Appendix

Contents

1 Data

1.1 Explanation

We have district-level panel data for the 11 districts (Merz) of Armenia from the years 2004 to 2023. It consists of variables from aggregated household surveys, variables on detailed agricultural output and drought-related variables. Every variable represents the average level in a particular year in a particular district.

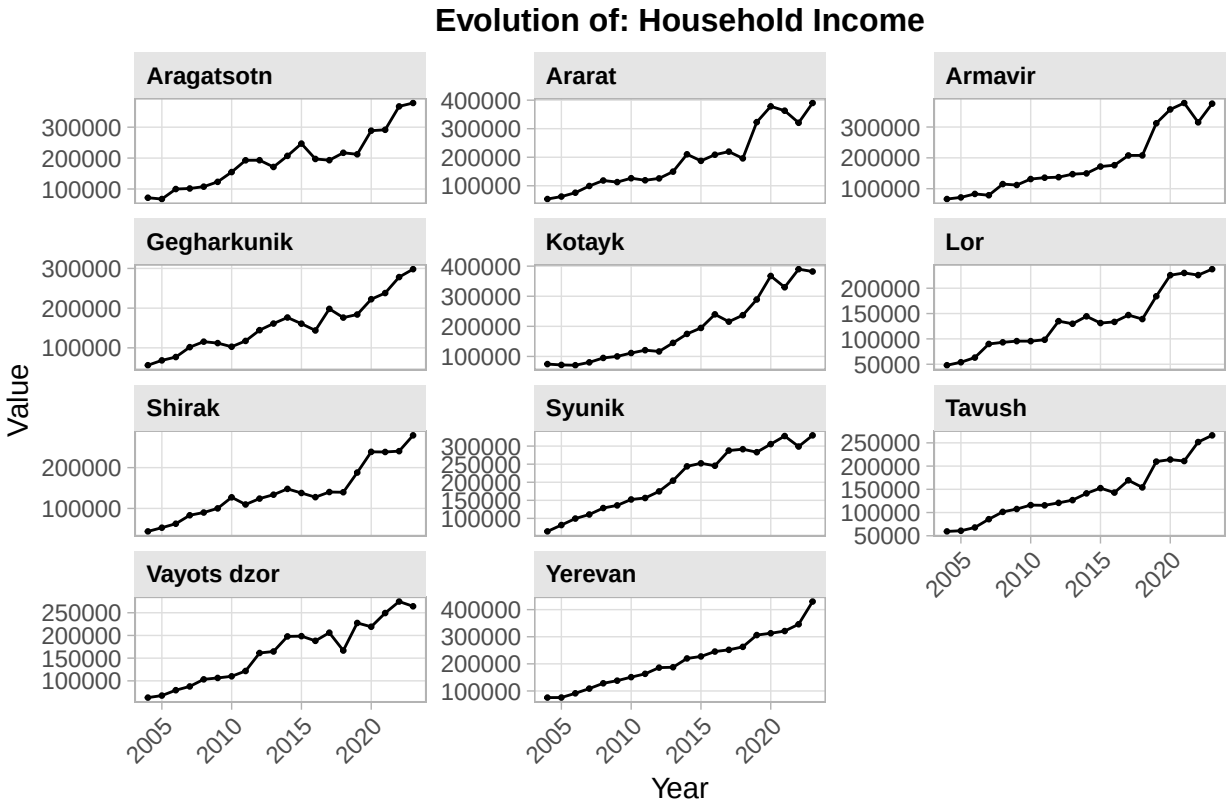
1.1.1 Variable Names & Units

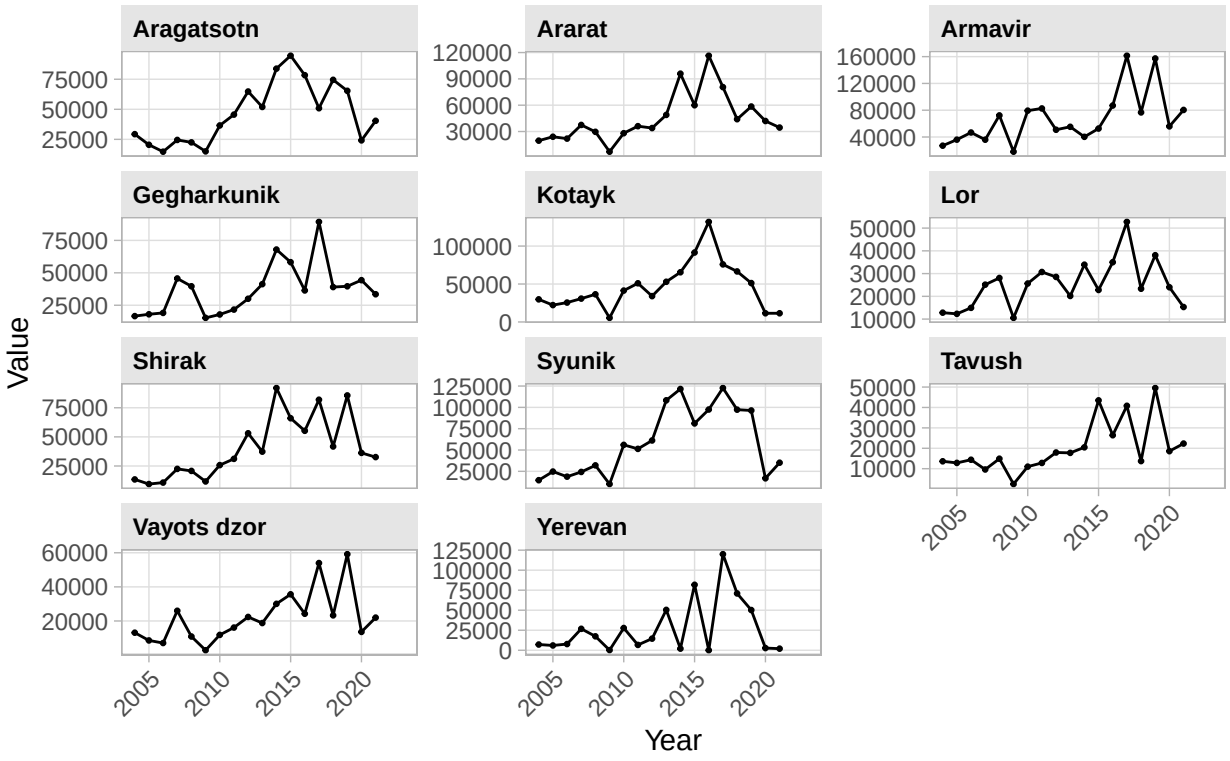
- In Armenian Dram (currency):
  - income: Household income
  - agric_income: Household agriculture income
  - fdcons: Household food consumption
  - fdpurch: Household food purchases
  - exp: Household expenditures
- In Percentage:
  - poverty: Rate of households in poverty
  - urban: Rate of households living in an urban area
  - share: Share of observations of SPEI above +1
  - agric_stress: Percentage of arable areas with a VHI (Vegetable Health Index) value below 35%
- Dummies:
  - drought_dummy1: Equals 1 if there are at least 10 SPEI observations above +1
  - drought_dummy2: Equals 1 if there are at least 15 SPEI observations above +1
- Tons (1000kg)
  - agric_output: Gross Agriculture output
  - grains_harvest: Tons of grains and leguminous plants harvested
  - vegetables_harvest: Tons of vegetables harvested
  - fruits_harvest: Tons of fruits and berries harvested
  - potatoes_harvest: Tons of potatoes harvested
  - watermelon_harvest: Tons of watermelons harvested
  - grapes_harvest: Tons of grapes harvested
- Hectare (1000km2)
  - grains_area: Hectares used for harvesting grains and leguminous plants
  - vegetables_area: Hectares used for harvesting vegetables
  - fruits_area: Hectares used for harvesting fruits and berries
  - potatoes_area: Hectares used for harvesting potatoes
  - watermelon_area: Hectares used for harvesting watermelons
  - grapes_area: Hectares used for harvesting grapes
- Tons per hectare (1000kg / 1000km2)
  - output_per_field_grains: Grains harvested divided by area (yield)
  - output_per_field_vegetables: Vegetables harvested divided by area (yield)
  - output_per_field_fruits: Fruits harvested divided by area (yield)
  - output_per_field_potatoes: Potatoes harvested divided by area (yield)
  - output_per_field_grapes: Grapes harvested divided by area (yield)
- Other:

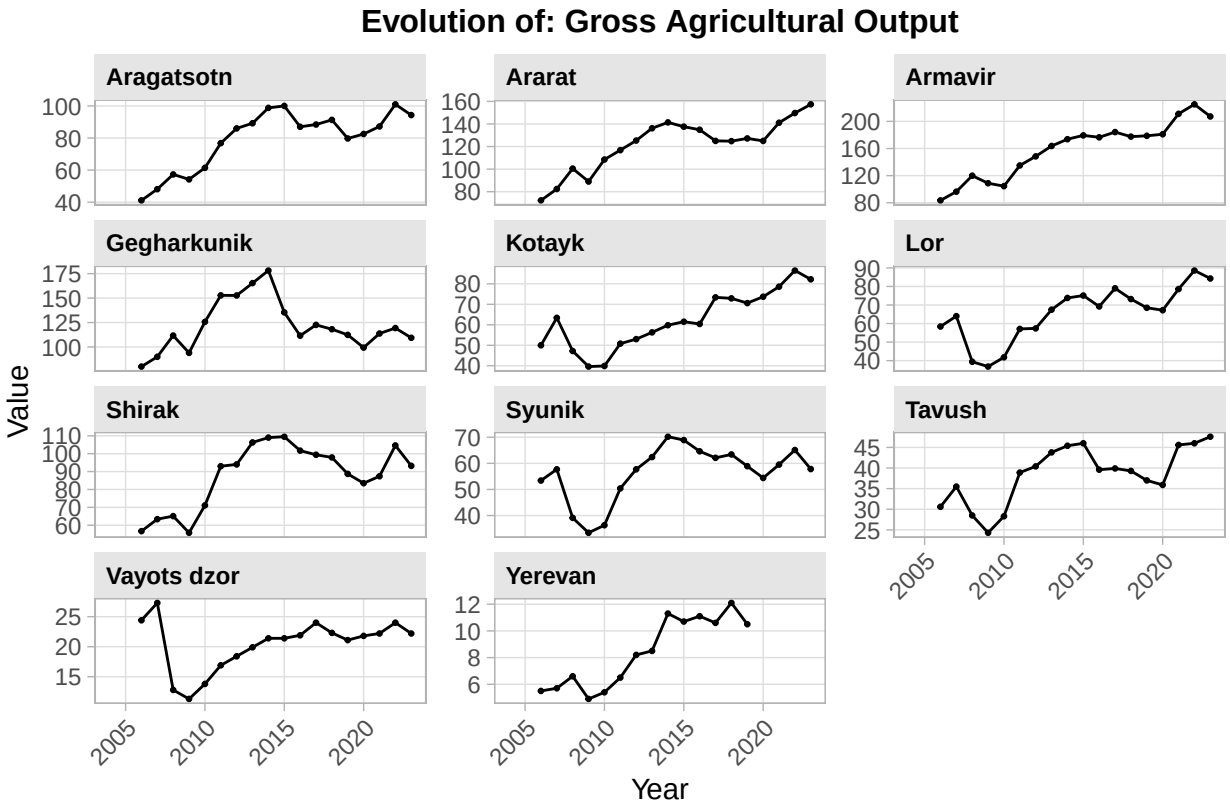
- spei: SPEI measures deviation of the water balance from the long term mean. A value of 0 means we are at the long term mean, while +1 is a moderate drought that happens once or twice in 10 years. Note that we took the official SPEI and multiplied it by (-1) in order to adjust the coefficient sign interpretation in the regressions. Positive values indicate harsher conditions.
- temperature: CRU land-based measure of average surface temperature in celsius

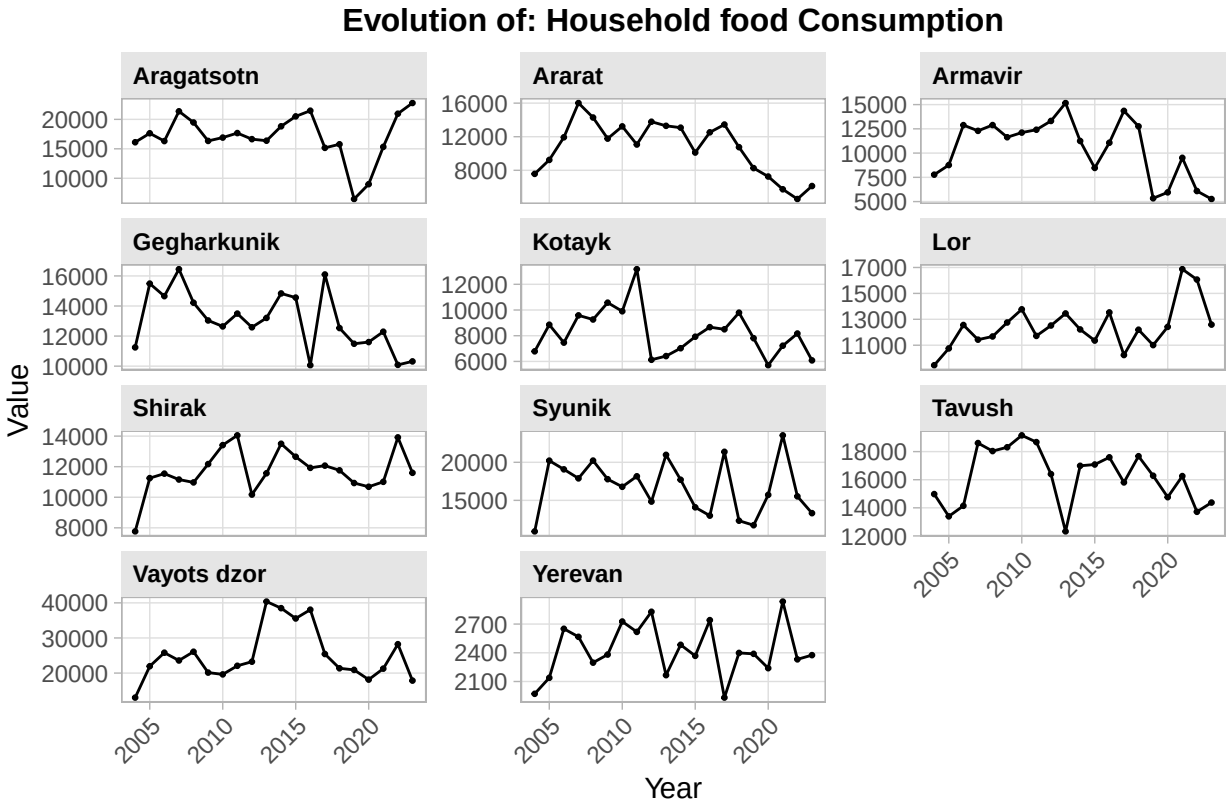
2 Descriptive Evidence

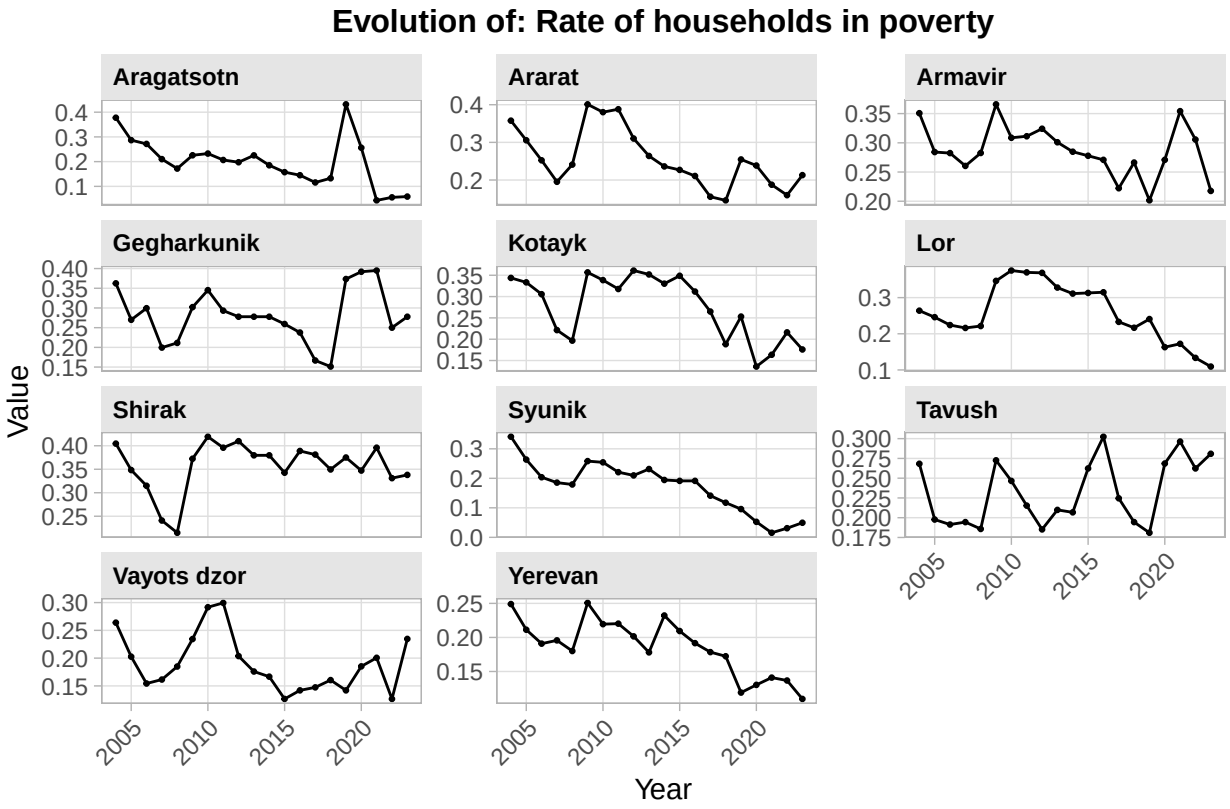
2.1 Raw Data Graphs

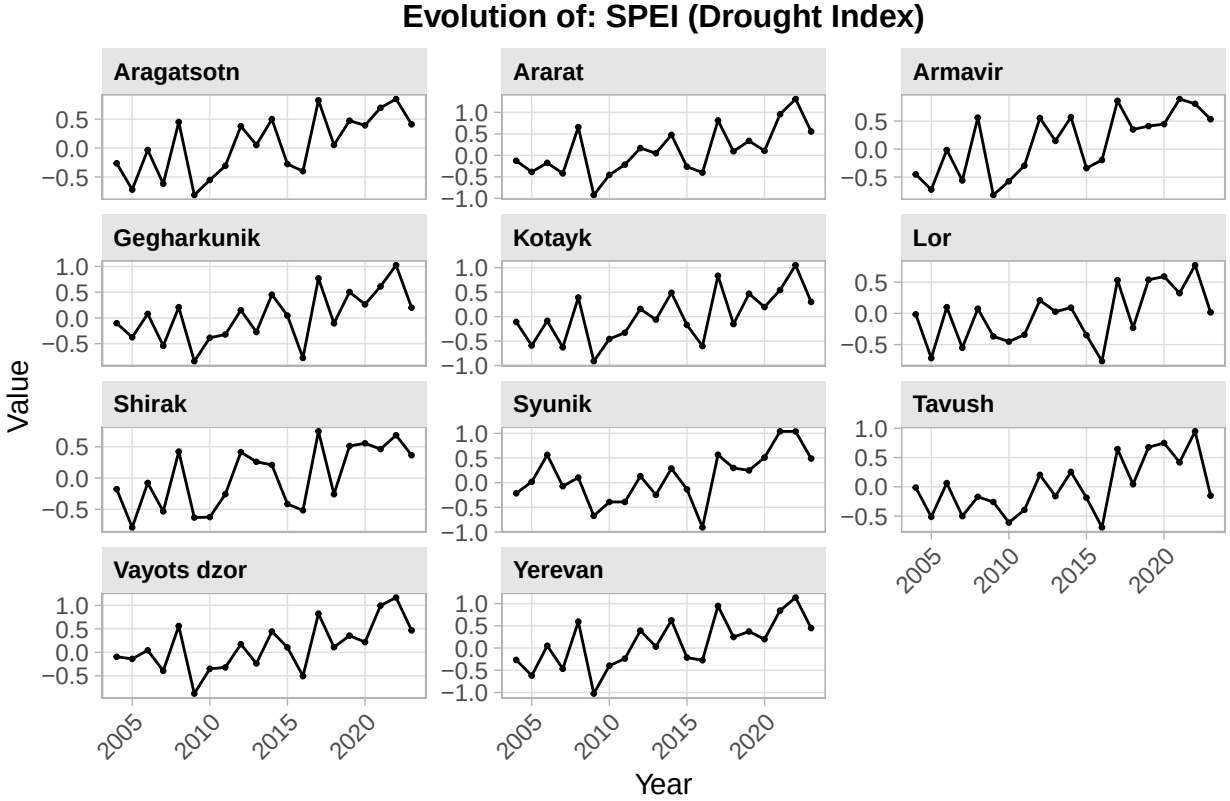


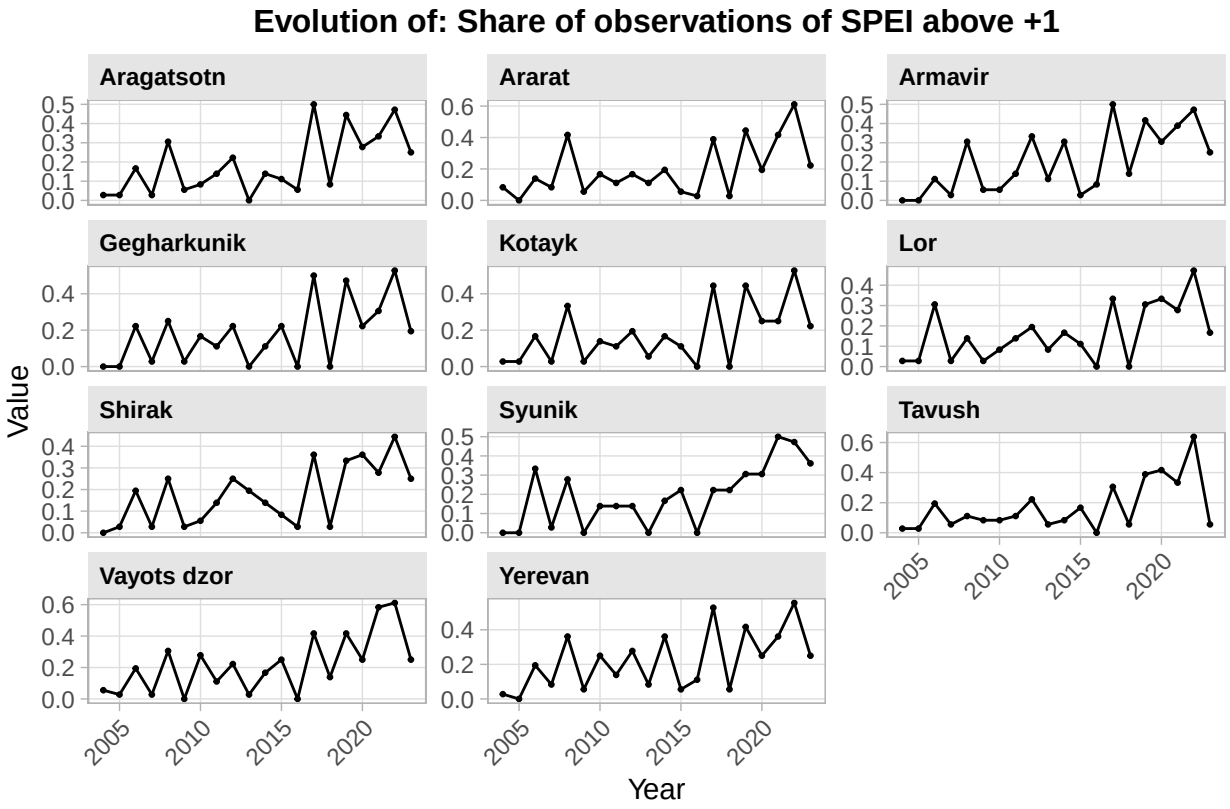


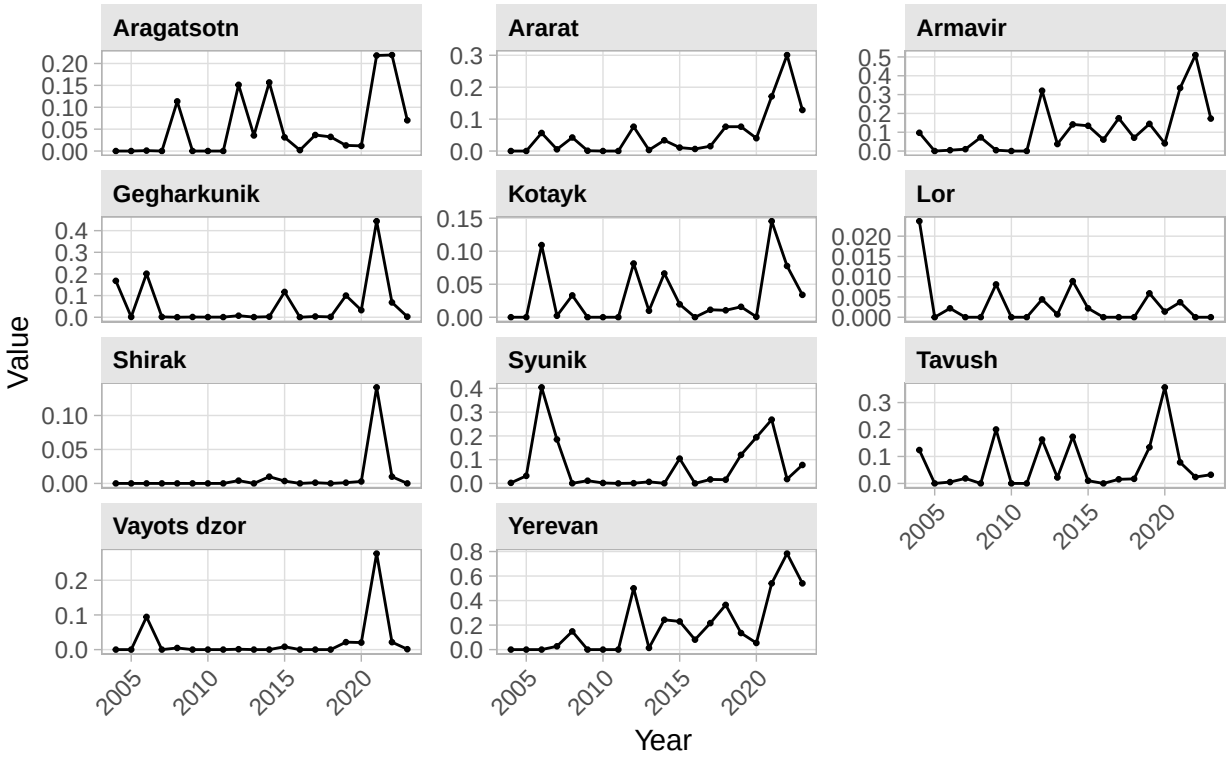

Evolution of: Gross Agricultural Output
Aragatsotn
Ararat
Armavir
Gegharkunik
Kotayk
Lor
Shirak
Syunik
Tavush
Vayots dzor
Yerevan
Value
Year

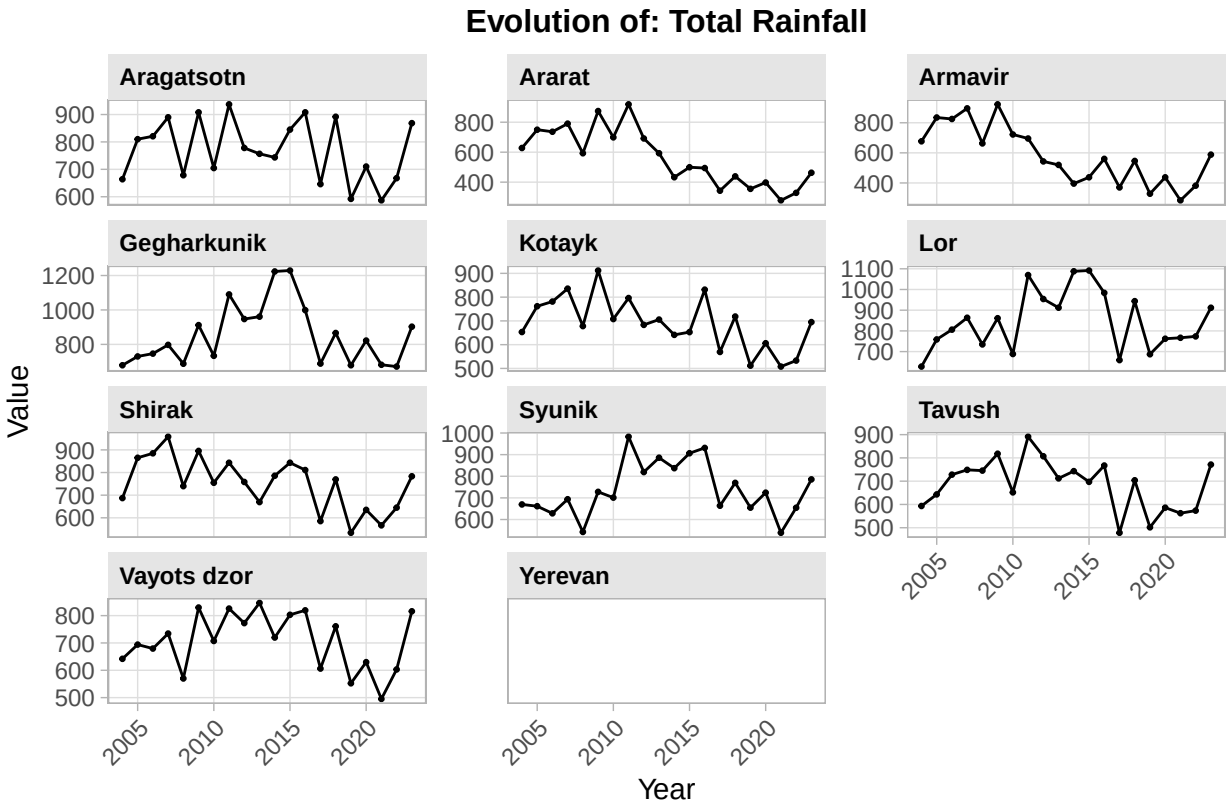

Evolution of: Household food Consumption
Aragatsotn
Ararat
Armavir
Gegharkunik
Kotayk
Lor
Shirak
Syunik
Tavush
Vayots dzor
Yerevan
Value
Year

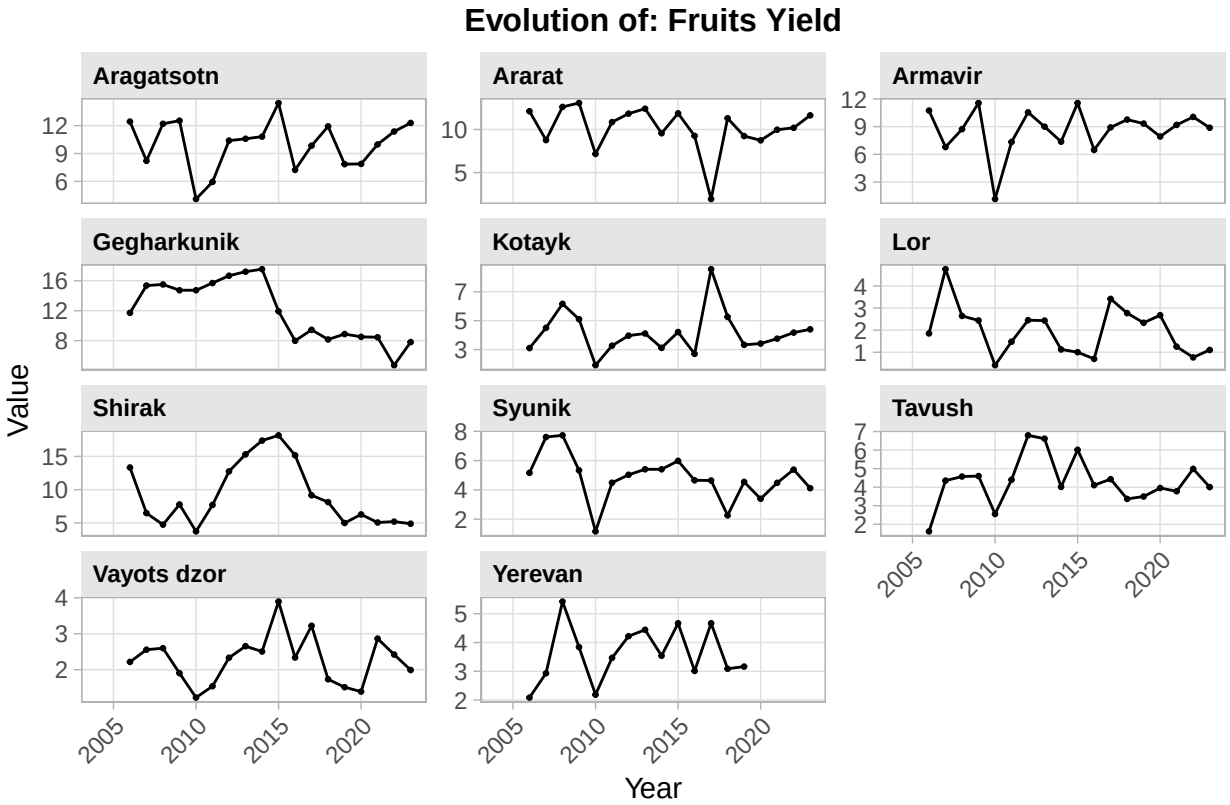

Evolution of: Rate of households in poverty
Aragatsotn
Ararat
Armavir
Gegharkunik
Kotayk
Lor
Shirak
Syunik
Tavush
Vayots dzor
Yerevan
Value
Year

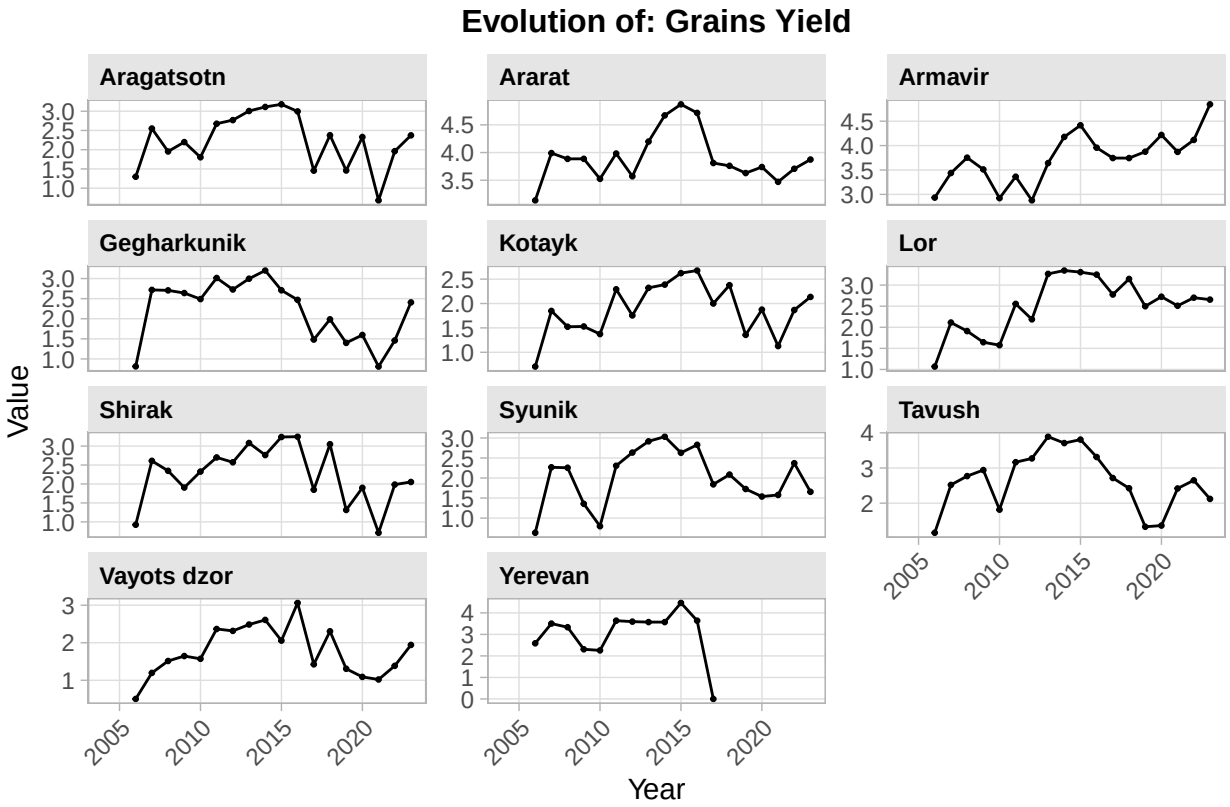

Evolution of: SPEI (Drought Index)
Aragatsotn
Ararat
Armavir
Gegharkunik
Kotayk
Lor
Shirak
Syunik
Tavush
Vayots dzor
Yerevan
Value
Year


Evolution of: Share of observations of SPEI above +1
Aragatsotn
Ararat
Armavir
Gegharkunik
Kotayk
Lor
Shirak
Syunik
Tavush
Vayots dzor
Yerevan
Value
Year
2005
2010
2015
2020

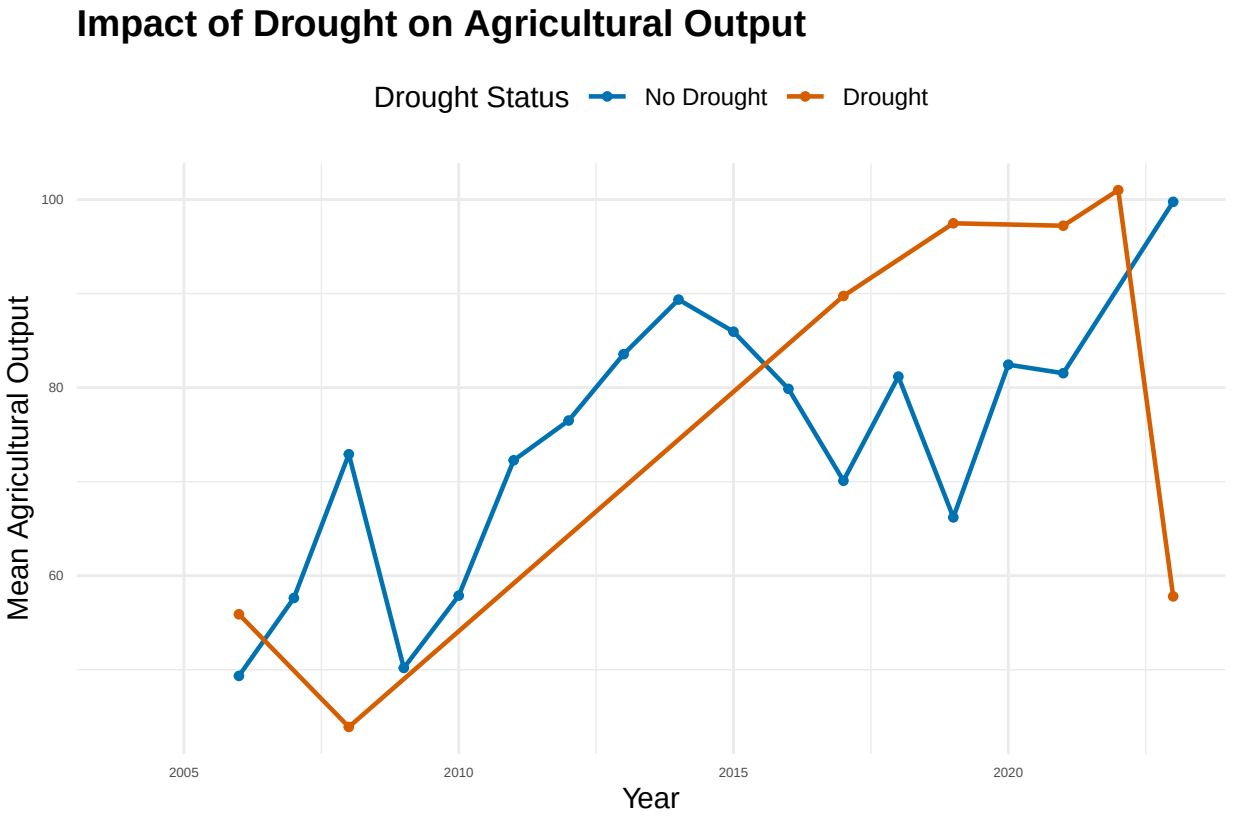

Evolution of: Agricultural Stress
Aragatsotn
Ararat
Armavir
Gegharkunik
Kotayk
Lor
Shirak
Syunik
Tavush
Vayots dzor
Yerevan
Value
Year
2005
2010
2015
2020


Evolution of: Total Rainfall
Aragatsotn
Ararat
Armavir
Gegharkunik
Kotayk
Lor
Shirak
Syunik
Tavush
Vayots dzor
Yerevan
Value
Year


Evolution of: Fruits Yield
Aragatsotn
Ararat
Armavir
Gegharkunik
Kotayk
Lor
Shirak
Syunik
Tavush
Vayots dzor
Yerevan
Value
Year

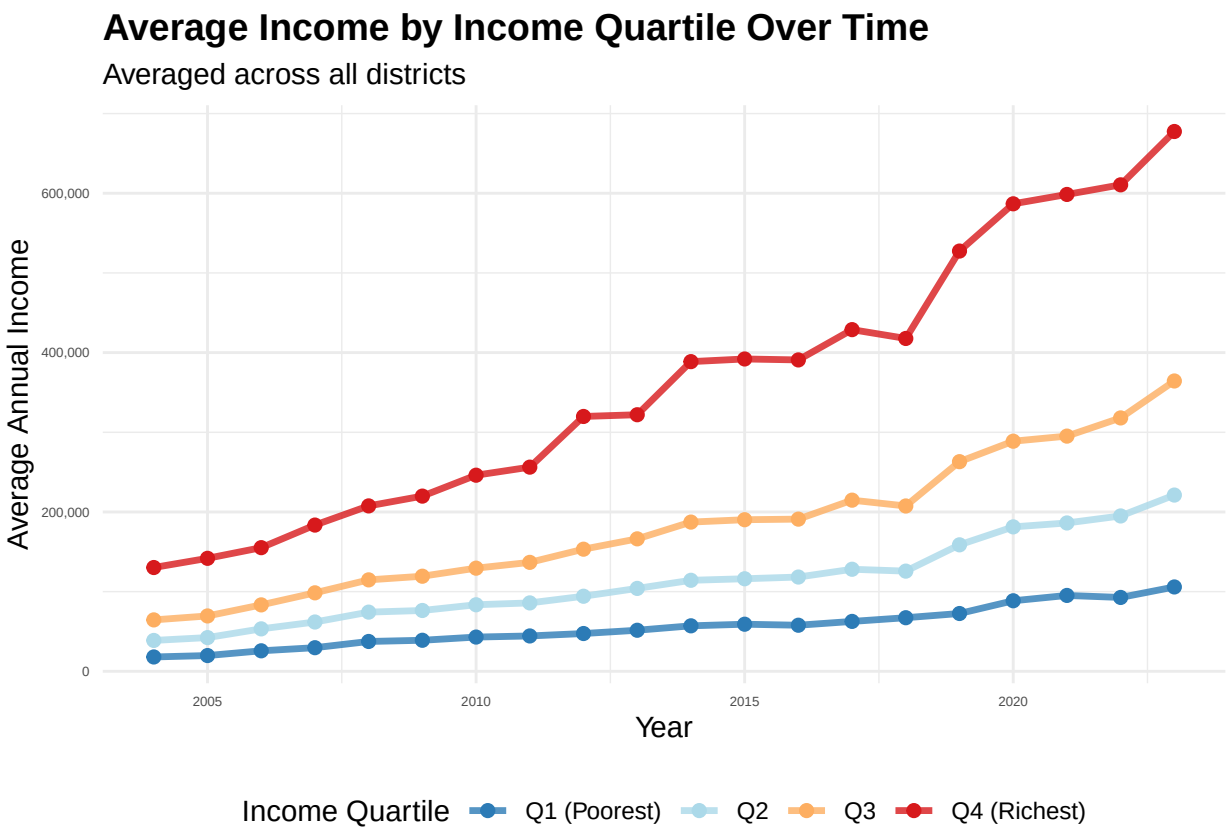

Evolution of: Grains Yield
Aragatsotn
Ararat
Armavir
Gegharkunik
Kotayk
Lor
Shirak
Syunik
Tavush
Vayots dzor
Yerevan
Value
Year
2005
2010
2015
2020

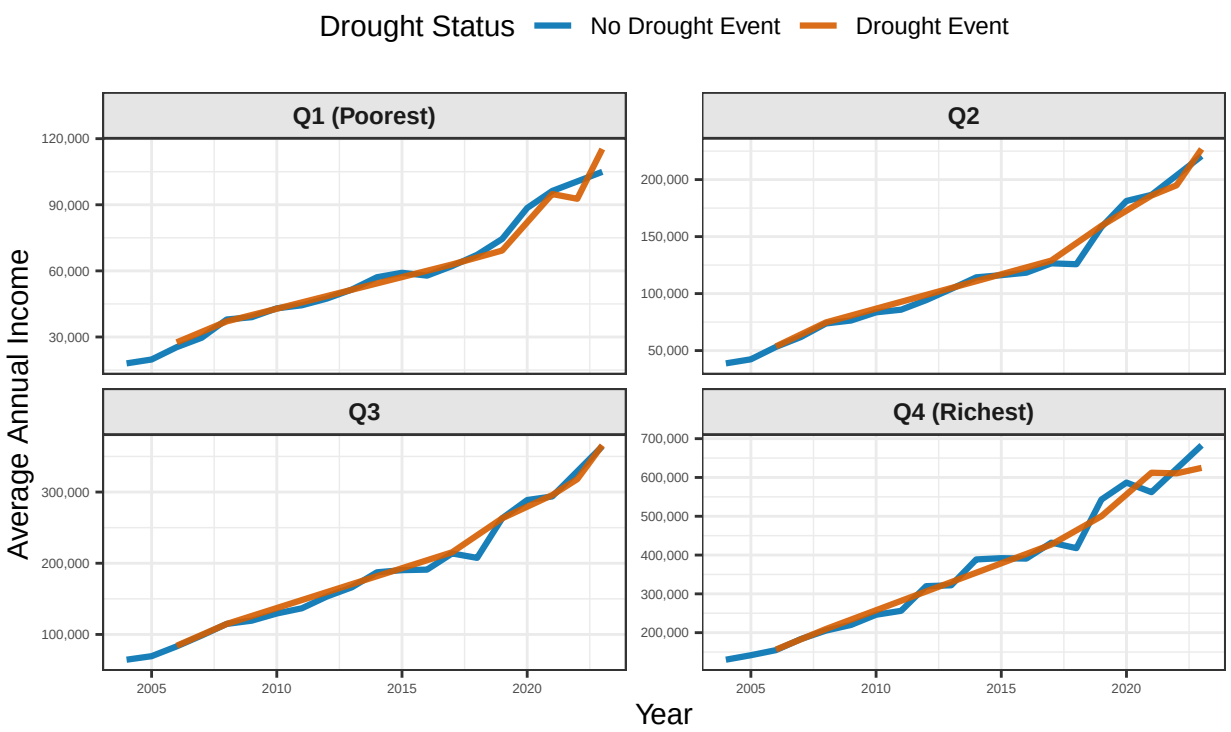
2.2 Graphs with Drought Dummy



Note: This graph should be interpreted with caution as the number of districts is very low, meaning that any kind of visible relationship is very likely due to confoundin

2.3 Graphs with Drought Dummy and Quartiles





3 TWFE Regressions

3.1 Data

3.1.1 Variable Units

- Armenian Dram (currency):
  - Income
  - Agriculture income
  - Food consumption
- Tons (1000kg)
  - Agriculture output
  - Grains harvest
  - Vegetables harvest
  - Fruits harvest
  - Potatoes harvest
- Tons per hectare (1000kg / 1000km2)
  - Grains output per field
  - Vegetables output per field
  - Fruits output per field
  - Potatoes output per field

```
## Dependent variables are in logs.
```

3.2 Regressions

3.2.1 Equation

All our regressions resemble the following equations, where Y_{dt} represents the chosen outcome variable for district d at time t, λ_d represents the district-specific fixed effect, γ_t represents the time-specific fixed effect, X_{dt} is the chosen explanatory variable, β is the effect of said variable on the outcome, and ϵ_{dt} is the error.

$$Y_{dt} = \alpha + \lambda_d + \gamma_t + \beta X_{dt} + \epsilon_{dt}$$

$$Y_{dt} = \alpha + \lambda_d + \gamma_t + \beta_1 X_{dt} + \beta_2 X_{d,t-1} + \epsilon_{dt}$$

$$Y_{dt} = \alpha + \lambda_d + \gamma_t + \beta_1 X_{dt} + \beta_2 X_{d,t-1} + \beta_3 X_{d,t-2} + \epsilon_{dt}$$

3.3 Dependent Variable: Household Income

3.3.1 Regressed on: Drought Index (SPEI)

```
              Model 1: 0 Lags   Model 2: 1 Lag  Model 3: 2 Lags
```

Dependent Var.: Household Income Household Income Household Income

SPEI 0.0260 (0.0266) 0.0263 (0.0252) 0.0254 (0.0264) SPEI (Lag 1) -0.0201 (0.0505) -0.0199 (0.0496) SPEI (Lag 2) -0.0174 (0.0522) Fixed-Effects: ————————- ————————- ————————- District Yes Yes Yes Year Yes Yes Yes _____ _____ _____ _____ S.E.: Clustered by: District by: District by: District Observations 220 220 220 R2 0.95771 0.95775 0.95778 Within R2 0.00175 0.00273 0.00344 — Signif. codes: 0 ‘’ ***0.001*** ’’ *0.01* ’’ 0.05 ‘.’ 0.1 ’ ’ 1

3.3.2 Regressed on: Share of observations of SPEI above +1

Model 1: 0 Lags Model 2: 1 Lag Model 3: 2 Lags

Dependent Var.: Household Income Household Income Household Income

SPEI Share -0.1165 (0.0908) -0.1618 (0.1105) -0.1685 (0.1155) SPEI Share (Lag 1) -0.2229 (0.1517) -0.2596 (0.1846) SPEI Share (Lag 2) -0.2104 (0.1685) Fixed-Effects: ———————- ———————- ———————- District Yes Yes Yes Year Yes Yes Yes _____ _____ _____ S.E.: Clustered by: District by: District by: District Observations 220 220 220 R2 0.95781 0.95839 0.95888 Within R2 0.00413 0.01776 0.02941 — Signif. codes: 0 ‘’ ***0.001*** ’’ *0.01* ’’ 0.05 ‘.’ 0.1 ’ ’ 1

3.3.3 Regressed on: Agricultural Stress

Model 1: 0 Lags Model 2: 1 Lag Model 3: 2 Lags

Dependent Var.: Household Income Household Income Household Income

Agric. Stress -0.0047 (0.0666) -0.0222 (0.0622) -0.0228 (0.0612) Agric. Stress (Lag 1) 0.0717 (0.0819) 0.0743 (0.0736) Agric. Stress (Lag 2) -0.0202 (0.1024) Fixed-Effects: ———————- ———————- ———————- District Yes Yes Yes Year Yes Yes Yes _____ _____ _____ S.E.: Clustered by: District by: District by: District Observations 220 220 220 R2 0.95764 0.95776 0.95777 Within R2 1.42e-5 0.00285 0.00300 — Signif. codes: 0 ‘’ ***0.001*** ’’ *0.01* ’’ 0.05 ‘.’ 0.1 ’ ’ 1

3.3.4 Regressed on: Temperature

Model 1: 0 Lags Model 2: 1 Lag Model 3: 2 Lags

Dependent Var.: Household Income Household Income Household Income

Temp. 0.0971 (0.0676) 0.0944 (0.0684) 0.0955 (0.0698) Temp. (Lag 1) 0.0133 (0.0326) -0.0002 (0.0205) Temp. (Lag 2) 0.0150 (0.0230) Fixed-Effects: ———————- ———————- ———————- District Yes Yes Yes Year Yes Yes Yes _____ _____ _____ S.E.: Clustered by: District by: District by: District Observations 220 220 220 R2 0.95785 0.95791 0.95798 Within R2 0.00499 0.00633 0.00809 — Signif. codes: 0 ‘’ ***0.001*** ’’ *0.01* ’’ 0.05 ‘.’ 0.1 ’ ’ 1

3.4 Dependent Variable: Household Agricultural Income

3.4.1 Regressed on: Drought Index (SPEI)

Model 1: 0 Lags Model 2: 1 Lag

Dependent Var.: Household Agricultural Income Household Agricultural Income

SPEI 0.2773 (0.2633) 0.2786 (0.2720) SPEI (Lag 1) 0.0586 (0.2790) SPEI (Lag 2)
Fixed-Effects: ———————- ———————- District Yes Yes Year Yes Yes _____ _____ S.E.: Clustered by: District by: District Observations 197 197 R2 0.71669 0.71680 Within R2 0.00952 0.00992

Model 3: 2 Lags

Dependent Var.: Household Agricultural Income

SPEI 0.2814 (0.2893) SPEI (Lag 1) 0.0572 (0.2737) SPEI (Lag 2) 0.0400 (0.2727) Fixed-Effects: ———————— ———— District Yes Year Yes _____ _____
S.E.: Clustered by: District Observations 197 R2 0.71685 Within R2 0.01009 — Signif. codes: 0 ‘’ ***0.001*** ’’ *0.01* ” 0.05 ‘.’ 0.1 ’ ’ 1

3.4.2 Regressed on: Share of observations of SPEI above +1

`Model 1: 0 Lags` `Model 2: 1 Lag`

Dependent Var.: Household Agricultural Income Household Agricultural Income

SPEI Share -0.3389 (0.4318) -0.3282 (0.4687) SPEI Share (Lag 1) 0.0552 (0.7967) SPEI Share (Lag 2)
Fixed-Effects: ———————— ———————— District Yes Yes Year Yes Yes _____ _____ _____ _____ S.E.:
Clustered by: District by: District Observations 197 197 R2 0.71444 0.71445 Within R2 0.00166 0.00170

`Model 3: 2 Lags`

Dependent Var.: Household Agricultural Income

SPEI Share -0.3893 (0.4920) SPEI Share (Lag 1) -0.1080 (0.8750) SPEI Share (Lag 2) -0.8570. (0.4538) Fixed-Effects: ———————— District Yes Year Yes _____ _____ S.E.: Clustered by: District Observations 197 R2 0.71667
Within R2 0.00946 — Signif. codes: 0 ‘’ ***0.001*** ’’ *0.01* ” 0.05 ‘.’ 0.1 ’ ’ 1

3.4.3 Regressed on: Agricultural Stress

`Model 1: 0 Lags`

Dependent Var.: Household Agricultural Income

Agric. Stress -0.1955 (0.5152) Agric. Stress (Lag 1)
Agric. Stress (Lag 2)
Fixed-Effects: ———————— District Yes Year Yes _____ _____
S.E.: Clustered by: District Observations 197 R2 0.71419 Within R2 0.00080

`Model 2: 1 Lag`

Dependent Var.: Household Agricultural Income

Agric. Stress -0.2022 (0.5525) Agric. Stress (Lag 1) 1.055 (0.9886) Agric. Stress (Lag 2)
Fixed-Effects: ———————— District Yes Year Yes _____ _____
S.E.: Clustered by: District Observations 197 R2 0.71963 Within R2 0.01981

`Model 3: 2 Lags`

Dependent Var.: Household Agricultural Income

Agric. Stress -0.1393 (0.6256) Agric. Stress (Lag 1) 1.193 (0.9930) Agric. Stress (Lag 2) -1.510 (0.8763) Fixed-Effects: ———————— District Yes Year Yes _____ _____ S.E.: Clustered by: District Observations 197 R2 0.72936
Within R2 0.05383 — Signif. codes: 0 ‘’ ***0.001*** ’’ *0.01* ” 0.05 ‘.’ 0.1 ’ ’ 1

3.4.4 Regressed on: Temperature

Model 1: 0 Lags Model 2: 1 Lag

Dependent Var.: Household Agricultural Income Household Agricultural Income

Temp. 0.1293 (0.2379) 0.1306 (0.2456) Temp. (Lag 1) -0.0064 (0.0712) Temp. (Lag 2)
Fixed-Effects: ———————— ———————— District Yes Yes Year Yes Yes _____
_____ _____ S.E.:
Clustered by: District by: District Observations 197 197 R2 0.71409 0.71410 Within R2 0.00045 0.00047

Model 3: 2 Lags

Dependent Var.: Household Agricultural Income

Temp. 0.1360 (0.2339) Temp. (Lag 1) 0.1104. (0.0564) Temp. (Lag 2) -0.1301* (0.0544) Fixed-Effects: ——
———————— District Yes Year Yes _____ _____
S.E.: Clustered by: District Observations 197 R2 0.71610 Within R2 0.00748 — Signif. codes: 0 '' ***0.001*** '' *0.01* '' 0.05 '.' 0.1 ' ' 1

3.5 Dependent Variable: Gross Agricultural Output

3.5.1 Regressed on: Drought Index (SPEI)

Model 1: 0 Lags Model 2: 1 Lag

Dependent Var.: Gross Agricultural Output Gross Agricultural Output

SPEI 0.0578 (0.0556) 0.0597 (0.0519) SPEI (Lag 1) 0.0986 (0.0580) SPEI (Lag 2)
Fixed-Effects: ———————- ———————- District Yes Yes Year Yes Yes _____
_____ _____ S.E.: Clustered by:
District by: District Observations 194 194 R2 0.97508 0.97550 Within R2 0.00561 0.02268

Model 3: 2 Lags

Dependent Var.: Gross Agricultural Output

SPEI 0.0666 (0.0544) SPEI (Lag 1) 0.0994. (0.0545) SPEI (Lag 2) 0.1435. (0.0744) Fixed-Effects: ————
————- District Yes Year Yes _____ _____ S.E.:
Clustered by: District Observations 194 R2 0.97640 Within R2 0.05855 — Signif. codes: 0 '' ***0.001*** '' *0.01* '' 0.05 '.' 0.1 ' ' 1

3.5.2 Regressed on: Share of observations of SPEI above +1

Model 1: 0 Lags Model 2: 1 Lag

Dependent Var.: Gross Agricultural Output Gross Agricultural Output

SPEI Share 0.1182 (0.1120) 0.1643 (0.1325) SPEI Share (Lag 1) 0.2021 (0.1329) SPEI Share (Lag 2)
Fixed-Effects: ———————- ———————- District Yes Yes Year Yes Yes _____
_____ _____ S.E.: Clustered by:
District by: District Observations 194 194 R2 0.97502 0.97522 Within R2 0.00316 0.01144

Model 3: 2 Lags

Dependent Var.: Gross Agricultural Output

SPEI Share 0.1763 (0.1352) SPEI Share (Lag 1) 0.2415 (0.1372) SPEI Share (Lag 2) 0.1923 (0.1527) Fixed-Effects: ———————- District Yes Year Yes _____ _____
S.E.: Clustered by: District Observations 194 R2 0.97540 Within R2 0.01864 — Signif. codes: 0 ‘’ ***0.001*** ’’ *0.01* ’’ 0.05 ‘.’ 0.1 ’ ’ 1

3.5.3 Regressed on: Agricultural Stress

Model 1: 0 Lags Model 2: 1 Lag

Dependent Var.: Gross Agricultural Output Gross Agricultural Output

Agric. Stress 0.3104 (0.1892) 0.2930 (0.1719) Agric. Stress (Lag 1) 0.2321 (0.1415) Agric. Stress (Lag 2) Fixed-Effects: ———————- ———————- District Yes Yes Year Yes Yes _____ _____ _____ _____ S.E.: Clustered by: District by: District Observations 194 194 R2 0.97572 0.97617 Within R2 0.03148 0.04908

Model 3: 2 Lags

Dependent Var.: Gross Agricultural Output

Agric. Stress 0.2932 (0.1746) Agric. Stress (Lag 1) 0.2317 (0.1351) Agric. Stress (Lag 2) 0.0070 (0.1898) Fixed-Effects: ———————- District Yes Year Yes _____ _____ S.E.: Clustered by: District Observations 194 R2 0.97617 Within R2 0.04909 — Signif. codes: 0 ‘’ ***0.001*** ’’ *0.01* ’’ 0.05 ‘.’ 0.1 ’ ’ 1

3.5.4 Regressed on: Temperature

Model 1: 0 Lags Model 2: 1 Lag

Dependent Var.: Gross Agricultural Output Gross Agricultural Output

Temp. 0.0568 (0.0720) 0.0550 (0.0775) Temp. (Lag 1) -0.0235 (0.1200) Temp. (Lag 2) Fixed-Effects: ———————- ———————- District Yes Yes Year Yes Yes _____ _____ _____ _____ S.E.: Clustered by: District by: District Observations 194 194 R2 0.97497 0.97497 Within R2 0.00120 0.00140

Model 3: 2 Lags

Dependent Var.: Gross Agricultural Output

Temp. 0.1154. (0.0588) Temp. (Lag 1) 0.0049 (0.1205) Temp. (Lag 2) 0.2403** (0.0733) Fixed-Effects: ———————- District Yes Year Yes _____ _____
S.E.: Clustered by: District Observations 194 R2 0.97548 Within R2 0.02182 — Signif. codes: 0 ‘’ ***0.001*** ’’ *0.01* ’’ 0.05 ‘.’ 0.1 ’ ’ 1

3.6 Dependent Variable: Household food Consumption

3.6.1 Regressed on: Drought Index (SPEI)

Model 1: 0 Lags Model 2: 1 Lag

Dependent Var.: Household food Consumption Household food Consumption

SPEI 0.0400 (0.0943) 0.0407 (0.0950) SPEI (Lag 1) -0.0648 (0.0517) SPEI (Lag 2)
Fixed-Effects: ——————— ——————— District Yes Yes Year Yes Yes _____
_____ _____ S.E.: Clustered
by: District by: District Observations 220 220 R2 0.90580 0.90611 Within R2 0.00133 0.00465

Model 3: 2 Lags

Dependent Var.: Household food Consumption

SPEI 0.0393 (0.0952) SPEI (Lag 1) -0.0645 (0.0522) SPEI (Lag 2) -0.0296 (0.1102) Fixed-Effects: ———
——————— District Yes Year Yes _____ _____
S.E.: Clustered by: District Observations 220 R2 0.90617 Within R2 0.00531 — Signif. codes: 0 ‘***’ 0.001 **’ *0.01 *’ 0.05 ‘.’ 0.1 ‘ ’ 1

3.6.2 Regressed on: Share of observations of SPEI above +1

Model 1: 0 Lags Model 2: 1 Lag

Dependent Var.: Household food Consumption Household food Consumption

SPEI Share -0.0860 (0.1944) -0.1811 (0.2304) SPEI Share (Lag 1) -0.4673 (0.2695) SPEI Share (Lag 2)
Fixed-Effects: ——————— ——————— District Yes Yes Year Yes Yes _____
_____ _____ S.E.: Clustered
by: District by: District Observations 220 220 R2 0.90574 0.90757 Within R2 0.00073 0.02016

Model 3: 2 Lags

Dependent Var.: Household food Consumption

SPEI Share -0.1932 (0.2334) SPEI Share (Lag 1) -0.5340. (0.2667) SPEI Share (Lag 2) -0.3819 (0.3588) Fixed-Effects: ——————— District Yes Year Yes _____
_____ S.E.: Clustered by: District Observations 220 R2 0.90875 Within R2 0.03261 — Signif. codes: 0 ‘***’ 0.001 **’ *0.01 *’ 0.05 ‘.’ 0.1 ‘ ’ 1

3.6.3 Regressed on: Agricultural Stress

Model 1: 0 Lags Model 2: 1 Lag

Dependent Var.: Household food Consumption Household food Consumption

Agric. Stress -0.0214 (0.2026) 0.0082 (0.1772) Agric. Stress (Lag 1) -0.1217 (0.1475) Agric. Stress (Lag 2)
Fixed-Effects: ——————— ——————— District Yes Yes Year Yes Yes _____
_____ _____ S.E.: Clustered
by: District by: District Observations 220 220 R2 0.90568 0.90593 Within R2 9.36e-5 0.00274

Model 3: 2 Lags

Dependent Var.: Household food Consumption

Agric. Stress 0.0074 (0.1811) Agric. Stress (Lag 1) -0.1182 (0.1280) Agric. Stress (Lag 2) -0.0270 (0.1968) Fixed-Effects: ——————— District Yes Year Yes _____ _____ S.E.: Clustered by: District Observations 220 R2 0.90594 Within R2 0.00283 — Signif. codes: 0 '' ***0.001*** '' *0.01* '' 0.05 '.' 0.1 ' ' 1

3.6.4 Regressed on: Temperature

Model 1: 0 Lags Model 2: 1 Lag

Dependent Var.: Household food Consumption Household food Consumption

Temp. 0.0666 (0.2338) 0.0762 (0.2367) Temp. (Lag 1) -0.0469 (0.0307) Temp. (Lag 2) Fixed-Effects: ——————— ——————— District Yes Yes Year Yes Yes _____ _____ _____ S.E.: Clustered by: District by: District Observations 220 220 R2 0.90574 0.90626 Within R2 0.00076 0.00621

Model 3: 2 Lags

Dependent Var.: Household food Consumption

Temp. 0.0787 (0.2407) Temp. (Lag 1) -0.0776* (0.0302) Temp. (Lag 2) 0.0341 (0.0259) Fixed-Effects: ——— ——————— District Yes Year Yes _____ _____ S.E.: Clustered by: District Observations 220 R2 0.90654 Within R2 0.00917 — Signif. codes: 0 '' ***0.001*** '' *0.01* '' 0.05 '.' 0.1 ' ' 1

3.7 Dependent Variable: Grains Harvest

3.7.1 Regressed on: Drought Index (SPEI)

Model 1: 0 Lags Model 2: 1 Lag Model 3: 2 Lags

Dependent Var.: Grains Harvest Grains Harvest Grains Harvest

SPEI -0.4503** (0.1064) -0.4573** (0.1065) -0.4691** (0.1071) SPEI (Lag 1) -0.2992* (0.1010) -0.3025* (0.1207) SPEI (Lag 2) -0.2425. (0.1214) Fixed-Effects: ——————— ——————— ——————— District Yes Yes Yes Year Yes Yes Yes _____ _____ _____ _____ _____ S.E.: Clustered by: District by: District by: District Observations 191 191 191 R2 0.94570 0.94719 0.94817 Within R2 0.05653 0.08245 0.09939 — Signif. codes: 0 '' ***0.001*** '' *0.01* '' 0.05 '.' 0.1 ' ' 1

3.7.2 Regressed on: Share of observations of SPEI above +1

Model 1: 0 Lags Model 2: 1 Lag Model 3: 2 Lags

Dependent Var.: Grains Harvest Grains Harvest Grains Harvest

SPEI Share -0.7772* (0.2690) -0.9705** (0.2807) -1.008** (0.2698) SPEI Share (Lag 1) -0.8358* (0.3403) -1.012* (0.3457) SPEI Share (Lag 2) -0.9098* (0.4027) Fixed-Effects: ——————— ——————— ——— ——— District Yes Yes Yes Year Yes Yes Yes _____ _____ _____ _____ _____ S.E.: Clustered by: District by: District by: District Observations 191 191 191 R2 0.94375 0.94509 0.94660 Within R2 0.02257 0.04590 0.07212 — Signif. codes: 0 '' ***0.001*** '' *0.01* '' 0.05 '.' 0.1 ' ' 1

3.7.3 Regressed on: Agricultural Stress

Model 1: 0 Lags Model 2: 1 Lag Model 3: 2 Lags

Dependent Var.: Grains Harvest Grains Harvest Grains Harvest

Agric. Stress -1.178** (0.3036) -1.127** (0.2822) -1.148** (0.2822) Agric. Stress (Lag 1) -0.8049. (0.4269) -0.7895. (0.4338) Agric. Stress (Lag 2) -0.5241 (0.4429) Fixed-Effects: ———— ———— ———— – District Yes Yes Yes Year Yes Yes Yes _____ _____ _____ _____ _____ S.E.: Clustered by: District by: District by: District Observations 191 191 191 R2 0.94656 0.94848 0.94914 Within R2 0.07144 0.10475 0.11627 — Signif. codes: 0 ‘***’ 0.001 **’ 0.01 *’ 0.05 ‘.’ 0.1 ‘ ’ 1

3.7.4 Regressed on: Temperature

Model 1: 0 Lags Model 2: 1 Lag Model 3: 2 Lags

Dependent Var.: Grains Harvest Grains Harvest Grains Harvest

Temp. -0.1116 (0.2034) -0.1260 (0.2061) -0.2292 (0.2332) Temp. (Lag 1) -0.1923 (0.3123) -0.2413 (0.3223) Temp. (Lag 2) -0.4141 (0.2432) Fixed-Effects: ———- ———- ———- District Yes Yes Yes Year Yes Yes Yes _____ _____ _____ _____ _____ S.E.: Clustered by: District by: District by: District Observations 191 191 191 R2 0.94249 0.94262 0.94320 Within R2 0.00077 0.00298 0.01312 — Signif. codes: 0 ‘***’ 0.001 **’ 0.01 *’ 0.05 ‘.’ 0.1 ‘ ’ 1

3.8 Dependent Variable: Vegetables Harvest

3.8.1 Regressed on: Drought Index (SPEI)

Model 1: 0 Lags Model 2: 1 Lag Model 3: 2 Lags

Dependent Var.: Vegetables Harvest Vegetables Harvest Vegetables Harvest

SPEI -0.1150 (0.0697) -0.1191 (0.0697) -0.1240 (0.0725) SPEI (Lag 1) -0.2078 (0.1572) -0.2084 (0.1617) SPEI (Lag 2) -0.1035 (0.0929) Fixed-Effects: ———— ———— ———— District Yes Yes Yes Year Yes Yes Yes _____ _____ _____ _____ _____ S.E.: Clustered by: District by: District by: District Observations 194 194 194 R2 0.95674 0.95738 0.95753 Within R2 0.00428 0.01891 0.02251 — Signif. codes: 0 ‘***’ 0.001 **’ 0.01 *’ 0.05 ‘.’ 0.1 ‘ ’ 1

3.8.2 Regressed on: Share of observations of SPEI above +1

Model 1: 0 Lags Model 2: 1 Lag Model 3: 2 Lags

Dependent Var.: Vegetables Harvest Vegetables Harvest Vegetables Harvest

SPEI Share -0.1733 (0.1950) -0.2713 (0.1901) -0.2927 (0.1953) SPEI Share (Lag 1) -0.4297 (0.3137) -0.5002 (0.3758) SPEI Share (Lag 2) -0.3438 (0.2918) Fixed-Effects: ———— ———— ———— District Yes Yes Yes Year Yes Yes Yes _____ _____ _____ _____ _____ S.E.: Clustered by: District by: District by: District Observations 194 194 194 R2 0.95661 0.95693 0.95712 Within R2 0.00131 0.00854 0.01298 — Signif. codes: 0 ‘***’ 0.001 **’ 0.01 *’ 0.05 ‘.’ 0.1 ‘ ’ 1

3.8.3 Regressed on: Agricultural Stress

Model 1: 0 Lags Model 2: 1 Lag Model 3: 2 Lags

Dependent Var.: Vegetables Harvest Vegetables Harvest Vegetables Harvest

Agric. Stress -0.4713 (0.4783) -0.4391 (0.4584) -0.4430 (0.4604) Agric. Stress (Lag 1) -0.4302 (0.5232) -0.4229 (0.5081) Agric. Stress (Lag 2) -0.1363 (0.3874) Fixed-Effects: ———— ———— ———— District Yes Yes Yes Year Yes Yes Yes ____ ____ ____ ____ S.E.: Clustered by: District by: District by: District Observations 194 194 194 R2 0.95716 0.95767 0.95771 Within R2 0.01401 0.02568 0.02661 — Signif. codes: 0 ‘’ ***0.001*** ’’ *0.01* ’’ 0.05 ‘.’ 0.1 ’ ’ 1

3.8.4 Regressed on: Temperature

Model 1: 0 Lags Model 2: 1 Lag Model 3: 2 Lags

Dependent Var.: Vegetables Harvest Vegetables Harvest Vegetables Harvest

Temp. -0.1386 (0.1596) -0.1443 (0.1766) -0.1537 (0.2011) Temp. (Lag 1) -0.0755 (0.2847) -0.0799 (0.3077) Temp. (Lag 2) -0.0372 (0.2512) Fixed-Effects: ———— ———— ———— — District Yes Yes Yes Year Yes Yes Yes ____ ____ ____ ____ S.E.: Clustered by: District by: District by: District Observations 194 194 194 R2 0.95662 0.95663 0.95664 Within R2 0.00138 0.00178 0.00187 — Signif. codes: 0 ‘’ ***0.001*** ’’ *0.01* ’’ 0.05 ‘.’ 0.1 ’ ’ 1

3.9 Dependent Variable: Fruits Harvest

3.9.1 Regressed on: Drought Index (SPEI)

Model 1: 0 Lags Model 2: 1 Lag Model 3: 2 Lags

Dependent Var.: Fruits Harvest Fruits Harvest Fruits Harvest

SPEI 0.2105 (0.1612) 0.2145 (0.1631) 0.2239 (0.1622) SPEI (Lag 1) 0.2010 (0.1169) 0.2022. (0.1042) SPEI (Lag 2) 0.1975 (0.1402) Fixed-Effects: ———— ———— ————- District Yes Yes Yes Year Yes Yes Yes ____ ____ ____ ____ S.E.: Clustered by: District by: District by: District Observations 194 194 194 R2 0.91392 0.91480 0.91565 Within R2 0.01062 0.02073 0.03042 — Signif. codes: 0 ‘’ ***0.001*** ’’ *0.01* ’’ 0.05 ‘.’ 0.1 ’ ’ 1

3.9.2 Regressed on: Share of observations of SPEI above +1

Model 1: 0 Lags Model 2: 1 Lag Model 3: 2 Lags

Dependent Var.: Fruits Harvest Fruits Harvest Fruits Harvest

SPEI Share 0.6161 (0.3458) 0.8515* (0.2807) 0.8986* (0.2913) SPEI Share (Lag 1) 1.033* (0.3621) 1.188* (0.4138) SPEI Share (Lag 2) 0.7552. (0.4113) Fixed-Effects: ———— ————- ———- District Yes Yes Yes Year Yes Yes Yes ____ ____ ____ ____ S.E.: Clustered by: District by: District by: District Observations 194 194 194 R2 0.91406 0.91675 0.91813 Within R2 0.01223 0.04308 0.05892 — Signif. codes: 0 ‘’ ***0.001*** ’’ *0.01* ’’ 0.05 ‘.’ 0.1 ’ ’ 1

3.9.3 Regressed on: Agricultural Stress

Model 1: 0 Lags Model 2: 1 Lag Model 3: 2 Lags

Dependent Var.: Fruits Harvest Fruits Harvest Fruits Harvest

Agric. Stress 0.6220* (0.2250) 0.5760** (0.1782) 0.5885* (0.1992) Agric. Stress (Lag 1) 0.6142. (0.3383) 0.5907. (0.3034) Agric. Stress (Lag 2) 0.4338 (0.3242) Fixed-Effects: ———————- ———————- ———————- District Yes Yes Yes Year Yes Yes Yes _____ _____ _____ S.E.: Clustered by: District by: District by: District Observations 194 194 194 R2 0.91457 0.91610 0.91670 Within R2 0.01802 0.03561 0.04253 — Signif. codes: 0 ‘’ ***0.001*** ’’ *0.01* ’’ 0.05 ‘.’ 0.1 ’ ’ 1

3.9.4 Regressed on: Temperature

Model 1: 0 Lags Model 2: 1 Lag Model 3: 2 Lags

Dependent Var.: Fruits Harvest Fruits Harvest Fruits Harvest

Temp. 0.1117 (0.3286) 0.1123 (0.3298) 0.1934 (0.3155) Temp. (Lag 1) 0.0076 (0.1958) 0.0458 (0.2025) Temp. (Lag 2) 0.3225. (0.1467) Fixed-Effects: ———————- ———————- ———————- District Yes Yes Yes Year Yes Yes Yes _____ _____ _____ S.E.: Clustered by: District by: District by: District Observations 194 194 194 R2 0.91306 0.91306 0.91352 Within R2 0.00066 0.00067 0.00591 — Signif. codes: 0 ‘’ ***0.001*** ’’ *0.01* ’’ 0.05 ‘.’ 0.1 ’ ’ 1

3.10 Dependent Variable: Potatoes Harvest

3.10.1 Regressed on: Drought Index (SPEI)

Model 1: 0 Lags Model 2: 1 Lag Model 3: 2 Lags

Dependent Var.: Potatoes Harvest Potatoes Harvest Potatoes Harvest

SPEI -0.0864 (0.0585) -0.0913 (0.0683) -0.0931 (0.0699) SPEI (Lag 1) -0.2477 (0.1406) -0.2479 (0.1438) SPEI (Lag 2) -0.0391 (0.0848) Fixed-Effects: ———————- ———————- ———————- District Yes Yes Yes Year Yes Yes Yes _____ _____ _____ S.E.: Clustered by: District by: District by: District Observations 194 194 194 R2 0.97357 0.97447 0.97449 Within R2 0.00395 0.03787 0.03871 — Signif. codes: 0 ‘’ ***0.001*** ’’ *0.01* ’’ 0.05 ‘.’ 0.1 ’ ’ 1

3.10.2 Regressed on: Share of observations of SPEI above +1

Model 1: 0 Lags Model 2: 1 Lag Model 3: 2 Lags

Dependent Var.: Potatoes Harvest Potatoes Harvest Potatoes Harvest

SPEI Share -0.3500 (0.2041) -0.5348. (0.2540) -0.5406. (0.2604) SPEI Share (Lag 1) -0.8109* (0.3189) -0.8300* (0.3329) SPEI Share (Lag 2) -0.0928 (0.2677) Fixed-Effects: ———————- ———————- ———————- District Yes Yes Yes Year Yes Yes Yes _____ _____ _____ S.E.: Clustered by: District by: District by: District Observations 194 194 194 R2 0.97369 0.97481 0.97482 Within R2 0.00872 0.05073 0.05126 — Signif. codes: 0 ‘’ ***0.001*** ’’ *0.01* ’’ 0.05 ‘.’ 0.1 ’ ’ 1

3.10.3 Regressed on: Agricultural Stress

```
                    Model 1: 0 Lags   Model 2: 1 Lag  Model 3: 2 Lags
```

Dependent Var.: Potatoes Harvest Potatoes Harvest Potatoes Harvest

Agric. Stress -0.0492 (0.2602) -0.0179 (0.2506) -0.0237 (0.2470) Agric. Stress (Lag 1) -0.4188 (0.3375) -0.4078 (0.3346) Agric. Stress (Lag 2) -0.2020 (0.1600) Fixed-Effects: ————————- ————————- ————————- District Yes Yes Yes Year Yes Yes Yes _____ _____ _____ _____ _____ S.E.: Clustered by: District by: District by: District Observations 194 194 194 R2 0.97347 0.97395 0.97403 Within R2 0.00025 0.01831 0.02162 — Signif. codes: 0 ‘***’ 0.001 **’ 0.01 *’ 0.05 ‘.’ 0.1 ‘ ’ 1

3.10.4 Regressed on: Temperature

```
                  Model 1: 0 Lags   Model 2: 1 Lag  Model 3: 2 Lags
```

Dependent Var.: Potatoes Harvest Potatoes Harvest Potatoes Harvest

Temp. 0.0188 (0.1026) 0.0361 (0.1132) 0.1030 (0.1501) Temp. (Lag 1) 0.2291 (0.1470) 0.2607 (0.1665) Temp. (Lag 2) 0.2664 (0.1743) Fixed-Effects: ————————- ————————- ————————- District Yes Yes Yes Year Yes Yes Yes _____ _____ _____ _____ _____ S.E.: Clustered by: District by: District by: District Observations 194 194 194 R2 0.97346 0.97362 0.97383 Within R2 4.14e-5 0.00597 0.01387 — Signif. codes: 0 ‘***’ 0.001 **’ 0.01 *’ 0.05 ‘.’ 0.1 ‘ ’ 1

3.11 Dependent Variable: Grains Yield

3.11.1 Regressed on: Drought Index (SPEI)

```
                    Model 1: 0 Lags     Model 2: 1 Lag    Model 3: 2 Lags
```

Dependent Var.: Grains Yield Grains Yield Grains Yield

SPEI -0.2324** (0.0584) -0.2349** (0.0563) -0.2379** (0.0524) SPEI (Lag 1) -0.1082 (0.0719) -0.1090 (0.0768) SPEI (Lag 2) -0.0598 (0.0758) Fixed-Effects: ———————— ———————— ———————— District Yes Yes Yes Year Yes Yes Yes _____ _____ _____ _____ _____ S.E.: Clustered by: District by: District by: District Observations 191 191 191 R2 0.78380 0.78558 0.78612 Within R2 0.03533 0.04328 0.04569 — Signif. codes: 0 ‘***’ 0.001 **’ 0.01 *’ 0.05 ‘.’ 0.1 ‘ ’ 1

3.11.2 Regressed on: Share of observations of SPEI above +1

```
                    Model 1: 0 Lags    Model 2: 1 Lag   Model 3: 2 Lags
```

Dependent Var.: Grains Yield Grains Yield Grains Yield

SPEI Share -0.4843* (0.2120) -0.4983* (0.2098) -0.5060* (0.2134) SPEI Share (Lag 1) -0.0607 (0.2006) -0.0972 (0.1848) SPEI Share (Lag 2) -0.1884 (0.2824) Fixed-Effects: ———————— ———————— ———————— District Yes Yes Yes Year Yes Yes Yes _____ _____ _____ _____ _____ S.E.: Clustered by: District by: District by: District Observations 191 191 191 R2 0.78048 0.78055 0.78114 Within R2 0.02055 0.02084 0.02348 — Signif. codes: 0 ‘***’ 0.001 **’ 0.01 *’ 0.05 ‘.’ 0.1 ‘ ’ 1

3.11.3 Regressed on: Agricultural Stress

Model 1: 0 Lags Model 2: 1 Lag Model 3: 2 Lags

Dependent Var.: Grains Yield Grains Yield Grains Yield

Agric. Stress -0.7051* (0.2239) -0.7082* (0.2265) -0.7031* (0.2256) Agric. Stress (Lag 1) 0.0484 (0.2655) 0.0446 (0.2562) Agric. Stress (Lag 2) 0.1299 (0.2151) Fixed-Effects: ———— ———— ———— – District Yes Yes Yes Year Yes Yes Yes ———————————— ———————————— ———————————— ———————————— S.E.: Clustered by: District by: District by: District Observations 191 191 191 R2 0.78933 0.78940 0.78977 Within R2 0.06004 0.06032 0.06198 — Signif. codes: 0 ‘***’ 0.001 **’ 0.01 *’ 0.05 ‘.’ 0.1 ‘ ’ 1

3.11.4 Regressed on: Temperature

Model 1: 0 Lags Model 2: 1 Lag Model 3: 2 Lags

Dependent Var.: Grains Yield Grains Yield Grains Yield

Temp. 0.0868 (0.1574) 0.0847 (0.1513) -0.0005 (0.1551) Temp. (Lag 1) -0.0277 (0.2003) -0.0682 (0.2072) Temp. (Lag 2) -0.3419. (0.1569) Fixed-Effects: ———— ————- ———— District Yes Yes Yes Year Yes Yes Yes ———————————— ———————————— ———————————— ———————————— S.E.: Clustered by: District by: District by: District Observations 191 191 191 R2 0.77612 0.77615 0.77978 Within R2 0.00110 0.00121 0.01743 — Signif. codes: 0 ‘***’ 0.001 **’ 0.01 *’ 0.05 ‘.’ 0.1 ‘ ’ 1

3.12 Dependent Variable: Vegetables Yield

3.12.1 Regressed on: Drought Index (SPEI)

Model 1: 0 Lags Model 2: 1 Lag Model 3: 2 Lags

Dependent Var.: Vegetables Yield Vegetables Yield Vegetables Yield

SPEI 0.0175 (0.0438) 0.0145 (0.0492) 0.0092 (0.0508) SPEI (Lag 1) -0.1505 (0.1425) -0.1512 (0.1481) SPEI (Lag 2) -0.1108 (0.1046) Fixed-Effects: ————- ————- ————- District Yes Yes Yes Year Yes Yes Yes ———————————— ———————————— ———————————— ———————————— S.E.: Clustered by: District by: District by: District Observations 194 194 194 R2 0.81793 0.82015 0.82134 Within R2 0.00016 0.01235 0.01890 — Signif. codes: 0 ‘***’ 0.001 **’ 0.01 *’ 0.05 ‘.’ 0.1 ‘ ’ 1

3.12.2 Regressed on: Share of observations of SPEI above +1

Model 1: 0 Lags Model 2: 1 Lag Model 3: 2 Lags

Dependent Var.: Vegetables Yield Vegetables Yield Vegetables Yield

SPEI Share 0.0835 (0.1599) 0.0650 (0.1552) 0.0650 (0.1582) SPEI Share (Lag 1) -0.0810 (0.1714) -0.0810 (0.2072) SPEI Share (Lag 2) -5.39e-5 (0.2109) Fixed-Effects: ————- ————- ———— – District Yes Yes Yes Year Yes Yes Yes ———————————— ———————————— ———————————— ———————————— S.E.: Clustered by: District by: District by: District Observations 194 194 194 R2 0.81799 0.81806 0.81806 Within R2 0.00048 0.00089 0.00089 — Signif. codes: 0 ‘***’ 0.001 **’ 0.01 *’ 0.05 ‘.’ 0.1 ‘ ’ 1

3.12.3 Regressed on: Agricultural Stress

	Model 1: 0 Lags	Model 2: 1 Lag	Model 3: 2 Lags
Dependent Var.:	Vegetables Yield	Vegetables Yield	Vegetables Yield
Agric. Stress	-0.3306 (0.3666)	-0.3029 (0.3502)	-0.3043 (0.3528)
Agric. Stress (Lag 1)	-0.3705 (0.4208)	-0.3679 (0.4132)	
Agric. Stress (Lag 2)	-0.0483 (0.2269)		
Fixed-Effects:			
District	Yes	Yes	Yes
Year	Yes	Yes	Yes
S.E.: Clustered by:	District	by: District	by: District
Observations	194	194	194
R2	0.81989	0.82240	0.82243
Within R2	0.01094	0.02469	0.02487

— Signif. codes: 0 ‘***’ 0.001 **’ 0.01 *’ 0.05 ‘.’ 0.1 ‘ ’ 1

3.12.4 Regressed on: Temperature

	Model 1: 0 Lags	Model 2: 1 Lag	Model 3: 2 Lags
Dependent Var.:	Vegetables Yield	Vegetables Yield	Vegetables Yield
Temp.	-0.0371 (0.1581)	-0.0314 (0.1647)	-0.0282 (0.1701)
Temp. (Lag 1)	0.0757 (0.1271)	0.0772 (0.1386)	
Temp. (Lag 2)	0.0129 (0.1257)		
Fixed-Effects:			
District	Yes	Yes	Yes
Year	Yes	Yes	Yes
S.E.: Clustered by:	District	by: District	by: District
Observations	194	194	194
R2	0.81793	0.81804	0.81805
Within R2	0.00016	0.00079	0.00080

— Signif. codes: 0 ‘***’ 0.001 **’ 0.01 *’ 0.05 ‘.’ 0.1 ‘ ’ 1

3.13 Dependent Variable: Fruits Yield

3.13.1 Regressed on: Drought Index (SPEI)

	Model 1: 0 Lags	Model 2: 1 Lag	Model 3: 2 Lags
Dependent Var.:	Fruits Yield	Fruits Yield	Fruits Yield
SPEI	0.1856 (0.1434)	0.1887 (0.1457)	0.1952 (0.1438)
SPEI (Lag 1)	0.1567 (0.1054)	0.1575 (0.0973)	
SPEI (Lag 2)	0.1367 (0.1568)		
Fixed-Effects:			
District	Yes	Yes	Yes
Year	Yes	Yes	Yes
S.E.: Clustered by:	District	by: District	by: District
Observations	194	194	194
R2	0.79919	0.80052	0.80152
Within R2	0.00881	0.01538	0.02034

— Signif. codes: 0 ‘***’ 0.001 **’ 0.01 *’ 0.05 ‘.’ 0.1 ‘ ’ 1

3.13.2 Regressed on: Share of observations of SPEI above +1

	Model 1: 0 Lags	Model 2: 1 Lag	Model 3: 2 Lags
Dependent Var.:	Fruits Yield	Fruits Yield	Fruits Yield
SPEI Share	0.5624 (0.3438)	0.7888* (0.2894)	0.8309* (0.3019)
SPEI Share (Lag 1)	0.9934* (0.3737)	1.132* (0.4357)	
SPEI Share (Lag 2)	0.6764 (0.4382)		
Fixed-Effects:			
District	Yes	Yes	Yes
Year	Yes	Yes	Yes
S.E.: Clustered by:	District	by: District	by: District
Observations	194	194	194
R2	0.79960	0.80578	0.80853
Within R2	0.01088	0.04136	0.05493

— Signif. codes: 0 ‘***’ 0.001 **’ 0.01 *’ 0.05 ‘.’ 0.1 ‘ ’ 1

3.13.3 Regressed on: Agricultural Stress

```
                    Model 1: 0 Lags    Model 2: 1 Lag   Model 3: 2 Lags
```

Dependent Var.: Fruits Yield Fruits Yield Fruits Yield

Agric. Stress 0.5254** (0.1508) 0.4862** (0.1244) 0.4959** (0.1335) Agric. Stress (Lag 1) 0.5233. (0.2771) 0.5052. (0.2487) Agric. Stress (Lag 2) 0.3352 (0.2826) Fixed-Effects: ———— ———— ———— – District Yes Yes Yes Year Yes Yes Yes ____ ____ ____ ____ ____ S.E.: Clustered by: District by: District by: District Observations 194 194 194 R2 0.80018 0.80294 0.80384 Within R2 0.01374 0.02737 0.03178 — Signif. codes: 0 ‘***’ 0.001 ’**’ 0.01 ’*’ 0.05 ‘.’ 0.1 ’ ’ 1

3.13.4 Regressed on: Temperature

```
                  Model 1: 0 Lags   Model 2: 1 Lag Model 3: 2 Lags
```

Dependent Var.: Fruits Yield Fruits Yield Fruits Yield

Temp. 0.1055 (0.2922) 0.1050 (0.2914) 0.1634 (0.2703) Temp. (Lag 1) -0.0068 (0.1793) 0.0207 (0.1890) Temp. (Lag 2) 0.2323 (0.1724) Fixed-Effects: ———— ————- ———— District Yes Yes Yes Year Yes Yes Yes ____ ____ ____ ____ ____ S.E.: Clustered by: District by: District by: District Observations 194 194 194 R2 0.79753 0.79753 0.79812 Within R2 0.00063 0.00063 0.00354 — Signif. codes: 0 ‘***’ 0.001 ’**’ 0.01 ’*’ 0.05 ‘.’ 0.1 ’ ’ 1

3.14 Dependent Variable: Potatoes Yield

3.14.1 Regressed on: Drought Index (SPEI)

```
                    Model 1: 0 Lags   Model 2: 1 Lag  Model 3: 2 Lags
```

Dependent Var.: Potatoes Yield Potatoes Yield Potatoes Yield

SPEI -0.0961. (0.0434) -0.1006 (0.0607) -0.1018 (0.0622) SPEI (Lag 1) -0.2282 (0.1451) -0.2283 (0.1473) SPEI (Lag 2) -0.0243 (0.0680) Fixed-Effects: ———— ————- ————- District Yes Yes Yes Year Yes Yes Yes ____ ____ ____ ____ ____ S.E.: Clustered by: District by: District by: District Observations 194 194 194 R2 0.80594 0.81511 0.81521 Within R2 0.00795 0.05479 0.05532 — Signif. codes: 0 ‘***’ 0.001 ’**’ 0.01 ’*’ 0.05 ‘.’ 0.1 ’ ’ 1

3.14.2 Regressed on: Share of observations of SPEI above +1

```
                    Model 1: 0 Lags    Model 2: 1 Lag   Model 3: 2 Lags
```

Dependent Var.: Potatoes Yield Potatoes Yield Potatoes Yield

SPEI Share -0.1459 (0.1639) -0.2399 (0.1776) -0.2216 (0.1901) SPEI Share (Lag 1) -0.4124. (0.2125) -0.3520. (0.1922) SPEI Share (Lag 2) 0.2948 (0.2023) Fixed-Effects: ————- ———— ——— ——— District Yes Yes Yes Year Yes Yes Yes ____ ____ ____ ____ ____ S.E.: Clustered by: District by: District by: District Observations 194 194 194 R2 0.80487 0.80833 0.81003 Within R2 0.00247 0.02015 0.02882 — Signif. codes: 0 ‘***’ 0.001 ’**’ 0.01 ’*’ 0.05 ‘.’ 0.1 ’ ’ 1

3.14.3 Regressed on: Agricultural Stress

```
                Model 1: 0 Lags   Model 2: 1 Lag  Model 3: 2 Lags
```

Dependent Var.: Potatoes Yield Potatoes Yield Potatoes Yield

Agric. Stress -0.2087 (0.1711) -0.1706 (0.1614) -0.1728 (0.1598) Agric. Stress (Lag 1) -0.5089 (0.3339) -0.5048 (0.3311) Agric. Stress (Lag 2) -0.0758 (0.1075) Fixed-Effects: ————————- ————————- ————————- District Yes Yes Yes Year Yes Yes Yes _____ _____ _____ S.E.: Clustered by: District by: District by: District Observations 194 194 194 R2 0.80581 0.81430 0.81445 Within R2 0.00730 0.05069 0.05145 — Signif. codes: 0 ‘’ ***0.001*** ’’ *0.01* ’’ 0.05 ‘.’ 0.1 ’ ’ 1

3.14.4 Regressed on: Temperature

```
              Model 1: 0 Lags  Model 2: 1 Lag Model 3: 2 Lags
```

Dependent Var.: Potatoes Yield Potatoes Yield Potatoes Yield

Temp. -0.0084 (0.0602) 0.0049 (0.0696) 0.0456 (0.0968) Temp. (Lag 1) 0.1761 (0.1118) 0.1953 (0.1248) Temp. (Lag 2) 0.1621 (0.1202) Fixed-Effects: ————————- ———————— ———————— District Yes Yes Yes Year Yes Yes Yes _____ _____ _____ S.E.: Clustered by: District by: District by: District Observations 194 194 194 R2 0.80439 0.80550 0.80644 Within R2 1.36e-5 0.00571 0.01047 — Signif. codes: 0 ‘’ ***0.001*** ’’ *0.01* ’’ 0.05 ‘.’ 0.1 ’ ’ 1