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***** SEAN O'GRADY *****
***Market Integration Analysis Research Project *****

***PLEASE NOTE: THIS CODE WAS STARTED BACK IN THE FALL OF 2019, AND SINCE THEN, I HAVE WORKED TO CONDENSE, CHANGE AND AMMEND IT TO FIT THE NEEDS OF THE AGRICULTURAL PROJECT I HAVE WORKED ON DURING MY TIME IN UNDERGRADUATE RESEARCH. I WAS GIVEN SOME GUIDANCE AT POINTS BY DR. RICHARD GALLENSTEIN ON THIS CODE, BUT I WROTE IT MYSELF, AS PER INSTRUCTIONS OF THE APPLICATION.

***ALSO NOTE: IF YOU NEED TO RUN IT WITH THE AVAILABLE DATASETS FROM ESOKO, THEN I CAN SEND THOSE TO YOU AS WELL. THANK YOU.

***ALSO NOTE: Michelle O'Grady is my mother's name, as the original computer I started the project with was on her old one. So, it still shows her name in the dropbox data file. I am noting this to avoid confusion.


*** Crop Key ***

* 1 - Maize white
* 2 - GroundnutShelled
* 3 - Maize Yellow
* 4 - Millet
* 5 - Paddy rice
* 6 - R.local Brown
* 7 - R.local White
* 8 - Yam Pona
* 9 - White Yam
* 10- Soya

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******** Appending All Crop Data ******************
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cd "C:\Users\Michelle Ogrady\Dropbox\Market Integration and Moral Hazard - Sean - Fall 19\Datasets"

* Ground Nuts *

import excel "C:\Users\Michelle Ogrady\Dropbox\Market Integration and Moral Hazard - Sean - Fall 19\Datasets\Esoko Data_2010-19.xls", sheet("Groundnut Shelled..") firstrow clear

rename Location market
rename GroundnutShelled Price

tab Measure
gen pricekg = Price if Measure=="kg"
replace pricekg = Price/82 if Measure=="bag 82kg"
drop Price
rename pricekg price
drop Measure
label variable price "Price per 1 kg"
gen crop=2

save groundnut_clean.dta, replace

* Yellow Maize *
import excel "C:\Users\Michelle Ogrady\Dropbox\Market Integration and Moral Hazard - Sean - Fall 19\Datasets\Esoko Data_2010-19.xls", sheet("Maize Yellow") firstrow clear

rename Location market
rename Maizeyellograin Price
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56
57  tab Measure
58  gen pricekg = Price if Measure=="kg"
59  replace pricekg = Price/100 if Measure=="bag 100kg "
60  drop Price
61  rename pricekg price
62  drop Measure
63  label variable price "Price per 1 kg"
64  gen crop=3
65
66  save maizeyellow_clean.dta, replace
67
68  * White Maize
69
70  import excel "C:\Users\Michelle Ogrady\Dropbox\Market Integration and Moral Hazard - Sean - Fall
    19\Datasets\Esoko Data_2010-19.xls", sheet("Maize white") firstrow clear
71
72  rename Location market
73  rename Maizewhitegrain Price
74
75  tab Measure
76  gen pricekg = Price if Measure=="kg"
77  replace pricekg = Price/100 if Measure=="bag 100kg"
78  drop Price
79  rename pricekg price
80  drop Measure
81  label variable price "Price per 1 kg"
82  gen crop=1
83
84  save maizewhite_clean.dta, replace
85
86  import excel "C:\Users\Michelle Ogrady\Dropbox\Market Integration and Moral Hazard - Sean - Fall
    19\Datasets\Esoko Data_2010-19.xls", sheet("Millet") firstrow clear
87
88  rename Location market
89  rename MilletGrain Price
90
91  tab Measure
92  gen pricekg = Price if Measure=="kg"
93  replace pricekg = Price/100 if Measure=="bag 93 kg"
94  drop Price
95  rename pricekg price
96  drop Measure
97  label variable price "Price per 1 kg"
98  gen crop=4
99
100 save Millet_clean.dta, replace
101
102 import excel "C:\Users\Michelle Ogrady\Dropbox\Market Integration and Moral Hazard - Sean - Fall
    19\Datasets\Esoko Data_2010-19.xls", sheet("Paddy rice") firstrow clear
103
104 rename Location market
105 rename RicelocalPaddy Price
106
107 tab Measure
108 gen pricekg = Price if Measure=="Bag 84KG"
109 replace pricekg = Price/84 if Measure=="Bag 84KG"
110 replace pricekg = Price/100 if Measure=="Bag 100KG"
111 replace pricekg = Price/50 if Measure=="Bag 50KG"
112
113 drop Price
114 rename pricekg price
115 drop Measure
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label variable price "Price per 1 kg"
gen crop=5

save Paddyrice_clean.dta, replace


import excel "C:\Users\Michelle Ogrady\Dropbox\Market Integration and Moral Hazard - Sean - Fall 19\Datasets\Esoko Data_2010-19.xls", sheet("R.local Brown") firstrow clear

rename Location market
rename Ricelocalbrown Price

tab Measure
gen pricekg = Price if Measure=="kg"
replace pricekg = Price/100 if Measure=="bag 100kg"
replace pricekg = Price/109 if Measure=="bag 109kg"
drop Price
rename pricekg price
drop Measure
label variable price "Price per 1 kg"
gen crop=6

save R.localBrown_clean.dta, replace

import excel "C:\Users\Michelle Ogrady\Dropbox\Market Integration and Moral Hazard - Sean - Fall 19\Datasets\Esoko Data_2010-19.xls", sheet("R.local white") firstrow clear

rename Location market
rename Ricelocalwhite Price

tab Measure
gen pricekg = Price if Measure=="kg"
replace pricekg = Price/100 if Measure=="bag 100kg"
drop Price
rename pricekg price
drop Measure
label variable price "Price per 1 kg"
gen crop=7

save R.localwhite_clean.dta, replace

import excel "C:\Users\Michelle Ogrady\Dropbox\Market Integration and Moral Hazard - Sean - Fall 19\Datasets\Esoko Data_2010-19.xls", sheet("Yam Pona") firstrow clear

rename Location market
rename YamPona Price

tab Measure
gen pricekg = Price if Measure=="kg"
replace pricekg = Price/250 if Measure=="100 tubers 250kg"
drop Price
rename pricekg price
drop Measure
label variable price "Price per 1 kg"
gen crop=8

save YamPona_clean.dta, replace


import excel "C:\Users\Michelle Ogrady\Dropbox\Market Integration and Moral Hazard - Sean - Fall 19\Datasets\Esoko Data_2010-19.xls", sheet("White Yam") firstrow clear

rename Location market
```

```
rename WhiteYam Price

tab Measure
gen pricekg = Price if Measure=="kg"
replace pricekg = Price/250 if Measure=="100 tubers 250kg"
drop Price
rename pricekg price
drop Measure
label variable price "Price per 1 kg"
gen crop=9

save WhiteYam_clean.dta, replace


import excel "C:\Users\Michelle Ogrady\Dropbox\Market Integration and Moral Hazard - Sean - Fall 19\Datasets\Esoko Data_2010-19.xls", sheet("Soya") firstrow clear

rename Location market
rename SoyaBean Price

tab Measure
gen pricekg = Price if Measure=="kg"
replace pricekg = Price/100 if Measure=="bag 100 kg"
drop Price
rename pricekg price
drop Measure
label variable price "Price per 1 kg"
gen crop=10

save Soya_clean.dta, replace



* Millet
* Yam
* Paddy Rice
* Local Rice
* SoyaBean

append using groundnut_clean.dta
append using maizeyellow_clean.dta
append using maizewhite_clean.dta
append using Millet_clean.dta
append using Paddyrice_clean.dta
append using R.localBrown_clean.dta
append using R.localwhite_clean.dta
append using YamPona_clean.dta
append using WhiteYam_clean.dta

tab crop
drop Crop

* Create a Market ID number

encode market, gen(mktID)
drop market

order mktID Year Week crop price

drop I - N
drop CPI

drop if missing(price)
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drop if missing(mktID)

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* Step 3: VISUALIZE *

drop MktYrCropID
gen MktYrCropID = 100000*mktID + 100*(Year-2000) + crop

sort MktYrCropID
by MktYrCropID: egen targetweek = mean(price) if Week==48 | Week==49 | Week==50 | Week==51

sort mktID crop Year Week

*******************************************************************************
tab mktID
twoway line Unadjusted Year if mktID==5 & Week==51 & crop==2
twoway line price Year if mktID==4 & Week==52 & crop==1

twoway (line price Year if mktID==10 & Week==49 & crop==1)  (line price Year if mktID==11 & Week==49 & crop==1) (line price Year if mktID==12 & Week==49 & crop==1, legend(order(1 "Bawku" 2 "Fumbisi" 3 "Navrongo")))

*****AVERAGE HARVEST SEASON PRICE******

*********************************************************       MAIZE WHITE
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*Upper East*
twoway (line targetweek Year if mktID==10 & Week==49 & crop==1)  (line targetweek Year if mktID==11 & Week==49 & crop==1) (line targetweek Year if mktID==17 & Week==49 & crop==1) (line targetweek Year if mktID==7 & Week==49 & crop==1, legend(order(1 "Bawku" 2 "Fumbisi" 3 "Navrongo" 4 "Bolgatanga")))

*Upper West*
twoway (line targetweek Year if mktID==13 & Week==49 & crop==1)  (line targetweek Year if mktID==24 & Week==49 & crop==1) (line targetweek Year if mktID==23 & Week==49 & crop==1, legend(order(1 "Jirapa" 2 "Wa" 3 "Tumu")))

*Northern Region*
twoway (line targetweek Year if mktID==28 & Week==49 & crop==1)  (line targetweek Year if mktID==5 & Week==49 & crop==1) (line targetweek Year if mktID==12 & Week==49 & crop==1) (line targetweek Year if mktID==19 & Week==49 & crop==1) (line targetweek Year if mktID==20 & Week==49 & crop==1, legend(order(1 "Yendi" 2 "Bimbilla" 3 "Gushiegu" 4 "Salaga" 5 "Tamale")))

*Savanah Region*
twoway (line targetweek Year if mktID==6 & Week==49 & crop==1)  (line targetweek Year if mktID==9 & Week==49 & crop==1, legend(order(1 "Bole" 2 "Damongo")))

*Major Markets*
twoway (line targetweek Year if mktID==19 & Week==49 & crop==1)  (line targetweek Year if mktID==24 & Week==49 & crop==1) (line targetweek Year if mktID==7 & Week==49 & crop==1) (line targetweek Year if mktID==21 & Week==49 & crop==1) (line targetweek Year if mktID==15 & Week==49 & crop==1) (line targetweek Year if mktID==1 & Week==49 & crop==1, legend(order(1 "Tamale" 2 "Wa" 3 "Bolgatanga" 4 "Techiman21" 5 "Kumasi" 6 "Agbogbloshie")))


*****************************************************       SOYA
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*Upper East*
twoway (line targetweek Year if mktID==10 & Week==49 & crop==10)  (line targetweek Year if mktID==11 & Week==49 & crop==10) (line targetweek Year if mktID==17 & Week==49 & crop==10) (line targetweek Year if mktID==7 & Week==49 & crop==10, legend(order(1 "Bawku" 2 "Fumbisi" 3 "Navrongo" 4 "Bolgatanga")))
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281
282  *Upper West*
283  twoway (line targetweek Year if mktID==13 & Week==50 & crop==10)  (line targetweek Year if mktID==24
     & Week==50 & crop==10) (line targetweek Year if mktID==23 & Week==50 & crop==10, legend(order(1
     "Jirapa" 2 "Wa" 3 "Tumu")))
284
285  *Northern Region*
286  twoway (line targetweek Year if mktID==28 & Week==49 & crop==10)  (line targetweek Year if mktID==5 &
      Week==49 & crop==10) (line targetweek Year if mktID==12 & Week==49 & crop==10) (line targetweek Year
      if mktID==19 & Week==49 & crop==10) (line targetweek Year if mktID==20 & Week==49 & crop==10, legend
     (order(1 "Yendi" 2 "Bimbilla" 3 "Gushiegu" 4 "Salaga" 5 "Tamale")))
287
288  *Savanah Region*
289  twoway (line targetweek Year if mktID==6 & Week==49 & crop==10)  (line targetweek Year if mktID==9 &
     Week==49 & crop==10, legend(order(1 "Bole" 2 "Damongo")))
290
291  *Major Markets*
292  twoway (line targetweek Year if mktID==19 & Week==49 & crop==10)  (line targetweek Year if mktID==24
     & Week==49 & crop==10) (line targetweek Year if mktID==7 & Week==49 & crop==10) (line targetweek Year
      if mktID==21 & Week==49 & crop==10) (line targetweek Year if mktID==15 & Week==49 & crop==10) (line
     targetweek Year if mktID==1 & Week==49 & crop==10, legend(order(1 "Tamale" 2 "Wa" 3 "Bolgatanga" 4
     "Techiman21" 5 "Kumasi" 6 "Agbogbloshie")))
293
294
295  ********************************************************************************************************
     **********
296  tab crop
297
298  help twoway
299
300  graph twoway (line price Year if mktID==4 & Week==50 & crop==1) (line price Year if mktID==11 & Week
     ==50 & crop==1) (line price Year if mktID==17 & Week==50 & crop==1)
301
302  save GhanaPrice_20200130, replace
303
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