



ภาคผนวก

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่

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ภาคผนวก ก

ข้อ ๑: ผลการใช้โปรแกรม Frontier 4.1c

Output from the program FRONTIER (Version 4.1c)

instruction file = terminal

data file = nrice.prn

Tech. Eff. Effects Frontier (see B&C 1993)

The model is a production function

the final mle estimates are :

	coefficient	standard-error	t-ratio
beta 0	0.51218980E+01	0.44947083E+00	0.11395396E+02
beta 1	-0.31362348E-02	0.56290850E-01	-0.55714823E-01
beta 2	0.29985476E-01	0.28533805E-01	0.10508755E+01
beta 3	-0.62210659E-01	0.84801628E-01	-0.73360217E+00
beta 4	0.52625759E-02	0.25169447E-01	0.20908588E+00
beta 5	-0.16686868E+00	0.17974217E-01	-0.92837801E+01
beta 6	-0.53513451E-01	0.55736085E-01	-0.96012217E+00
beta 7	0.42461855E+00	0.30413399E-01	0.13961562E+02
beta 8	0.12272172E+00	0.29098507E-01	0.42174578E+01
beta 9	0.37358952E-02	0.35911083E-02	0.10403182E+01
beta10	-0.56161746E-02	0.31366261E-02	-0.17905145E+01
beta11	-0.15796188E+00	0.49909140E-01	-0.31649891E+01
beta12	0.23443364E-01	0.31499459E-01	0.74424658E+00
beta13	-0.50325191E-02	0.19719561E-02	-0.25520442E+01
beta14	0.72415062E-01	0.41011140E-01	0.17657413E+01
beta15	-0.13598166E-01	0.39932763E-01	-0.34052656E+00
beta16	-0.35131974E+00	0.12291356E-01	-0.28582667E+02
delta 0	0.66670959E+00	0.64650852E+00	0.10312464E+01
delta 1	0.74908302E-05	0.52896276E-05	0.14161356E+01
delta 2	-0.26268084E+00	0.14001585E+00	-0.18760794E+01
delta 3	-0.38805906E+00	0.12700117E+00	-0.30555550E+01
delta 4	-0.91658248E-03	0.59911920E-02	-0.15298833E+00

delta 5	-0.83035125E+00	0.47306962E+00	-0.17552411E+01
delta 6	0.81894798E-01	0.51445565E+00	0.15918729E+00
delta 7	0.63662363E+00	0.19232618E+00	0.33101247E+01
delta 8	0.46829744E+00	0.13577112E+00	0.34491682E+01
delta 9	-0.68040003E-01	0.52273189E-01	-0.13016233E+01
delta10	0.14269660E+00	0.65798154E-01	0.21687022E+01
delta11	0.23960271E+00	0.10287290E+00	0.23291140E+01
delta12	0.24273955E-01	0.23411438E+00	0.10368417E+00
delta13	-0.50083412E+00	0.14746004E+00	-0.33964056E+01
delta14	0.97097623E-01	0.13268338E+00	0.73179941E+00
sigma-squared	0.31376156E+00	0.36734978E-01	0.85412206E+01
gamma	0.99999999E+00	0.11612948E-06	0.86110776E+07

log likelihood function = -0.16646331E+02

LR test of the one-sided error = 0.67138705E+02

with number of restrictions = *

[note that this statistic has a mixed chi-square distribution]

number of iterations = 86

(maximum number of iterations set at : 100)

number of cross-sections = 134

number of time periods = 1

total number of observations = 134

thus there are: 0 obsns not in the panel

technical efficiency estimates :

firm	year	eff.-est.
1	1	0.62041610E+00
2	1	0.48667601E+00
3	1	0.48667601E+00
4	1	0.49173699E+00
5	1	0.34853268E+00
6	1	0.79967198E+00
7	1	0.43647481E+00

8	1	0.22663553E+00
9	1	0.47185707E+00
10	1	0.47185707E+00
11	1	0.51378995E+00
12	1	0.99960822E+00
13	1	0.55373185E+00
.	.	.
.	.	.
.	.	.
117	1	0.77754341E+00
118	1	0.51252470E+00
119	1	0.99979573E+00
120	1	0.99977894E+00
121	1	0.66101442E+00
122	1	0.84891121E+00
123	1	0.48929484E+00
124	1	0.83557779E+00
125	1	0.83557779E+00
126	1	0.70505061E+00
127	1	0.58000249E+00
128	1	0.61697981E+00
129	1	0.61697981E+00
130	1	0.92760890E+00
131	1	0.71414819E+00
132	1	0.61318019E+00
133	1	0.80159516E+00
134	1	0.80159516E+00

mean efficiency = 0.65059324E+00

ภาคผนวก ข

ข้อแนะนำ: ผลการใช้โปรแกรม Frontier 4.1c

Output from the program FRONTIER (Version 4.1c)

instruction file = terminal

data file = grice.prn

Tech. Eff. Effects Frontier (see B&C 1993)

The model is a production function

The dependent variable is logged

the final mle estimates are :

	coefficient	standard-error	t-ratio
beta 0	0.51647809E+01	0.48345220E+00	0.10683126E+02
beta 1	-0.82484909E-01	0.80535279E-01	-0.10242084E+01
beta 2	0.11843329E+00	0.65166162E-01	0.18174047E+01
beta 3	0.17539952E+00	0.10255508E+00	0.17102958E+01
beta 4	-0.35982369E-01	0.77908739E-01	-0.46185280E+00
beta 5	-0.18092005E+00	0.10580670E+00	-0.17099111E+01
beta 6	-0.12160111E+00	0.57907837E-01	-0.20999077E+01
beta 7	0.29517577E+00	0.71902131E-01	0.41052437E+01
beta 8	0.21258822E+00	0.65006342E-01	0.32702689E+01
beta 9	0.24313240E-01	0.65588567E-02	0.37069327E+01
beta10	0.59825070E-02	0.64977238E-02	0.92070811E+00
beta11	0.68822846E-01	0.61451979E-01	0.11199451E+01
beta12	-0.71873402E-01	0.48505608E-01	-0.14817545E+01
beta13	0.15902086E-01	0.74680091E-02	0.21293608E+01
beta14	-0.26958861E+00	0.11136636E+00	-0.24207365E+01
beta15	-0.46094425E+00	0.11474491E+00	-0.40171216E+01
beta16	-0.30988770E+00	0.88060719E-01	-0.35190231E+01
delta 0	-0.26306047E+01	0.86344727E+00	-0.30466305E+01
delta 1	0.62652219E-05	0.53763758E-05	0.11653244E+01
delta 2	0.76244633E+00	0.23681376E+00	0.32196031E+01
delta 3	0.94485913E-01	0.17242022E+00	0.54799789E+00

delta 4	0.37308883E-02	0.62916925E-02	0.59298643E+00
delta 5	-0.68103606E-01	0.59891499E+00	-0.11371164E+00
delta 6	0.35838938E+00	0.61578012E+00	0.58200870E+00
delta 7	0.81120500E+00	0.36918297E+00	0.21972980E+01
delta 8	0.81696802E+00	0.24534094E+00	0.33299295E+01
delta 9	0.23116762E+00	0.63875145E-01	0.36190543E+01
delta10	0.19475844E+00	0.83745510E-01	0.23255986E+01
delta11	-0.22028659E+00	0.18935727E+00	-0.11633384E+01
delta12	0.64726648E+00	0.19915341E+00	0.32500899E+01
delta13	0.23842044E-01	0.17043909E+00	0.13988601E+00
delta14	-0.16535535E+00	0.19041448E+00	-0.86839693E+00
sigma-squared	0.15850130E+00	0.37277824E-01	0.42518925E+01
gamma	0.47671924E+00	0.13043955E+00	0.36547139E+01

log likelihood function = -0.48559860E+02

LR test of the one-sided error = 0.30937813E+02

with number of restrictions = *

[note that this statistic has a mixed chi-square distribution]

number of iterations = 44

(maximum number of iterations set at : 100)

number of cross-sections = 154

number of time periods = 1

total number of observations = 154

thus there are: 0 obsns not in the panel

technical efficiency estimates :

firm	year	eff.-est.
1	1	0.85205927E+00
2	1	0.72596419E+00
3	1	0.92191582E+00
4	1	0.93995345E+00
5	1	0.65552776E+00
6	1	0.94614981E+00

7	1	0.94041800E+00
8	1	0.94041800E+00
9	1	0.55913430E+00
10	1	0.76089922E+00
.	.	.
.	.	.
.	.	.
133	1	0.88844361E+00
134	1	0.92367979E+00
135	1	0.95990532E+00
136	1	0.93407336E+00
137	1	0.92078184E+00
138	1	0.92078184E+00
139	1	0.92397078E+00
140	1	0.93926679E+00
141	1	0.93928971E+00
142	1	0.90547733E+00
143	1	0.95606329E+00
144	1	0.91770153E+00
145	1	0.83564549E+00
146	1	0.88041361E+00
147	1	0.93256350E+00
148	1	0.90467988E+00
149	1	0.95127879E+00
150	1	0.95127879E+00
151	1	0.95736222E+00
152	1	0.92823972E+00
153	1	0.95203611E+00
154	1	0.96230181E+00

mean efficiency = 0.84806107E+00

ประวัติผู้เขียน

ชื่อ

นางสาวเดือนแรม บ่อเงิน

วัน เดือน ปีเกิด

1 กรกฎาคม 2521

ประวัติการศึกษา

สำเร็จการศึกษามัธยมศึกษาตอนปลาย โรงเรียนสวนบุญโญปถัมภ์
จังหวัดลำพูน ปีการศึกษา 2539สำเร็จการศึกษาระดับปริญญาวิทยาศาสตรบัณฑิต (เศรษฐศาสตร์เกษตร)
คณะเกษตรศาสตร์ มหาวิทยาลัยเชียงใหม่ ปีการศึกษา 2543

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่
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