ผลการประมาณค่าแบบจำลอง

แสดงผลการประมาณค่าสัมประสิทธิ์ในแบบจำลอง Heckman two-step model แบบ basic version (สมการการวิจัยและพัฒนา)

```
Heckman selection model -- two-step estimates      Number of obs    =      2050
(regression model with sample selection)           Censored obs     =      1773
                                                   Uncensored obs   =       277

                                                   Wald chi2(8)     =    409.74
                                                   Prob > chi2      =    0.0000
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
loginten     |
     logsize |  -.4989864   .0737668    -6.76   0.000    -.6435666   -.3544062
      export |  -.0029417   .0023837    -1.23   0.217    -.0076136    .0017302
      within |   1.035833   .5806062     1.78   0.074    -.1021343     2.1738
      market |   .2239458   .2377567     0.94   0.346    -.2420487    .6899403
       _cons |   10.53403   .9935143    10.60   0.000     8.586781    12.48129
-------------+----------------------------------------------------------------
select       |
     logsize |   .2282748   .0306687     7.44   0.000     .1681653    .2883843
      export |   .0027551    .001154     2.39   0.017     .0004933     .005017
     foreign |  -.4362177   .1178435    -3.70   0.000    -.6671868   -.2052487
         obm |   .0052202   .0010413     5.01   0.000     .0031793    .0072611
   knowledge |  -.6819576   .2690911    -2.53   0.011    -1.209366   -.1545487
      within |    2.30205   .1666824    13.81   0.000     1.975359    2.628742
      market |   .7683106   .1858147     4.13   0.000     .4041205    1.132501
       _cons |    -2.7302   .1647329   -16.57   0.000    -3.053071    -2.40733
-------------+----------------------------------------------------------------
mills        |
      lambda |   .7173396   .4014978     1.79   0.074    -.0695815    1.504261
-------------+----------------------------------------------------------------
         rho |    0.47103
       sigma |  1.5229167
      lambda |   .71733964   .4014978
------------------------------------------------------------------------------
```

```
Probit regression, reporting marginal effects        Number of obs =    2050
                                                     LR chi2(7)    =  615.04
                                                     Prob > chi2   =  0.0000
Log likelihood =  -504.2967                          Pseudo R2     =  0.3788
------------------------------------------------------------------------------
  select |      dF/dx   Std. Err.      z    P>|z|     x-bar  [   95% C.I.    ]
---------+--------------------------------------------------------------------
 logsize |   .0356335   .0045837     7.44   0.000   4.69781    .02665   .044617
  export |   .0004301   .0001792     2.39   0.017   25.0838   .000079   .000781
foreign* |  -.0568078   .0126959    -3.70   0.000   .195122  -.081691  -.031924
     obm |   .0008149   .0001612     5.01   0.000   19.2311   .000499   .001131
knowle~e*|   -.066743   .0150116    -2.53   0.011       .02  -.096165  -.037321
 within* |   .7141001   .0479933    13.81   0.000   .076585   .620035   .808165
 market* |   .1811328   .0586562     4.13   0.000   .053171   .066169   .296097
---------+--------------------------------------------------------------------
  obs. P |    .135122
 pred. P |   .0853576  (at x-bar)
------------------------------------------------------------------------------
(*) dF/dx is for discrete change of dummy variable from 0 to 1
    z and P>|z| correspond to the test of the underlying coefficient being 0
```

แสดงผลการประมาณค่าสัมประสิทธิ์ในแบบจำลอง Heckman two-step model แบบ extend version (สมการการวิจัยและพัฒนา)

```
Heckman selection model -- two-step estimates    Number of obs    =      2050
(regression model with sample selection)         Censored obs     =      1773
                                                 Uncensored obs   =       277

                                                 Wald chi2(16)    =    455.11
                                                 Prob > chi2      =    0.0000

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
loginten     |
     logsize |  -.4363628   .0761392    -5.73   0.000    -.5855929   -.2871328
      export |  -.0022538   .0024414    -0.92   0.356    -.0070389    .0025313
      within |   1.723585   .5706347     3.02   0.003     .6051617    2.842008
      market |   .3854906   .2535275     1.52   0.128    -.1114141    .8823954
    techpush |  -.0080341   .0671404    -0.12   0.905     -.139627    .1235587
   demandpull|  -.2328803   .0689945    -3.38   0.001     -.368107   -.0976536
        gov1 |   .3349596   .2435327     1.38   0.169    -.1423558    .8122749
        gov2 |  -.3245906   .2490516    -1.30   0.192    -.8127228    .1635416
       _cons |   9.931023   .8790611    11.30   0.000     8.208095    11.65395
-------------+----------------------------------------------------------------
select       |
     logsize |   .2454955   .0319388     7.69   0.000     .1828966    .3080944
      export |   .0034455   .0012219     2.82   0.005     .0010506    .0058404
     foreign |  -.5057277   .1245618    -4.06   0.000    -.7498643   -.2615911
         obm |    .005106    .001087     4.70   0.000     .0029756    .0072364
   knowledge |  -.7366182   .2728473    -2.70   0.007    -1.271389   -.2018474
      within |   2.483501   .1750329    14.19   0.000     2.140443    2.826559
      market |   .8026873   .1901336     4.22   0.000     .4300323    1.175342
    techpush |  -.0899891   .0329211    -2.73   0.006    -.1545133   -.0254648
   demandpull|  -.0998845   .0313199    -3.19   0.001    -.1612705   -.0384985
        gov1 |   .5332329   .1331373     4.01   0.000     .2722887    .7941772
        gov2 |  -.4483669   .1334003    -3.36   0.001    -.7098267   -.1869072
       _cons |  -2.475541   .1720632   -14.39   0.000    -2.812779   -2.138304
-------------+----------------------------------------------------------------
mills        |
      lambda |   1.077717   .3660254     2.94   0.003     .3603205    1.795114
-------------+----------------------------------------------------------------
         rho |    0.67164
       sigma |  1.6046083
      lambda |  1.0777171   .3660254
------------------------------------------------------------------------------
```

```
Probit regression, reporting marginal effects      Number of obs =     2050
                                                   LR chi2(11)   =   691.00
                                                   Prob > chi2   =   0.0000
Log likelihood = -466.31874                        Pseudo R2     =   0.4256

------------------------------------------------------------------------------
   select  |     dF/dx   Std. Err.      z    P>|z|    x-bar  [    95% C.I.    ]
---------+--------------------------------------------------------------------
  logsize |   .0327064   .0042022     7.69   0.000   4.69781    .02447   .040943
   export |    .000459   .0001622     2.82   0.005   25.0838   .000141   .000777
 foreign* |  -.0539217   .0107115    -4.06   0.000   .195122  -.074916  -.032928
      obm |   .0006803   .0001454     4.70   0.000   19.2311   .000395   .000965
knowle~e* |  -.0574803   .0115212    -2.70   0.007       .02  -.080062  -.034899
  within* |   .7443383   .0473909    14.19   0.000   .076585   .651454   .837223
  market* |   .1716519   .0567164     4.22   0.000   .053171    .06049   .282814
 techpush |  -.0119889   .0043455    -2.73   0.006   2.31805  -.020506  -.003472
 demand~l |  -.0133072   .0041464    -3.19   0.001    2.2639  -.021434   -.00518
    gov1* |   .0901991    .027218     4.01   0.000   .19122   .036853   .143545
    gov2* |  -.0523736   .0137255    -3.36   0.001   .290244  -.079275  -.025472
---------+--------------------------------------------------------------------
   obs. P |   .135122
  pred. P |  .0692954   (at x-bar)
------------------------------------------------------------------------------
(*) dF/dx is for discrete change of dummy variable from 0 to 1
    z and P>|z| correspond to the test of the underlying coefficient being 0
```

แสดงผลการประมาณค่าสัมประสิทธิ์ในแบบจำลอง Treatment effects model แบบ basic version (สมการผลผลิตทางนวัตกรรมและผลิตภาพการผลิต)

```
Treatment-effects model -- two-step estimates    Number of obs    =      2050

                                                 Wald chi2(9)     =    1243.74
                                                 Prob > chi2      =     0.0000

------------------------------------------------------------------------------
             |      Coef.    Std. Err.       z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
logq         |
     logsize | -.4654051    .0135732    -34.29   0.000    -.492008    -.4388022
     foreign |  .4360049    .0498823      8.74   0.000     .3382375    .5337724
      export |  .0017914    .0005382      3.33   0.001     .0007365    .0028462
    training | -.116427     .1297867     -0.90   0.370    -.3708043    .1379503
    organize |  .1512368    .1456799      1.04   0.299    -.1342905    .4367641
    flexible | -.3372733    .1465736     -2.30   0.021    -.6245523   -.0499944
        inno |  .5481476    .1572357      3.49   0.000     .2399714    .8563238
       _cons |  2.487717    .0613197     40.57   0.000     2.367533    2.607901
-------------+----------------------------------------------------------------
inno         |
    intenhat |  .0813568    .2955125      0.28   0.783    -.4978372    .6605507
     logsize |  .1166875    .1795042      0.65   0.516    -.2351343    .4685094
      export |  .0010907    .0017714      0.62   0.538    -.0023812    .0045626
     finance |  1.787464    .1051211     17.00   0.000     1.581431    1.993498
       _cons | -3.312358    3.687672     -0.90   0.369    -10.54006    3.915346
-------------+----------------------------------------------------------------
hazard       |
      lambda | -.2091543    .0769154     -2.72   0.007    -.3599057   -.0584029
-------------+----------------------------------------------------------------
         rho |  -0.24517
       sigma |  .85310117
      lambda | -.20915432   .0769154
------------------------------------------------------------------------------
```

```
Probit regression, reporting marginal effects      Number of obs =     2050
                                                    LR chi2(4)    =   375.40
                                                    Prob > chi2   =   0.0000
Log likelihood = -393.49417                         Pseudo R2     =   0.3230

------------------------------------------------------------------------------
    inno |     dF/dx   Std. Err.       z    P>|z|     x-bar  [    95% C.I.    ]
---------+--------------------------------------------------------------------
intenhat | .0073477    .0267325      0.28   0.783   9.55954  -.045047   .059742
 logsize | .0105386    .016266       0.65   0.516   4.69781  -.021342   .042419
  export | .0000985    .0001602      0.62   0.538   25.0838  -.000215   .000413
 finance*| .406815     .033677      17.00   0.000   .131707   .340809   .472821
---------+--------------------------------------------------------------------
  obs. P | .0819512
 pred. P | .042384  (at x-bar)
------------------------------------------------------------------------------
(*) dF/dx is for discrete change of dummy variable from 0 to 1
    z and P>|z| correspond to the test of the underlying coefficient being 0
```

แสดงผลการประมาณค่าสัมประสิทธิ์ในแบบจำลอง Treatment effects model แบบ extend version (สมการผลผลิตทางนวัตกรรมและผลิตภาพการผลิต)

```
Treatment-effects model -- two-step estimates   Number of obs      =      2050

                                                Wald chi2(14)      =   1417.50
                                                Prob > chi2        =    0.0000

------------------------------------------------------------------------------
             |     Coef.    Std. Err.      z    P>|z|    [95% Conf. Interval]
-------------+----------------------------------------------------------------
logq         |
     logsize | -.4601264   .0132452   -34.74   0.000   -.4860865   -.4341662
     foreign |  .4268289   .0501312     8.51   0.000    .3285734    .5250843
      export |  .0018059   .0005363     3.37   0.001    .0007547     .002857
    training | -.1283808    .132318    -0.97   0.332   -.3877193    .1309576
    organize |  .1502858   .1491546     1.01   0.314   -.1420519    .4426236
    flexible | -.3543119   .1491341    -2.38   0.018   -.6466093   -.0620144
     lsupply | -.0990274   .1505717    -0.66   0.511   -.3941425    .1960876
     fsupply |  .0614359   .1509695     0.41   0.684   -.2344589    .3573307
      parent | -.0204325   .1476296    -0.14   0.890   -.3097811    .2689162
    universe | -.2349718   .2122973    -1.11   0.268   -.6510668    .1811233
      compet |  .1791492   .1835755     0.98   0.329   -.1806522    .5389505
        inno |  .4048573   .1451117     2.79   0.005    .1204436    .6892709
       _cons |  2.478601   .0609481    40.67   0.000    2.359145    2.598058
-------------+----------------------------------------------------------------
inno         |
   intendhat |   2.16762   .1577155    13.74   0.000    1.858503    2.476737
     logsize |  1.124491   .0887701    12.67   0.000    .9505051    1.298478
      export |   .009233    .001769     5.22   0.000    .0057658    .0127002
     finance |  .6194414   .1569094     3.95   0.000    .3119046    .9269781
    techpush |  .0656899   .0398268     1.65   0.099   -.0123692     .143749
   demandpull| -.0687612   .0389497    -1.77   0.077   -.1451013    .0075788
        gov1 |  .4465178   .1487487     3.00   0.003    .1549757    .7380598
        gov2 |  .0062466    .148816     0.04   0.967   -.2854274    .2979205
       _cons | -25.45085   1.675072   -15.19   0.000   -28.73393   -22.16777
-------------+----------------------------------------------------------------
hazard       |
      lambda | -.1469886   .0682848    -2.15   0.031   -.2808244   -.0131528
-------------+----------------------------------------------------------------
         rho |  -0.17303
       sigma |  .84947606
      lambda | -.14698858   .0682848
------------------------------------------------------------------------------
```

```
Probit regression, reporting marginal effects      Number of obs =    2050
                                                   LR chi2(8)    =  692.82
                                                   Prob > chi2   =  0.0000
Log likelihood = -234.78442                        Pseudo R2     =  0.5960

------------------------------------------------------------------------------
    inno |    dF/dx   Std. Err.      z    P>|z|    x-bar   [   95% C.I.    ]
---------+--------------------------------------------------------------------
intend~t |  .1215836   .0189536   13.74   0.000   8.20734   .084435   .158732
 logsize |  .0630736   .0097759   12.67   0.000   4.69781   .043913   .082234
  export |  .0005179   .0001142    5.22   0.000   25.0838   .000294   .000742
finance* |  .0549298   .0200651    3.95   0.000   .131707   .015603   .094257
techpush |  .0036846   .0022385    1.65   0.099   2.31805  -.000703   .008072
demand~l | -.0038569   .0021676   -1.77   0.077    2.2639  -.008105   .000391
   gov1* |  .0332447   .0141765    3.00   0.003    .19122   .005459    .06103
   gov2* |  .0003513   .0083897    0.04   0.967   .290244  -.016092   .016795
---------+--------------------------------------------------------------------
  obs. P |  .0819512
 pred. P |  .0238051  (at x-bar)
------------------------------------------------------------------------------
(*) dF/dx is for discrete change of dummy variable from 0 to 1
    z and P>|z| correspond to the test of the underlying coefficient being 0
```