

Report 06/18

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6/18/2023

#check profits and separate subsidy

Model 0 {-}:

```
lm_corn_pf <- lm(y2 ~ pfex_corn + pfex_rice + pfex_soy + policy + region,
  data = regdat_V2 %>% filter(crop == "corn"))

lm_rice_pf <- lm(y2 ~ pfex_corn + pfex_rice + pfex_soy + policy + region,
  data = regdat_V2 %>% filter(crop == "rice"))

lm_soy_pf <- lm(y2 ~ pfex_corn + pfex_rice + pfex_soy + policy + region ,
  data = regdat_V2 %>% filter(crop == "soybean"))

#summary(lm_corn_pf)
#summary(lm_rice_pf)
#summary(lm_soy_pf)

stargazer(lm_corn_pf, lm_rice_pf, lm_soy_pf, column.labels = c("Corn", "Rice", "Soybean"), type = "text",
  order = c("pfex_corn", "pfex_rice", "pfex_soy", "policy", "region"),
  covariate.labels = c("Expected Corn Profit(subsidy included)", "Expected Rice Profit(subsidy included)", "Expected Soybean Profit(subsidy included)"))
```

```
##
## =====
##                               y2
##                               Rice  Soybean
##                               (1)   (2)   (3)
## -----
## Expected Corn Profit(subsidy included)  0.001**  0.001*  -0.0002
##                                       (0.0005)  (0.0005)  (0.0005)
##
## Expected Rice Profit(subsidy included)   0.001   0.0004  -0.0002
##                                       (0.0004)  (0.0004)  (0.0004)
##
## Expected Soybean Profit(subsidy included) -0.001*  -0.001   0.001*
##                                       (0.0004)  (0.0004)  (0.0004)
##
## Dummy for Producer Subsidy              0.864***  0.631***  0.039
##                                       (0.102)  (0.102)  (0.097)
##
```

```
## Jilin                1.752***    3.479***    0.415***
##                    (0.141)    (0.141)    (0.142)
##
## Liaoning            1.151***    3.110***   -0.557***
##                    (0.152)    (0.152)    (0.152)
##
## Heilongjiang        1.452***    4.276***    2.381***
##                    (0.124)    (0.124)    (0.126)
##
## Constant           -1.088***   -4.165***   -1.513***
##                    (0.202)    (0.202)    (0.201)
##
## -----
## Observations              84          84          84
## R2                      0.794        0.952        0.901
## Adjusted R2              0.775        0.947        0.892
## Residual Std. Error (df = 76)    0.379        0.379        0.386
## F Statistic (df = 7; 76)    41.826***   214.573***   98.521***
## =====
## Note:                    *p<0.1; **p<0.05; ***p<0.01
##
## =
## 3
## -
```

Model 1 {-}: isolate subsidy

```
lm_corn_pf <- lm(y2 ~ I(pfex_corn-subsidy_corn) + I(pfex_rice-subsidy_rice) + I(pfex_soy-subsidy_soybean),
  data = regdat_V2 %>% filter(crop == "corn"))

lm_rice_pf <- lm(y2 ~ I(pfex_corn-subsidy_corn) + I(pfex_rice-subsidy_rice) + I(pfex_soy-subsidy_soybean),
  data = regdat_V2 %>% filter(crop == "rice"))

lm_soy_pf <- lm(y2 ~ I(pfex_corn-subsidy_corn) + I(pfex_rice-subsidy_rice) + I(pfex_soy-subsidy_soybean),
  data = regdat_V2 %>% filter(crop == "soybean"))

#summary(lm_corn_pf)
#summary(lm_rice_pf)
#summary(lm_soy_pf)

stargazer(lm_corn_pf, lm_rice_pf, lm_soy_pf, column.labels = c("Corn", "Rice", "Soybean"), type = "text",
  covariate.labels = c("Expected Corn Profit", "Expected Rice Profit", "Expected Soybean Profit"))

##
## =====
##
##              y2
##              Rice
##              Soybean
##              (1)      (2)      (3)
## -----
## Expected Corn Profit    0.0002    0.0004    0.0001
##                      (0.0004) (0.0005) (0.001)
```

```
##
## Expected Rice Profit      -0.0001      -0.0003      -0.0003
##                          (0.0003)      (0.0004)      (0.0004)
##
## Expected Soybean Profit   -0.0004      -0.0004      0.0004
##                          (0.0004)      (0.0004)      (0.0005)
##
## Corn Subsidy              -0.0001      -0.0001      -0.0001
##                          (0.001)      (0.001)      (0.002)
##
## Soybean Subsidy           -0.001       -0.0002      0.002**
##                          (0.001)      (0.001)      (0.001)
##
## Year                      0.075***     0.049***     -0.018
##                          (0.010)     (0.012)     (0.014)
##
## Jilin                     1.632***     3.411***     0.480***
##                          (0.111)     (0.130)     (0.147)
##
## Liaoning                  1.022***     3.040***     -0.477***
##                          (0.121)     (0.141)     (0.160)
##
## Heilongjiang              1.390***     4.240***     2.415***
##                          (0.095)     (0.111)     (0.126)
##
## Constant                  -152.146*** -102.887***  34.260
##                          (20.941)    (24.449)    (27.655)
##
## -----
## Observations              84           84           84
## R2                        0.884         0.963         0.906
## Adjusted R2               0.870         0.959         0.895
## Residual Std. Error (df = 74) 0.288         0.336         0.380
## F Statistic (df = 9; 74)    62.864***   214.741***   79.696***
## =====
## Note:                      *p<0.1; **p<0.05; ***p<0.01
##
## =
## 3
## -
```

Model 2 {-}: Self subsidy

```
lm_corn_pf <- lm(y2 ~ I(pfex_corn-subsidy_corn) + I(pfex_rice-subsidy_rice) + I(pfex_soy-subsidy_soybean)
               data = regdat_V2 %>% filter(crop == "corn"))

lm_rice_pf <- lm(y2 ~ I(pfex_corn-subsidy_corn) + I(pfex_rice-subsidy_rice) + I(pfex_soy-subsidy_soybean)
               data = regdat_V2 %>% filter(crop == "rice"))

lm_soy_pf <- lm(y2 ~ I(pfex_corn-subsidy_corn) + I(pfex_rice-subsidy_rice) + I(pfex_soy-subsidy_soybean)
               data = regdat_V2 %>% filter(crop == "soybean"))
```

```

#summary(lm_corn_pf)
#summary(lm_rice_pf)
#summary(lm_soy_pf)

stargazer(lm_corn_pf, lm_rice_pf, lm_soy_pf, column.labels = c("Corn", "Rice", "Soybean"), type = "text",
          covariate.labels = c("Expected Corn Profit", "Expected Rice Profit", "Expected Soybean Profit"))

##
## =====
##                               y2
##                               Rice   Soybean
##                               (2)   (3)
## -----
## Expected Corn Profit         0.0002   0.0004   0.0001
##                               (0.0004) (0.0003) (0.0004)
##
## Expected Rice Profit         0.0001  -0.0001  -0.0003
##                               (0.0003) (0.0004) (0.0004)
##
## Expected Soybean Profit      -0.0004  -0.0004   0.0004
##                               (0.0004) (0.0004) (0.0004)
##
## Corn Subsidy                 -0.0001
##                               (0.001)
##
## Rice Subsidy                 0.001
##                               (0.001)
##
## Soybean Subsidy              0.002**
##                               (0.001)
##
## Year                         0.068***   0.044***  -0.018
##                               (0.008)   (0.009)   (0.013)
##
## Jilin                       1.626***   3.408***   0.482***
##                               (0.111)   (0.119)   (0.134)
##
## Liaoning                    1.012***   3.034***  -0.474***
##                               (0.121)   (0.127)   (0.143)
##
## Heilongjiang                1.386***   4.239***   2.416***
##                               (0.095)   (0.107)   (0.122)
##
## Constant                    -137.576*** -91.268***  34.643
##                               (15.522)  (18.778) (25.132)
## -----
## Observations                 84         84         84
## R2                           0.883       0.963       0.906
## Adjusted R2                  0.870       0.959       0.897
## Residual Std. Error (df = 75) 0.288     0.333     0.377
## F Statistic (df = 8; 75)      70.519*** 245.615*** 90.869***
## =====

```

```
## Note:                                *p<0.1; **p<0.05; ***p<0.01
##
## =
## 3
## -
```

Model 3 {-}: Relative subsidy

```
lm_corn_pf <- lm(y2 ~ I(pfex_corn-subsidy_corn) + I(pfex_rice-subsidy_rice) + I(pfex_soy-subsidy_soybean)
               data = regdat_V2 %>% filter(crop == "corn"))

lm_rice_pf <- lm(y2 ~ I(pfex_corn-subsidy_corn) + I(pfex_rice-subsidy_rice) + I(pfex_soy-subsidy_soybean)
               data = regdat_V2 %>% filter(crop == "rice"))

lm_soy_pf <- lm(y2 ~ I(pfex_corn-subsidy_corn) + I(pfex_rice-subsidy_rice) + I(pfex_soy-subsidy_soybean)
               data = regdat_V2 %>% filter(crop == "soybean"))

#summary(lm_corn_pf)
#summary(lm_rice_pf)
#summary(lm_soy_pf)

stargazer(lm_corn_pf, lm_rice_pf, lm_soy_pf, column.labels = c("Corn", "Rice", "Soybean"), type = "text",
           covariate.labels = c("Expected Corn Profit", "Expected Rice Profit", "Expected Soybean Profit"))
```

```
##
## =====
##
##              y2
##              Rice
##              Soybean
##              (1)  (2)  (3)
## -----
## Expected Corn Profit      0.0003      0.0004      -0.0002
##                          (0.0003)    (0.0004)    (0.0004)
##
## Expected Rice Profit     -0.00004     -0.0002     -0.0004
##                          (0.0003)    (0.0004)    (0.0004)
##
## Expected Soybean Profit   -0.0005     -0.0004      0.001
##                          (0.0003)    (0.0004)    (0.0005)
##
## Relative Soybean Subsidy  -0.001      -0.0001     0.002**
##                          (0.001)    (0.001)    (0.001)
##
## Year                      0.072***     0.048***     -0.008
##                          (0.008)    (0.009)    (0.010)
##
## Jilin                     1.651***     3.419***     0.430***
##                          (0.105)    (0.122)    (0.139)
##
## Liaoning                  1.044***     3.049***     -0.534***
##                          (0.113)    (0.131)    (0.150)
##
```

```

## Heilongjiang      1.399***    4.245***    2.389***
##                  (0.093)    (0.109)    (0.124)
##
## Constant      -144.844*** -99.709***    15.225
##                  (15.553)    (18.129)    (20.649)
##
## -----
## Observations      84          84          84
## R2                0.884        0.963        0.905
## Adjusted R2       0.872        0.959        0.895
## Residual Std. Error (df = 75)  0.286        0.334        0.380
## F Statistic (df = 8; 75)    71.378***   244.718***  89.442***
## =====
## Note:                *p<0.1; **p<0.05; ***p<0.01
##
## =
## 3
## -

```