running C:\Program Files\Stata 11\profile.do ...

. *(8 variables, 350 observations pasted into data editor)

. encode kabupatenkota, generate(kabkot)

. drop kabupatenkota

. xtset kabkot tahun, yearly
   panel variable:  kabkot (strongly balanced)
   time variable:  tahun, 2004 to 2013
   delta:  1 year

. xtunitroot llc df

Levin-Lin-Chu unit-root test for df
-----------------------------------
Ho: Panels contain unit roots          Number of panels  =    35
Ha: Panels are stationary             Number of periods =    10
AR parameter: Common                  Asymptotics: N/T -> 0
Panel means:  Included                 Time trend:   Not included
ADF regressions: 1 lag                 LR variance:     Bartlett kernel, 6.00 lags average (chosen by LLC)
------------------------------------------------------------------------------
Statistic      p-value
------------------------------------------------------------------------------
Unadjusted t    -6.2710
Adjusted t*     -4.8986    0.0000
------------------------------------------------------------------------------

. xtunitroot llc ipm

Levin-Lin-Chu unit-root test for ipm
-------------------------------------
Ho: Panels contain unit roots          Number of panels  =    35
Ha: Panels are stationary             Number of periods =    10
AR parameter: Common                  Asymptotics: N/T -> 0
Panel means:  Included                 Time trend:   Not included
ADF regressions: 1 lag                 LR variance:     Bartlett kernel, 6.00 lags average (chosen by LLC)
------------------------------------------------------------------------------
Levin-Lin-Chu unit-root test for pe

Ho: Panels contain unit roots               Number of panels =     35
Ha: Panels are stationary                   Number of periods =     10

AR parameter: Common                        Asymptotics: N/T -> 0
Panel means: Included
Time trend:   Not included

ADF regressions: 1 lag
LR variance:     Bartlett kernel, 6.00 lags average (chosen by LLC)

-----------------------------------
<table>
<thead>
<tr>
<th>Statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unadjusted t</td>
<td>-9.0720</td>
</tr>
<tr>
<td>Adjusted t*</td>
<td>-5.0171</td>
</tr>
</tbody>
</table>
-----------------------------------

Levin-Lin-Chu unit-root test for wi

Ho: Panels contain unit roots               Number of panels =     35
Ha: Panels are stationary                   Number of periods =     10

AR parameter: Common                        Asymptotics: N/T -> 0
Panel means: Included
Time trend:   Not included

ADF regressions: 1 lag
LR variance:     Bartlett kernel, 6.00 lags average (chosen by LLC)

-----------------------------------
<table>
<thead>
<tr>
<th>Statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unadjusted t</td>
<td>-14.6883</td>
</tr>
<tr>
<td>Adjusted t*</td>
<td>-15.0946</td>
</tr>
</tbody>
</table>
-----------------------------------

Levin-Lin-Chu unit-root test for ipm_f

Ho: Panels contain unit roots               Number of panels =     35
Ha: Panels are stationary                   Number of periods =     10

AR parameter: Common                        Asymptotics: N/T -> 0
Panel means: Included
Time trend:   Not included

ADF regressions: 1 lag
LR variance:     Bartlett kernel, 6.00 lags average (chosen by LLC)

-----------------------------------
<table>
<thead>
<tr>
<th>Statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unadjusted t</td>
<td>-12.0611</td>
</tr>
<tr>
<td>Adjusted t*</td>
<td>-11.8560</td>
</tr>
</tbody>
</table>
-----------------------------------
Levin-Lin-Chu unit-root test for pe_f
-------------------------------------
Ho: Panels contain unit roots               Number of panels  =     35
Ha: Panels are stationary                   Number of periods =     10
AR parameter: Common                        Asymptotics: N/T -> 0
Panel means: Included
Time trend:   Not included

ADF regressions: 1 lag
LR variance:     Bartlett kernel, 6.00 lags average (chosen by LLC)

<table>
<thead>
<tr>
<th>Statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unadjusted t</td>
<td>-2.4787</td>
</tr>
<tr>
<td>Adjusted t*</td>
<td>0.2073</td>
</tr>
<tr>
<td></td>
<td>0.5821</td>
</tr>
</tbody>
</table>

Levin-Lin-Chu unit-root test for pe_f, trend
-------------------------------------
Ho: Panels contain unit roots               Number of panels  =     35
Ha: Panels are stationary                   Number of periods =     10
AR parameter: Common                        Asymptotics: N/T -> 0
Panel means: Included
Time trend:   Included

ADF regressions: 1 lag
LR variance:     Bartlett kernel, 6.00 lags average (chosen by LLC)

<table>
<thead>
<tr>
<th>Statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unadjusted t</td>
<td>-19.0827</td>
</tr>
<tr>
<td>Adjusted t*</td>
<td>-7.3899</td>
</tr>
<tr>
<td></td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Fixed-effects (within) regression               Number of obs      =       350
Group variable: kabkot                          Number of groups   =        35

R-sq:  within  = 0.8774                         Obs per group: min =        10
between = 0.1157                                        avg =      10.0
overall = 0.0456                                        max =        10

F(1,314)           =   2248.12                        corr(u_i, Xb)  = -0.4144
Prob > F           =    0.0000

| Coef.   | Std. Err. | t    | P>|t| | [95% Conf. Interval] |
|---------|-----------|------|-------|----------------------|
| ipm     | 7.21e-06  | 1.52e-07 | 47.41 | 0.000                 |
| df      | 67.38509  | 0.955329 | 70.36 | 0.000                 |
| _cons   | 67.38509  | 0.955329 | 70.36 | 0.000                 |
| sigma_u | 2.9073375 |              |       | 0.0000                |
| sigma_e | 0.54297875|              |       | 0.0000                |
| rho     | 0.96629574|              |       | (fraction of variance due to u_i)  |

F test that all u_i=0:     F(34, 314) =   237.46             Prob > F = 0.0000
### Fixed-effects (within) regression

**Group variable:** kabkot  
**Number of obs:** 350  
**Number of groups:** 35

<table>
<thead>
<tr>
<th>R-sq:</th>
<th>within = 0.2697</th>
<th>between = 0.0147</th>
<th>overall = 0.1448</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>F(1,314)</strong></td>
<td>115.95</td>
<td><strong>Prob &gt; F</strong></td>
<td>0.0000</td>
</tr>
</tbody>
</table>

**corr(u_i, Xb) = -0.2940**  

| pe  | Coef. | Std. Err. | t     | P>|t|  | [95% Conf. Interval] |
|-----|-------|-----------|-------|------|---------------------|
| df  | 2.17e-06 | 2.02e-07 | 10.77 | 0.000 | 1.78e-06 | 2.57e-06 |
| _cons | 3.468453 | .1267627 | 27.33 | 0.000 | 3.215442 | 3.714265 |

**sigma_u | .58991593**  
**sigma_e | .72047906**  
**rho | .40134294**  

(Fraction of variance due to u_i)

**F test that all u_i=0:**  
**F(34, 314) = 6.12**  
**Prob > F = 0.0000**

---

### Fixed-effects (within) regression

**Group variable:** kabkot  
**Number of obs:** 350  
**Number of groups:** 35

<table>
<thead>
<tr>
<th>R-sq:</th>
<th>within = 0.5570</th>
<th>between = 0.0797</th>
<th>overall = 0.1030</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>F(1,314)</strong></td>
<td>394.86</td>
<td><strong>Prob &gt; F</strong></td>
<td>0.0000</td>
</tr>
</tbody>
</table>

**corr(u_i, Xb) = 0.0791**  

| wi  | Coef. | Std. Err. | t     | P>|t|  | [95% Conf. Interval] |
|-----|-------|-----------|-------|------|---------------------|
| df  | -1.67e-06 | 8.42e-08 | -19.87 | 0.000 | -1.84e-06 | -1.51e-06 |
| _cons | 3.808959 | .0529322 | 71.96 | 0.000 | 3.704812 | 3.913105 |

**sigma_u | 1.5767087**  
**sigma_e | .3008497**  
**rho | .96487102**  

(Fraction of variance due to u_i)

**F test that all u_i=0:**  
**F(34, 314) = 272.94**  
**Prob > F = 0.0000**

---

### Fixed-effects (within) regression

**Group variable:** kabkot  
**Number of obs:** 350  
**Number of groups:** 35

<table>
<thead>
<tr>
<th>R-sq:</th>
<th>within = 0.2924</th>
<th>between = 0.0912</th>
<th>overall = 0.1447</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>F(1,314)</strong></td>
<td>129.77</td>
<td><strong>Prob &gt; F</strong></td>
<td>0.0000</td>
</tr>
</tbody>
</table>

**corr(u_i, Xb) = -0.6205**  

| pe  | Coef. | Std. Err. | t     | P>|t|  | [95% Conf. Interval] |
|-----|-------|-----------|-------|------|---------------------|
| ipm_f | .3002978 | .0263611 | 11.39 | 0.000 | .2484312 | .3521645 |
| _cons | -16.76632 | 1.890494 | -8.87 | 0.000 | -20.48596 | -13.04669 |

**sigma_u | .73572667**  
**sigma_e | .70917024**
\[ \rho = 0.51837325 \quad \text{(fraction of variance due to } u_i) \]

F test that all \( u_i = 0 \): \( F(34, 314) = 6.62 \quad \text{Prob} \ > \ F = 0.0000 \)

```
. xtreg wi ipm_f, fe
Fixed-effects (within) regression
Group variable: kabkot
Number of obs = 350
Number of groups = 35
R-sq: within = 0.6507
between = 0.0729
overall = 0.1098
F(1,314) = 584.89
F(34, 314) = 6.62
Prob > F = 0.0000
F test that all \( u_i = 0 \): \( F(34, 314) = 6.62 \quad \text{Prob} \ > \ F = 0.0000 \)
```

| wi | Coef. | Std. Err. | t | P>|t| | [95% Conf. Interval] |
|----|-------|-----------|---|------|----------------------|
| ipm_f | -0.2401741 | 0.0099309 | -24.18 | 0.000 | -0.2597136 to -0.2206346 |
| _cons | 20.02757 | 7121.965 | 28.12 | 0.000 | 18.62628 to 21.42885 |
| sigma_u | 1.5743428 | sigma_e | 0.26716225 |
| rho | 0.97200879 | (fraction of variance due to \( u_i \)) |

```
. xtreg wi pe_f, fe
Fixed-effects (within) regression
Group variable: kabkot
Number of obs = 350
Number of groups = 35
R-sq: within = 0.5342
between = 0.0772
overall = 0.1058
F(1,314) = 360.11
F(34, 314) = 345.86
Prob > F = 0.0000
F test that all \( u_i = 0 \): \( F(34, 314) = 345.86 \quad \text{Prob} \ > \ F = 0.0000 \)
```

| wi | Coef. | Std. Err. | t | P>|t| | [95% Conf. Interval] |
|----|-------|-----------|---|------|----------------------|
| pe_f | -0.668811 | 0.035244 | -18.98 | 0.000 | -0.7381553 to -0.5994668 |
| _cons | 5.993742 | 1687.453 | 35.52 | 0.000 | 5.661727 to 6.325756 |
| sigma_u | 1.5696116 | sigma_e | 0.30850593 |
| rho | 0.9628053 | (fraction of variance due to \( u_i \)) |

```
F test that all \( u_i = 0 \): \( F(34, 314) = 258.26 \quad \text{Prob} \ > \ F = 0.0000 \)
```