0967	-.0383	-.0584
6.0	-.215	-.1125	-.0445	-.0665
6.2	-.203	-.1275	-.0504	-.0738
6.4	-.193	-.1417	-.0560	-.0805
6.6	-.181	-.1556	-.0613	-.0867
6.8	-.174	-.1642	-.0662	-.0924
7.0	-.167	-.1805	-.0709	-.0977
7.2	-.160	-.1923	-.0754	-.1026
7.4	-.155	-.2036	-.0796	-.1072
7.6	-.150	-.2144	-.0836	-.1115
7.8	-.145	-.2246	-.0874	-.1155
8.0	-.141	-.2346	-.0910	-.1193
8.2	-.137	-.2439	-.0944	-.1228
8.4	-.133	-.2532	-.0977	-.1262
8.6	-.130	-.2614	-.1008	-.1293
8.8	-.126	-.2703	-.1038	-.1323
9.0	-.123	-.2784	-.1066	-.1352
9.2	-.120	-.2862	-.1093	-.1379
9.4	-.117	-.2937	-.1119	-.1404
9.6	-.115	-.3011	-.1144	-.1429
9.8	-.112	-.3081	-.1168	-.1452

$\alpha_3 = 0.75$

α_4	Lag 1	Lag 2	Lag 3	Lag 4
2.6	-1.334	.2104	.0000	.3903
3.0	-1.097	.2003	.0183	.3119
3.2	-.921	.1850	.0299	.2492
3.4	-.785	.1658	.0360	.1974
3.6	-.677	.1440	.0375	.1542
3.8	-.590	.1206	.0355	.1179
4.0	-.521	.0966	.0309	.0873
4.2	-.466	.0726	.0240	.0614
4.4	-.419	.0492	.0174	.0392
4.6	-.384	.0266	.9663*	.0202
4.7	-.367	.0156	.5745*	.0116
4.8	-.352	.4940*	.1833*	.3583*
4.9	-.339	-.5509*	-.2061*	-.3916*
5.0	-.326	-.0157	-.5915*	-.0109
5.2	-.306	-.0353	-.0134	-.0238
5.4	-.284	-.0539	-.0207	-.0352
5.6	-.268	-.0716	-.0276	-.0459
5.8	-.254	-.0884	-.0342	-.0567
6.0	-.240	-.1044	-.0405	-.0630
6.2	-.229	-.1195	-.0464	-.0706
6.4	-.218	-.1339	-.0520	-.0776
6.6	-.209	-.1476	-.0573	-.0840
6.8	-.201	-.1607	-.0623	-.0899
7.0	-.194	-.1731	-.0670	-.0954
7.2	-.186	-.1851	-.0715	-.1005
7.4	-.181	-.1964	-.0758	-.1053
7.6	-.175	-.2074	-.0799	-.1098
7.8	-.170	-.2177	-.0837	-.1139
8.0	-.165	-.2278	-.0874	-.1176
8.2	-.160	-.2375	-.0909	-.1213
8.4	-.156	-.2466	-.0942	-.1247
8.6	-.152	-.2554	-.0974	-.1279
8.8	-.148	-.2640	-.1004	-.1310
9.0	-.145	-.2722	-.1033	-.1339
9.2	-.142	-.2802	-.1061	-.1367
9.4	-.138	-.2879	-.1088	-.1393
9.6	-.135	-.2952	-.1113	-.1418
9.8	-.133	-.3023	-.1137	-.1442
10.0	-.130	-.3093	-.1161	-.1465

$\alpha_3 = 0.80$

α_4	Lag 1	Lag 2	Lag 3	Lag 4
3.0	-1.225	.1996	.6647*	.3356
3.2	-1.025	.1864	.0211	.2687
3.4	-.874	.1682	.0295	.2143
3.6	-.756	.1492	.0333	.1691
3.8	-.657	.1272	.0333	.1310
4.0	-.582	.1042	.0303	.0989
4.2	-.515	.0810	.0256	.0716
4.4	-.466	.0580	.0192	.0482
4.6	-.425	.0357	.0123	.0281
4.8	-.392	.0142	.5035*	.0107
4.9	-.375	.3770*	.1352*	.2770*
5.0	-.361	-.6291*	-.2276*	-.4531*
5.1	-.349	-.0164	-.5981*	-.0116
5.2	-.335	-.0361	-.9596*	-.0141
5.4	-.313	-.0448	-.0167	-.0301
5.6	-.295	-.0626	-.0235	-.0408
5.8	-.279	-.0795	-.0300	-.0504
6.0	-.264	-.0958	-.0363	-.0592
6.2	-.251	-.1110	-.0422	-.0671
6.4	-.240	-.1255	-.0478	-.0743
6.6	-.230	-.1394	-.0531	-.0810
6.8	-.220	-.1527	-.0582	-.0871
7.0	-.212	-.1651	-.0630	-.0928
7.2	-.204	-.1778	-.0676	-.0980
7.4	-.197	-.1889	-.0719	-.1029
7.6	-.191	-.2005	-.0760	-.1075
7.8	-.185	-.2104	-.0799	-.1117
8.0	-.180	-.2205	-.0836	-.1157
8.2	-.174	-.2304	-.0872	-.1195
8.4	-.169	-.2397	-.0906	-.1230
8.6	-.166	-.2488	-.0938	-.1264
8.8	-.161	-.2574	-.0969	-.1295
9.0	-.157	-.2658	-.0999	-.1325
9.2	-.154	-.2737	-.1027	-.1353
9.4	-.150	-.2815	-.1054	-.1380
9.6	-.143	-.2890	-.1080	-.1406
9.8	-.144	-.2962	-.1105	-.1430
10.0	-.141	-.3033	-.1129	-.1454
10.2	-.139	-.3100	-.1152	-.1476

$\alpha_3 = 0.85$

α_4	Lag 1	Lag 2	Lag 3	Lag 4
3.0	-1.303	.1965	.0000*	.3488
3.2	-1.145	.1875	.0110	.2912
3.4	-.973	.1723	.0220	.2332
3.6	-.838	.1541	.0281	.1855
3.8	-.732	.1336	.0301	.1455
4.0	-.645	.1119	.0291	.1117
4.2	-.577	.0895	.0256	.0829
4.4	-.519	.0671	.0206	.0587
4.6	-.472	.0451	.0146	.0370
4.8	-.430	.0234	.8001*	.0185
4.9	-.413	.0134	.4581*	.0102
5.0	-.398	.3503*	.1211*	.2612*
5.1	-.383	-.6701*	-.2345*	-.4896*
5.2	-.370	-.0165	-.5808*	-.0114
5.4	-.348	-.0353	-.0127	-.0244
5.6	-.324	-.0531	-.0193	-.0356
5.8	-.305	-.0703	-.0258	-.0457
6.0	-.290	-.0864	-.0319	-.0546
6.2	-.275	-.1019	-.0376	-.0631
6.4	-.262	-.1168	-.0435	-.0707
6.6	-.251	-.1307	-.0488	-.0776
6.8	-.241	-.1442	-.0539	-.0840
7.0	-.231	-.1570	-.0588	-.0899
7.2	-.223	-.1692	-.0634	-.0953
7.4	-.215	-.1809	-.0676	-.1004
7.6	-.207	-.1921	-.0720	-.1051
7.8	-.201	-.2028	-.0759	-.1095
8.0	-.195	-.2130	-.0797	-.1136
8.2	-.190	-.2229	-.0833	-.1175
8.4	-.184	-.2324	-.0866	-.1211
8.6	-.179	-.2416	-.0901	-.1244
8.8	-.175	-.2503	-.0932	-.1278
9.0	-.171	-.2587	-.0962	-.1309
9.2	-.167	-.2669	-.0991	-.1338
9.4	-.163	-.2748	-.1019	-.1366
9.6	-.159	-.2823	-.1045	-.1392
9.8	-.156	-.2897	-.1071	-.1417
10.0	-.153	-.2967	-.1095	-.1441
10.2	-.150	-.3037	-.1119	-.1463

ตาราง จ. (ต่อ)

$\alpha_3 = 0.90$

α_4	Lag 1	Lag 2	Lag 3	Lag 4
3.2	-1.277	.1660	.0000	.3160
3.4	-1.045	.1751	.0133	.2548
3.6	-.933	.1546	.0216	.2039
3.8	-.814	.1397	.0260	.1615
4.0	-.717	.1193	.0269	.1258
4.2	-.639	.0979	.0251	.0953
4.4	-.575	.0762	.0214	.0693
4.6	-.522	.0557	.0164	.0468
4.8	-.478	.0337	.0106	.0273
5.0	-.439	.0132	.4226+	.0102
5.1	-.422	.3339+	.1111+	.2526+
5.2	-.407	-.6388+	-.2154+	-.4735+
5.3	-.394	-.0159	-.5428+	-.0116
5.4	-.375	-.0252	-.8699+	-.0180
5.6	-.353	-.0432	-.0152	-.0298+
5.8	-.334	-.0605	-.0215	-.0435
6.0	-.317	-.0768	-.0275	-.0500
6.2	-.301	-.0924	-.0334	-.0587
6.4	-.287	-.1073	-.0390	-.0666
6.6	-.273	-.1215	-.0444	-.0738
6.8	-.262	-.1352	-.0495	-.0805
7.0	-.252	-.1481	-.0544	-.0866
7.2	-.242	-.1606	-.0591	-.0923
7.4	-.233	-.1723	-.0635	-.0975
7.6	-.225	-.1838	-.0678	-.1024
7.8	-.218	-.1947	-.0718	-.1070
8.0	-.212	-.2051	-.0756	-.1113
8.2	-.205	-.2151	-.0793	-.1153
8.4	-.199	-.2246	-.0828	-.1190
8.6	-.194	-.2340	-.0862	-.1226
8.8	-.185	-.2428	-.0894	-.1259
9.0	-.185	-.2514	-.0924	-.1291
9.2	-.180	-.2597	-.0954	-.1321
9.4	-.176	-.2676	-.0982	-.1349
9.6	-.172	-.2753	-.1009	-.1376
9.8	-.168	-.2827	-.1035	-.1402
10.0	-.165	-.2900	-.1060	-.1427
10.2	-.162	-.2969	-.1084	-.1450
10.4	-.159	-.3035	-.1107	-.1472

$\alpha_3 = 1.00$

α_4	Lag 1	Lag 2	Lag 3	Lag 4
3.4	-1.253	.1772	.0000+	.2854+
3.6	-1.161	.1664	.4828+	.2490
3.8	-1.010	.1509	.0141	.1996
4.0	-.886	.1333	.0193	.1588
4.2	-.787	.1142	.0212	.1244
4.4	-.706	.0943	.0206	.0950
4.6	-.638	.0741	.0182	.0697
4.8	-.581	.0539	.0144	.0477
5.0	-.533	.0340	.9635+	.0285
5.2	-.492	.0146	.4383+	.0117
5.3	-.474	.5192+	.1584+	.4063+
5.4	-.445	-.0317+	-.0101+	-.0242+
5.5	-.442	-.0132	-.4176+	-.9946+
5.6	-.429	-.0222	-.7097+	-.0169
5.8	-.403	-.0395	-.0129	-.0282+
6.0	-.379	-.0562	-.0187	-.0388
6.2	-.358	-.0721	-.0244	-.0488
6.4	-.341	-.0873	-.0299	-.0571
6.6	-.325	-.1019	-.0352	-.0651
6.8	-.309	-.1158	-.0404	-.0723
7.0	-.297	-.1291	-.0452	-.0790
7.2	-.285	-.1419	-.0500	-.0852
7.4	-.275	-.1540	-.0545	-.0909
7.6	-.265	-.1658	-.0589	-.0962
7.8	-.256	-.1769	-.0630	-.1011
8.0	-.248	-.1878	-.0670	-.1058
8.2	-.241	-.1980	-.0707	-.1101
8.4	-.233	-.2079	-.0744	-.1141
8.6	-.227	-.2174	-.0778	-.1179
8.8	-.220	-.2267	-.0812	-.1215
9.0	-.215	-.2356	-.0844	-.1249
9.2	-.210	-.2440	-.0874	-.1281
9.4	-.204	-.2522	-.0904	-.1311
9.6	-.200	-.2602	-.0932	-.1340
9.8	-.195	-.2678	-.0959	-.1367
10.0	-.191	-.2752	-.0985	-.1393
10.2	-.187	-.2824	-.1010	-.1418
10.4	-.184	-.2893	-.1034	-.1442
10.6	-.180	-.2959	-.1057	-.1464

$\alpha_3 = 1.10$

α_4	Lag 1	Lag 2	Lag 3	Lag 4
3.8	-1.215	.1582	.0000+	.2479
4.0	-1.108	.1459	.4035+	.2013
4.2	-.974	.1296	.0125	.1607
4.4	-.869	.1117	.0157	.1267
4.6	-.781	.0932	.0165	.0977
4.8	-.708	.0743	.0154	.0727
5.0	-.647	.0552	.0128	.0508
5.2	-.596	.0365	.9764+	.0318
5.4	-.552	.0181	.4639+	.0150
5.5	-.532	.9034+	.2484+	.7342+
5.6	-.517	.0997+	.0279+	.0795+
5.7	-.497	-.8629+	-.2479+	-.6726+
5.8	-.481	-.0173	-.5046+	-.0132
6.0	-.451	-.0340	-.0103	-.0251
6.2	-.427	-.0501	-.0155	-.0358
6.4	-.403	-.0656	-.0208	-.0455
6.6	-.384	-.0805	-.0259	-.0544
6.8	-.366	-.0947	-.0309	-.0624
7.0	-.350	-.1084	-.0358	-.0698
7.2	-.335	-.1214	-.0405	-.0766
7.4	-.322	-.1341	-.0451	-.0829
7.6	-.311	-.1460	-.0494	-.0887
7.8	-.299	-.1577	-.0537	-.0941
8.0	-.289	-.1687	-.0577	-.0991
8.2	-.280	-.1794	-.0616	-.1038
8.4	-.271	-.1896	-.0653	-.1082
8.6	-.263	-.1994	-.0689	-.1123
8.8	-.256	-.2090	-.0724	-.1162
9.0	-.249	-.2180	-.0757	-.1198
9.2	-.242	-.2267	-.0788	-.1232
9.4	-.236	-.2353	-.0819	-.1265
9.6	-.231	-.2435	-.0848	-.1296
9.8	-.226	-.2513	-.0876	-.1325
10.0	-.221	-.2592	-.0903	-.1353
10.2	-.216	-.2664	-.0930	-.1379
10.4	-.211	-.2735	-.0955	-.1404
10.6	-.207	-.2804	-.0979	-.1428
10.8	-.203	-.2870	-.1002	-.1451
11.0	-.199	-.2936	-.1025	-.1473

$\alpha_3 = 1.20$

α_4	Lag 1	Lag 2	Lag 3	Lag 4
4.2	-1.183	.1407	.0000+	.1997
4.4	-1.083	.1278	.5096+	.1675
4.6	-.965	.1113	.9968+	.1329
4.8	-.870	.0941	.0122	.1036
5.0	-.792	.0764	.0124	.0784
5.2	-.723	.0586	.0112	.0565
5.4	-.666	.0404	.8705+	.0372
5.6	-.615	.0233	.5411+	.0202
5.7	-.591	.0146	.3525+	.0124
5.8	-.577	.6084+	.1515+	.5050+
5.9	-.556	-.2319+	-.0594+	-.1884+
6.0	-.562	-.0962+	-.0245+	-.0784+
6.2	-.506	-.0266	-.7343+	-.0206
6.4	-.481	-.0424	-.0120	-.0315
6.6	-.454	-.0575	-.0168	-.0416
6.8	-.432	-.0719	-.0215	-.0504
7.0	-.412	-.0860	-.0262	-.0587
7.2	-.394	-.0993	-.0308	-.0662
7.4	-.378	-.1123	-.0353	-.0732
7.6	-.362	-.1247	-.0397	-.0796
7.8	-.349	-.1366	-.0439	-.0856
8.0	-.337	-.1480	-.0480	-.0911
8.2	-.325	-.1589	-.0519	-.0962
8.4	-.314	-.1695	-.0558	-.1010
8.6	-.305	-.1796	-.0596	-.1055
8.8	-.296	-.1896	-.0630	-.1098
9.0	-.287	-.1990	-.0664	-.1137
9.2	-.280	-.2082	-.0697	-.1175
9.4	-.273	-.2168	-.0726	-.1210
9.6	-.265	-.2253	-.0759	-.1243
9.8	-.255	-.2335	-.0788	-.1275
10.0	-.254	-.2414	-.0816	-.1305
10.2	-.248	-.2490	-.0843	-.1333
10.4	-.242	-.2564	-.0870	-.1360
10.6	-.237	-.2634	-.0895	-.1386
10.8	-.233	-.2704	-.0919	-.1410
11.0	-.228	-.2772	-.0943	-.1434
11.2	-.224	-.2837	-.0966	-.1456
11.4	-.220	-.2901	-.0988	-.1478

$\alpha_3 = 1.30$

α_4	Lag 1	Lag 2	Lag 3	Lag 4
4.6	-1.156	.1249	.0000+	.1679
4.8	-1.044	.1129	.3174+	.1435
5.0	-.975	.0968	.7225+	.1130
5.2	-.866	.0802	.9035+	.0870
5.4	-.813	.0634	.9168+	.0665
5.6	-.749	.0466	.7959+	.0467
5.8	-.695	.0300	.5783+	.0273
6.0	-.644	.0204+	.6619E+	.0139+
6.1	-.617	.0446+	.0100+	.0175+
6.2	-.616	-.0526+	-.0110+	-.0442+
6.3	-.585	-.0104	-.2450+	-.8504+
6.4	-.572	-.0182	-.4399+	-.0196
6.6	-.535	-.0333	-.0469+	-.0258
6.8	-.518	-.0480	-.0127	-.0360
7.0	-.485	-.0622	-.0178	-.0453
7.2	-.463	-.0756	-.0213	-.0538
7.4	-.442	-.0890	-.0256	-.0614
7.6	-.424	-.1017	-.0298	-.0688
7.8	-.407	-.1140	-.0340	-.0754
8.0	-.392	-.1258	-.0380	-.0816
8.2	-.378	-.1372	-.0420	-.0873
8.4	-.365	-.1480	-.0458	-.0926
8.6	-.353	-.1584	-.0495	-.0975
8.8	-.342	-.1687	-.0535	-.1022
9.0	-.332	-.1784	-.0566	-.1065
9.2	-.322	-.1878	-.0600	-.1106
9.4	-.314	-.1969	-.0632	-.1145
9.6	-.305	-.2057	-.0664	-.1181
9.8	-.296	-.2141	-.0694	-.1215
10.0	-.291	-.2223	-.0723	-.1248
10.2	-.284	-.2304	-.0752	-.1279
10.4	-.277	-.2379	-.0779	-.1308
10.6	-.272	-.2453	-.0805	-.1336
10.8	-.266	-.2525	-.0931	-.1362
11.0	-.261	-.2595	-.0855	-.1388+
11.2	-.256	-.2662	-.0879	-.1412
11.4	-.251	-.2728	-.0902	-.1435
11.6	-.246	-.2792	-.0925	-.1457
11.8	-.242	-.2852	-.0946	-.1478

$\alpha_3 = 1.40$

α_4	Lag 1	Lag 2	Lag 3	Lag 4
5.0	-1.132	.1092	.0000+	.1411
5.2	-1.106	.1011	.0787+	.1268
5.4	-1.001	.0855	.4546+	.0991
5.6	-.916	.0697	.6256+	.0754
5.8	-.844	.0538	.6530+	.0547
6.0	-.782	.0379	.5603+	.0365
6.2	-.729	.0222	.3785+	.0206
6.3	-.706	.0145	.2611+	.0130
6.4	-.683	.6422+	.1292+	.5987+
6.5	-.660	-.1226+	-.0244+	-.1052+
6.6	-.643	-.8266+	-.1702+	-.6968+
6.8	-.607	-.0230	-.5060+	-.0187
7.0	-.575	-.0373	-.8670+	-.0293
7.2	-.547	-.0510	-.0124	-.0389
7.4	-.521	-.0645	-.0163	-.0478
7.6	-.498	-.0775	-.0202	-.0559
7.8	-.475	-.0900	-.0242	-.0633+
8.0	-.458	-.1020	-.0280	-.0702
8.2	-.440	-.1137	-.0319	-.0766
8.4	-.423	-.1250	-.0357	-.0825+
8.6	-.410	-.1358	-.0393	-.0881+
8.8	-.395	-.1463	-.0430	-.0932
9.0	-.383	-.1564	-.0465	-.0980
9.2	-.372	-.1662	-.0499	-.1026
9.4	-.361	-.1756	-.0532	-.1068
9.6	-.351	-.1846	-.0564	-.1108
9.8	-.342	-.1935	-.0595	-.1146
10.0	-.333	-.2018	-.0625	-.1181
10.2	-.325	-.2102	-.0655	-.1215
10.4	-.317	-.2181	-.0683	-.1247
10.6	-.310	-.2257	-.0710	-.1277
10.8	-.303	-.2332	-.0737	-.1306
11.0	-.297	-.2405	-.0762	-.1334+
11.2	-.291	-.2475	-.0787	-.1360
11.4	-.285	-.2542	-.0811	-.1385+
11.6	-.279	-.2609	-.0835	-.1409
11.8	-.274	-.2671	-.0857	-.1431
12.0	-.269	-.2734	-.0879	-.1453
12.2	-.265	-.2794	-.0900	-.1474

ตาราง จ. (ต่อ)

$\sigma_3 = 1.50$

σ_4	Lag 1	Lag 2	Lag 3	Lag 4
5.4	-1.112	.0951	.0000+	.1162
5.6	-1.103	.0846	.0000+	.1043
5.8	-1.092	.0733	.1949+	.0899
6.0	-.957	.0622	.3907+	.0677
6.2	-.885	.0471	.4441+	.0483
6.4	-.824	.0321	.3885+	.0313
6.6	-.688	.0566+	.0100++	.0434++
6.7	-.747	.9962+	.1538+	.9059+
6.8	-.714	-.0290+	-.46975	-.0256+
6.9	-.720	-.9446+	-.0764+	-.3882+
7.0	-.684	-.0115	-.2068+	-.9675+
7.2	-.647	-.0254	-.4989+	-.0210
7.4	-.615	-.0390	-.6156+	-.0312
7.6	-.585	-.0520	-.0115	-.0404
7.8	-.558	-.0648	-.0150	-.0489
8.0	-.534	-.0767	-.0184	-.0565
8.2	-.514	-.0891	-.0221	-.0640
8.4	-.494	-.1007	-.0257	-.0707
8.6	-.476	-.1118	-.0292	-.0769
8.8	-.459	-.1225	-.0327	-.0826
9.0	-.443	-.1330	-.0362	-.0880
9.2	-.427	-.1431	-.0396	-.0931
9.4	-.414	-.1528	-.0429	-.0978
9.6	-.404	-.1622	-.0461	-.1022
9.8	-.393	-.1713	-.0493	-.1064
10.0	-.383	-.1803	-.0524	-.1104
10.2	-.372	-.1897	-.0553	-.1141
10.4	-.363	-.1969	-.0582	-.1176
10.6	-.354	-.2049	-.0611	-.1209
10.8	-.346	-.2127	-.0638	-.1241
11.0	-.336	-.2202	-.0665	-.1271
11.2	-.331	-.2273	-.0690	-.1299
11.4	-.325	-.2339	-.0713	-.1325
11.6	-.317	-.2414	-.0740	-.1353
11.8	-.311	-.2478	-.0763	-.1377
12.0	-.305	-.2544	-.0786	-.1401
12.2	-.300	-.2607	-.0808	-.1424
12.4	-.295	-.2662	-.0827	-.1444
12.6	-.289	-.2726	-.0851	-.1466

$\sigma_3 = 1.60$

σ_4	Lag 1	Lag 2	Lag 3	Lag 4
6.0	-1.088	.0757	.0000+	.0896
6.2	-1.078	.0698	.0000	.0814
6.4	-1.011	.0573	.1639+	.0634
6.6	-.937	.0430	.2684+	.0469
6.8	-.875	.0287	.2597+	.0285
7.0	-.746	.0422+	.63568+	.0378++
7.1	-.796	.77738+	.0969+	.71772+
7.2	-.771	-.0361+	-.86345	-.0309+
7.3	-.751	-.5924+	-.0858+	-.5279+
7.4	-.731	-.0127	-.1962+	-.0111
7.6	-.693	-.0258	-.4383+	-.0216
7.8	-.659	-.0386	-.71114	-.0316
8.0	-.630	-.0511	-.0100	-.0406
8.2	-.602	-.0633	-.0131	-.0489
8.4	-.577	-.0752	-.0163	-.0566+
8.6	-.553	-.0866	-.0196	-.0636
8.8	-.534	-.0972	-.0227	-.0699
9.0	-.515	-.1084	-.0261	-.0763
9.2	-.496	-.1187	-.0294	-.0819
9.4	-.480	-.1288	-.0326	-.0872
9.6	-.465	-.1385	-.0358	-.0922
9.8	-.452	-.1480	-.0389	-.0969
10.0	-.438	-.1572	-.0420	-.1013
10.2	-.426	-.1659	-.0450	-.1054
10.4	-.415	-.1745	-.0479	-.1093
10.6	-.404	-.1828	-.0508	-.1130
10.8	-.394	-.1908	-.0536	-.1165
11.0	-.385	-.1986	-.0563	-.1198
11.2	-.377	-.2062	-.0589	-.1230
11.4	-.368	-.2135	-.0615	-.1260
11.6	-.360	-.2206	-.0640	-.1288
11.8	-.352	-.2275	-.0665	-.1315
12.0	-.346	-.2341	-.0688	-.1341
12.2	-.339	-.2407	-.0711	-.1366
12.4	-.333	-.2471	-.0734	-.1390
12.6	-.326	-.2527	-.0753	-.1411
12.8	-.321	-.2592	-.0777	-.1434
13.0	-.314	-.2650	-.0797	-.1455
13.2	-.311	-.2706	-.0817	-.1475
13.4	-.306	-.2760	-.0837	-.1494
13.6	-.301	-.2814	-.0856	-.1513
13.8	-.296	-.2866	-.0875	-.1531
14.0	-.292	-.2917	-.0893	-.1548
14.2	-.287	-.2967	-.0911	-.1565
14.4	-.283	-.3016	-.0928	-.1581
14.6	-.279	-.3064	-.0945	-.1597
14.8	-.275	-.3111	-.0962	-.1612
15.0	-.271	-.3157	-.0978	-.1627
15.2	-.267	-.3202	-.0994	-.1641
15.4	-.264	-.3246	-.1010	-.1655
15.6	-.260	-.3289	-.1025	-.1668
15.8	-.257	-.3332	-.1040	-.1681
16.0	-.253	-.3373	-.1055	-.1694
16.2	-.250	-.3414	-.1069	-.1706
16.4	-.247	-.3454	-.1083	-.1718
16.6	-.244	-.3493	-.1097	-.1730
16.8	-.241	-.3532	-.1111	-.1741
17.0	-.238	-.3570	-.1124	-.1752
17.2	-.235	-.3607	-.1138	-.1763
17.4	-.232	-.3644	-.1151	-.1773
17.6	-.229	-.3680	-.1164	-.1783
17.8	-.227	-.3715	-.1177	-.1793
18.0	-.224	-.3750	-.1190	-.1803
18.2	-.221	-.3784	-.1202	-.1812
18.4	-.219	-.3818	-.1215	-.1821
18.6	-.216	-.3851	-.1227	-.1830
18.8	-.214	-.3884	-.1239	-.1839
19.0	-.211	-.3916	-.1251	-.1847
19.2	-.209	-.3948	-.1263	-.1855
19.4	-.207	-.3979	-.1275	-.1863
19.6	-.205	-.4010	-.1286	-.1871
19.8	-.202	-.4040	-.1298	-.1878
20.0	-.200	-.4070	-.1309	-.1885

$\sigma_3 = 1.70$

σ_4	Lag 1	Lag 2	Lag 3	Lag 4
6.6	-1.064	.0540	.0000+	.0657
6.8	-1.057	.0525	.0000	.0588
7.0	-1.091	.0412	.1027+	.0441
7.2	-.935	.0275	.1513+	.0260
7.4	-.878	.0142	.1142+	.0138
7.5	-.852	.7546+	.0696+	.7179+
7.6	-.825	-.0250+	-.26015	-.0232++
7.7	-.806	-.5465+	-.0619+	-.5000+
7.8	-.788	-.0119	-.1453+	-.0107
8.0	-.745	-.0245	-.3423+	-.0212
8.2	-.709	-.0367	-.5705+	-.0304
8.4	-.678	-.0487	-.8225+	-.0397
8.6	-.650	-.0603	-.0105	-.0478
8.8	-.622	-.0717	-.0134	-.0553+
9.0	-.596	-.0827	-.0167	-.0623
9.2	-.574	-.0933	-.0196	-.0686
9.4	-.557	-.1036	-.0226	-.0748
9.6	-.538	-.1136	-.0256	-.0804
9.8	-.521	-.1233	-.0286	-.0857
10.0	-.505	-.1329	-.0316	-.0907
10.2	-.485	-.1420	-.0346	-.0953
10.4	-.476	-.1509	-.0375	-.0997
10.6	-.463	-.1594	-.0403	-.1038
10.8	-.451	-.1677	-.0431	-.1077
11.0	-.440	-.1758	-.0458	-.1114
11.2	-.429	-.1837	-.0485	-.1149
11.4	-.419	-.1913	-.0511	-.1182
11.6	-.410	-.1988	-.0537	-.1214
11.8	-.401	-.2059	-.0562	-.1245
12.0	-.392	-.2128	-.0586	-.1272
12.2	-.384	-.2195	-.0610	-.1299
12.4	-.377	-.2261	-.0633	-.1325
12.6	-.369	-.2326	-.0656	-.1350
12.8	-.362	-.2388	-.0678	-.1374
13.0	-.356	-.2450	-.0700	-.1397
13.2	-.350	-.2508	-.0720	-.1419
13.4	-.344	-.2565	-.0741	-.1440
13.6	-.338	-.2622	-.0761	-.1460
13.8	-.333	-.2675	-.0780	-.1479+

$\sigma_3 = 1.80$

σ_4	Lag 1	Lag 2	Lag 3	Lag 4
7.2	-1.042	.0417	.0000+	.0456
7.4	-1.033	.0367	.0000+	.0396
7.6	-1.007	.0284	.0378+	.0298
7.8	-.945	.0155	.0696+	.0155
7.9	-.915	.9177+	.8498+	.9006+
8.0	-.892	.2914+	.0193+	.2881+
8.1	-.866	-.3291+	-.0254+	-.3102+
8.2	-.846	-.9427+	-.0826+	-.8721+
8.4	-.804	-.0215	-.2269+	-.0192
8.6	-.767	-.0333	-.4103+	-.0288
8.8	-.733	-.0448	-.6190+	-.0376
9.0	-.702	-.0559	-.8489+	-.0456
9.2	-.675	-.0668	-.0109	-.0531
9.4	-.649	-.0775	-.0135	-.0601
9.6	-.625	-.0877	-.0162	-.0665
9.8	-.604	-.0978	-.0189	-.0726
10.0	-.583	-.1075	-.0217	-.0782
10.2	-.565	-.1169	-.0244	-.0835
10.4	-.548	-.1260	-.0272	-.0884
10.6	-.532	-.1349	-.0299	-.0931
10.8	-.517	-.1436	-.0327	-.0975
11.0	-.503	-.1520	-.0354	-.1016
11.2	-.490	-.1600	-.0380	-.1055
11.4	-.478	-.1679	-.0406	-.1092
11.6	-.467	-.1757	-.0432	-.1128
11.8	-.456	-.1831	-.0457	-.1161
12.0	-.446	-.1904	-.0482	-.1193
12.2	-.436	-.1974	-.0506	-.1223
12.4	-.427	-.2043	-.0530	-.1252
12.6	-.418	-.2109	-.0553	-.1279
12.8	-.410	-.2175	-.0576	-.1306
13.0	-.402	-.2238	-.0598	-.1331
13.2	-.395	-.2299	-.0619	-.1355
13.4	-.388	-.2359	-.0640	-.1376
13.6	-.381	-.2417	-.0661	-.1400
13.8	-.374	-.2473	-.0681	-.1421
14.0	-.368	-.2530	-.0701	-.1442
14.2	-.362	-.2583	-.0720	-.1461
14.4	-.353	-.2632	-.0737	-.1479

$\sigma_3 = 1.90$

σ_4	Lag 1	Lag 2	Lag 3	Lag 4
8.0	-1.023	.0220	.0000+	.0230
8.2	-1.018	.0175	.0000	.0181
8.4	-.966	.6447+	.0150+	.6431+
8.5	-.946	.1239+	.41208	.1215+
8.6	-.917	-.5444+	-.0257+	-.5220+
8.7	-.893	-.0113	-.10657	-.0106
8.8	-.871	-.0171	-.1567+	-.0158
9.0	-.831	-.0284	-.2475+	-.0254
9.2	-.794	-.0395	-.4100+	-.0343
9.4	-.761	-.0503	-.5975+	-.0424
9.6	-.731	-.0609	-.8046+	-.0500
9.8	-.703	-.0712	-.0103	-.0570
10.0	-.679	-.0811	-.0126	-.0635
10.2	-.656	-.0907	-.0150	-.0695
10.4	-.634	-.1002	-.0175	-.0752
10.6	-.614	-.1093	-.0200	-.0805
10.8	-.595	-.1183	-.0226	-.0855
11.0	-.578	-.1269	-.0251	-.0902
11.2	-.562	-.1355	-.0277	-.0947
11.4	-.547	-.1437	-.0302	-.0989
11.6	-.533	-.1515	-.0327	-.1028
11.8	-.520	-.1594	-.0352	-.1066
12.0	-.508	-.1665	-.0375	-.1100
12.2	-.495	-.1742	-.0401	-.1135
12.4	-.485	-.1811	-.0425	-.1166
12.6	-.474	-.1883	-.0448	-.1198
12.8	-.464	-.1950	-.0471	-.1227
13.0	-.455	-.2015	-.0493	-.1255
13.2	-.446	-.2080	-.0515	-.1282
13.4	-.437	-.2142	-.0537	-.1307
13.6	-.429	-.2203	-.0558	-.1332
13.8	-.421	-.2262	-.0579	-.1355
14.0	-.414	-.2320	-.0599	-.1378
14.2	-.407	-.2376	-.0619	-.1399
14.4	-.400	-.2431	-.0638	-.1420
14.6	-.394	-.2485	-.0657	-.1440
14.8	-.388	-.2537	-.0676	-.1459
15.0	-.382	-.2589	-.0694	-.1478
15.2	-.376	-.2636	-.0711	-.1495
15.4	-.370	-.2686	-.0729	-.1512
15.6	-.365	-.2734	-.0746	-.1529
15.8	-.360	-.2781	-.0763	-.1545
16.0	-.355	-.2827	-.0779	-.1561
16.2	-.350	-.2872	-.0795	-.1576
16.4	-.345	-.2916	-.0810	-.1591
16.6	-.341	-.2959	-.0825	-.1605
16.8	-.336	-.3001	-.0840	-.1619
17.0	-.332	-.3042	-.0855	-.1633
17.2	-.328	-.3083	-.0869	-.1646
17.4	-.324	-.3123	-.0883	-.1659
17.6	-.320	-.3162	-.0897	-.1672
17.8	-.316	-.3200	-.0911	-.1684
18.0	-.312	-.3238	-.0924	-.1696
18.2	-.309	-.3275	-.0938	-.1708
18.4	-.305	-.3311	-.0951	-.1719
18.6	-.302	-.3347	-.0964	-.1730
18.8	-.298	-.3382	-.0977	-.1741
19.0	-.295	-.3417	-.0989	-.1752
19.2	-.292	-.3451	-.1002	-.1762
19.4	-.289	-.3485	-.1014	-.1772
19.6	-.286	-.3518	-.1027	-.1782
19.8	-.283	-.3551	-.1039	-.1792
20.0	-.280	-.3583	-.1051	-.1801

$\sigma_3 = 2.00$

σ_4	Lag 1	Lag 2	Lag 3	Lag 4
8.4	-1.009	.8397+	.0000+	.8541+
8.6	-1.004	.4147+	.0000+	.4182+
8.9	-1.002	.2061+	.00018+	.2070+
9.0	-.993	-.1081+	-.04075	-.1076+
9.1	-.974	-.5675+	-.7075E	-.5567+
9.2	-.950	-.0113	-.0272+	-.0109
9.4	-.905	-.0222	-.1012+	-.0207
9.6	-.865	-.0331	-.2125+	-.0298
9.8	-.828	-.0435	-.3537+	-.0381
10.0	-.796	-.0538	-.5187+	-.0458
10.2	-.766	-.0637	-.7027+	-.0529
10.4	-.738	-.0734	-.9016+	-.0595
10.6	-.713	-.0829	-.0111	-.0657
10.8	-.690	-.0920	-.0133	-.0714
11.0	-.670	-.1005	-.0154	-.0766
11.2	-.647	-.1097	-.0179	-.0819
11.4	-.629	-.1181	-.0202	-.0867
11.6	-.611	-.1264	-.0226	-.0912
11.8	-.595	-.1345	-.0249	-.0955
12.0	-.579	-.1423	-.0273	-.0995
12.2	-.565	-.1498	-.0296	-.1033
12.4	-.552	-.1555	-.0312	-.1062
12.6	-.539	-.1644	-.03+2	-.1106
12.8	-.527	-.1715	-.0365	-.1137
13.0	-.515	-.1784	-.0388	-.1168
13.2	-.504	-.1851	-.0410	-.1198
13.4	-.495	-.1914	-.0431	-.1226
13.6	-.485	-.1979	-.0453	-.1254
13.8	-.475	-.2041	-.0474	-.1280
14.0	-.466	-.2101	-.0495	-.1305
14.2	-.458	-.2160	-.0515	-.1329
14.4	-.450	-.2216	-.0535	-.1351+
14.6	-.443	-.2271	-.0554	-.1373
14.8	-.436	-.2321	-.0571	-.1393
15.0	-.428	-.2380	-.0592	-.1415
15.2	-.422	-.2432	-.0610	-.1435+
15.4	-.415	-.2481	-.0628	-.1453+
15.6	-.409	-.2532	-.0646	-.1472
15.8	-.403	-.2580	-.0663	-.1485+

ประวัติผู้เขียนวิทยานิพนธ์

นางสาวนิตยา เหิมใจหาญ เกิดวันที่ 18 เดือนพฤศจิกายน พ.ศ. 2527 มีภูมิลำเนาอยู่ที่จังหวัดสุพรรณบุรี สำเร็จการศึกษาในหลักสูตรวิทยาศาสตรบัณฑิต สาขาสถิติ คณะวิทยาศาสตร์ มหาวิทยาลัยศิลปากร เมื่อปีการศึกษา 2549 และเข้าศึกษาต่อในหลักสูตรปริญญาครุศาสตรมหาบัณฑิต สาขาสถิติการศึกษา ภาควิชาวิจัยและจิตวิทยาการศึกษา บัณฑิตวิทยาลัย จุฬาลงกรณ์มหาวิทยาลัย เมื่อปีการศึกษา 2550