Fentanyl Consumption and Peasants Income

	(1)	(2)	(3)	(4)
		Income		
	Survey	Big	Medium	Small
Panel A: Full sample				
Log Number of deaths (US) caused only by fentanyl	-0.022	-0.280	-0.157*	-0.055*
	(0.061)	(0.437)	(0.067)	(0.024)
Log Number of deaths (US) caused only by cocaine	0.172	1.312	-0.070	-0.050
	(0.096)	(0.881)	(0.119)	(0.044)
State CPI	0.003	-0.079*	-0.024***	-0.010***
	(0.004)	(0.037)	(0.003)	(0.001)
Participation rate	0.000	-0.002	0.000	0.000
	(0.003)	(0.016)	(0.001)	(0.000)
Log Exchange rate (COP/USD)	-0.223	2.786*	0.561***	0.204***
	(0.126)	(1.270)	(0.085)	(0.032)
Log Estimated Coca Production based on Quinoa	-0.012	-0.304	0.075**	0.031**
	(0.027)	(0.217)	(0.029)	(0.009)
ENSO index	0.013	-0.073	0.026**	0.008*
	(0.017)	(0.103)	(0.008)	(0.003)
Economic Performance Index	0.005	0.016	0.011***	0.005***
	(0.003)	(0.019)	(0.001)	(0.001)
COVID	-0.049	-0.400	0.095**	0.058***
	(0.081)	(0.675)	(0.030)	(0.014)
Observations	840	819	819	819
R-squared	0.551	0.838	0.582	0.525
State F.E.	✓	✓	✓	✓
Month F.E.	✓	✓	✓	✓
Panel B: Sub sample from October 2014				
Log Number of deaths (US) caused only by fentanyl	-0.111	-0.785	-0.326***	-0.120***
	(0.101)	(0.904)	(0.065)	(0.024)
Log Number of deaths (US) caused only by cocaine	0.127	2.431*	0.079	0.018
	(0.110)	(1.081)	(0.112)	(0.042)
State CPI	0.009	-0.077	-0.013**	-0.005**
	(0.007)	(0.075)	(0.004)	(0.002)
Participation rate	0.003	-0.006	-0.001	-0.000
	(0.003)	(0.012)	(0.002)	(0.001)
Log Exchange rate (COP/USD)	-0.148	4.010**	0.626***	0.223***
	(0.160)	(1.531)	(0.066)	(0.022)
Log Estimated Coca Production based on Quinoa	-0.018	-0.374**	0.038	0.015*
	(0.015)	(0.143)	(0.024)	(0.006)
ENSO index	-0.007	-0.179	-0.008	-0.004
	(0.018)	(0.137)	(0.011)	(0.003)
Economic Performance Index	0.003	0.033	0.007**	0.003***
	(0.005)	(0.029)	(0.002)	(0.001)
COVID	-0.070	-0.196	0.095**	0.053**
	(0.100)	(0.634)	(0.037)	(0.017)
Observations	609	609	609	609
R-squared	0.607	0.861	0.606	0.575
State F.E.	✓	✓	✓	✓
Month F.E.	✓	✓	✓	✓

*** p<0.01, ** p<0.05, * p<0.1

Table 1

Note: This table reports the regression of income as a function of fentanyl and cocaine related deaths in the US. Column 1 shows the dependent variable as the traditional approach using survey data for

average rural household income. Columns 2-4 use satellite light intensity data, in particular column 2 establishes a classification of big villages. column 3 for medium-size villages and column 4 for small cities. All columns include state and monthly fixed effects and control by standard macroeconomic variables that affects the business cycle. Unit of observation is state x month.

	(1)	(2)	(3)	(4)
		Income		
	Survey	Big	Medium	Small
Panel A: Full sample				
Log Number of deaths (US) caused only by fentanyl	-0.022	-0.280	-0.157*	-0.055*
	(0.061)	(0.437)	(0.067)	(0.024)
Observations	840	819	819	819
R-squared	0.551	0.838	0.582	0.525
State F.E.	✓	✓	✓	✓
Month F.E.	✓	✓	✓	✓
Panel B: Sub sample from October 2014				
Log Number of deaths (US) caused only by fentanyl	-0.111	-0.785	-0.326***	-0.120***
	(0.101)	(0.904)	(0.065)	(0.024)
Observations	609	609	609	609
R-squared	0.607	0.861	0.606	0.575
State F.E.	✓	✓	✓	✓
Month F.E.	✓	✓	✓	✓

*** p<0.01, ** p<0.05, * p<0.1

Table 2

Note: This table reports the regression of income as a function of fentanyl and cocaine related deaths in the US. Column 1 shows the dependent variable as the traditional approach using survey data for average rural household income. Columns 2-4 use satellite light intensity data, in particular column 2 establishes a classification of big villages. column 3 for medium-size villages and column 4 for small cities. All columns include state and monthly fixed effects and control by standard macroeconomic variables that affects the business cycle. Unit of observation is state x month.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Income							
	Survey	Light Intensity			Survey	Light Intensity		
	GEIH	Big	Medium	Small	GEIH	Big	Medium	Small
Panel A: Full sample								
Log of deaths by fentanyl	-0.001	-0.446**	-0.174***	-0.064***	-0.022	-0.280	-0.157*	-0.055*
	(0.014)	(0.179)	(0.025)	(0.009)	(0.061)	(0.437)	(0.067)	(0.024)
Log of deaths by cocaine					0.172	1.312	-0.070	-0.050
					(0.096)	(0.881)	(0.119)	(0.044)
State CPI					0.003	-0.079*	-0.024***	-0.010***
					(0.004)	(0.037)	(0.003)	(0.001)
Participation rate					0.000	-0.002	0.000	0.000
					(0.003)	(0.016)	(0.001)	(0.000)
Log Exchange rate (COP/USD)					-0.223	2.786*	0.561***	0.204***
					(0.126)	(1.270)	(0.085)	(0.032)
Log Estimated Coca Production					-0.012	-0.304	0.075**	0.031**
					(0.027)	(0.217)	(0.029)	(0.009)
ENSO index					0.013	-0.073	0.026**	0.008*
					(0.017)	(0.103)	(0.008)	(0.003)
Economic Performance Index					0.005	0.016	0.011***	0.005***
					(0.003)	(0.019)	(0.001)	(0.001)
COVID					-0.049	-0.400	0.095**	0.058***
					(0.081)	(0.675)	(0.030)	(0.014)
Observations	951	936	936	936	840	819	819	819
R-squared	0.477	0.694	0.523	0.460	0.551	0.838	0.582	0.525
State F.E.	✓	✓	✓	✓	✓	✓	✓	✓
Month F.E.	✓	✓	✓	✓	✓	✓	✓	✓
Panel B: Sub sample from October 2014								
Log of deaths by fentanyl	-0.019	-1.044*	-0.303***	-0.112***	-0.111	-0.785	-0.326***	-0.120***
	(0.020)	(0.446)	(0.029)	(0.010)	(0.101)	(0.904)	(0.065)	(0.024)
Log of deaths by cocaine					0.127	2.431*	0.079	0.018
					(0.110)	(1.081)	(0.112)	(0.042)
State CPI					0.009	-0.077	-0.013**	-0.005**
					(0.007)	(0.075)	(0.004)	(0.002)
Participation rate					0.003	-0.006	-0.001	-0.000
					(0.003)	(0.012)	(0.002)	(0.001)
Log Exchange rate (COP/USD)					-0.148	4.010**	0.626***	0.223***
					(0.160)	(1.531)	(0.066)	(0.022)
Log Estimated Coca Production					-0.018	-0.374**	0.038	0.015*
					(0.015)	(0.143)	(0.024)	(0.006)
ENSO index					-0.007	-0.179	-0.008	-0.004
					(0.018)	(0.137)	(0.011)	(0.003)
Economic Performance Index					0.003	0.033	0.007**	0.003***
					(0.005)	(0.029)	(0.002)	(0.001)
COVID					-0.070	-0.196	0.095**	0.053**
					(0.100)	(0.634)	(0.037)	(0.017)
Observations	690	696	696	696	609	609	609	609
R-squared	0.517	0.721	0.603	0.567	0.607	0.861	0.606	0.575
State F.E.	✓	✓	✓	✓	✓	✓	✓	✓
Month F.E.	✓	✓	✓	✓	✓	✓	✓	✓

*** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered by state

Table 3

Note: This table reports the regression of income as a function of fentanyl and cocaine related deaths in the US. Column 1 shows the dependent variable as the traditional approach using survey data for

average rural household income. Columns 2-4 use satellite light intensity data, in particular column 2 establishes a classification of big villages. column 3 for medium-size villages and column 4 for small cities. All columns include state and monthly fixed effects and control by standard macroeconomic variables that affects the business cycle. Unit of observation is state x month.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Income							
	Survey	Light Intensity			Survey	Light Intensity		
	GEIH	Big	Medium	Small	GEIH	Big	Medium	Small
Panel A: Full sample								
Log of deaths by fentanyl	-0.001	-0.446**	-0.174***	-0.064***	-0.022	-0.280	-0.157*	-0.055*
	(0.014)	(0.179)	(0.025)	(0.009)	(0.061)	(0.437)	(0.067)	(0.024)
Log of deaths by cocaine					0.172	1.312	-0.070	-0.050
					(0.096)	(0.881)	(0.119)	(0.044)
Log Estimated Coca Production					-0.012	-0.304	0.075**	0.031**
					(0.027)	(0.217)	(0.029)	(0.009)
Observations	951	936	936	936	840	819	819	819
R-squared	0.477	0.694	0.523	0.460	0.551	0.838	0.582	0.525
Controls	×	×	×	×	✓	✓	✓	✓
State F.E.	✓	✓	✓	✓	✓	✓	✓	✓
Month F.E.	✓	✓	✓	✓	✓	✓	✓	✓
Panel B: Sub sample								
Log of deaths by fentanyl	-0.019	-1.044*	-0.303***	-0.112***	-0.111	-0.785	-0.326***	-0.120***
	(0.020)	(0.446)	(0.029)	(0.010)	(0.101)	(0.904)	(0.065)	(0.024)
Log of deaths by cocaine					0.127	2.431*	0.079	0.018
					(0.110)	(1.081)	(0.112)	(0.042)
Log Estimated Coca Production					-0.018	-0.374**	0.038	0.015*
					(0.015)	(0.143)	(0.024)	(0.006)
Observations	690	696	696	696	609	609	609	609
R-squared	0.517	0.721	0.603	0.567	0.607	0.861	0.606	0.575
Controls	×	×	×	×	✓	✓	✓	✓
State F.E.	✓	✓	✓	✓	✓	✓	✓	✓
Month F.E.	✓	✓	✓	✓	✓	✓	✓	✓

Table 4

Note: This table reports the regression of income as a function of fentanyl and cocaine related deaths in the US. Column 1 shows the dependent variable as the traditional approach using survey data for average rural household income. Columns 2-4 use satellite light intensity data, in particular column 2 establishes a classification of big villages. column 3 for medium-size villages and column 4 for small cities. All columns include state and monthly fixed effects and control by standard macroeconomic variables that affects the business cycle. Unit of observation is state x month.

	(1)	(2)	(3)	(4)
		Income		
	Survey	Big	Medium	Small
Panel A: Full sample				
Log Number of deaths (US) caused only by fentanyl	-0.035*	-0.883*	-0.209***	-0.077***
	(0.017)	(0.389)	(0.028)	(0.010)
Log Number of deaths (US) caused only by cocaine	0.259**	3.299	0.260***	0.100***
	(0.087)	(1.847)	(0.069)	(0.024)
Observations	951	936	936	936
R-squared	0.488	0.698	0.528	0.465
State F.E.	✓	✓	✓	✓
Month F.E.	✓	✓	✓	✓
Panel B: Sub sample from October 2014				
Log Number of deaths (US) caused only by fentanyl	-0.042	-1.316*	-0.313***	-0.116***
	(0.023)	(0.574)	(0.030)	(0.010)
Log Number of deaths (US) caused only by cocaine	0.268**	3.252	0.115	0.044
	(0.103)	(1.731)	(0.081)	(0.033)
Observations	690	696	696	696
R-squared	0.528	0.725	0.604	0.568
State F.E.	✓	✓	✓	✓
Month F.E.	✓	✓	✓	✓

*** p<0.01, ** p<0.05, * p<0.1

Table 5

Note:

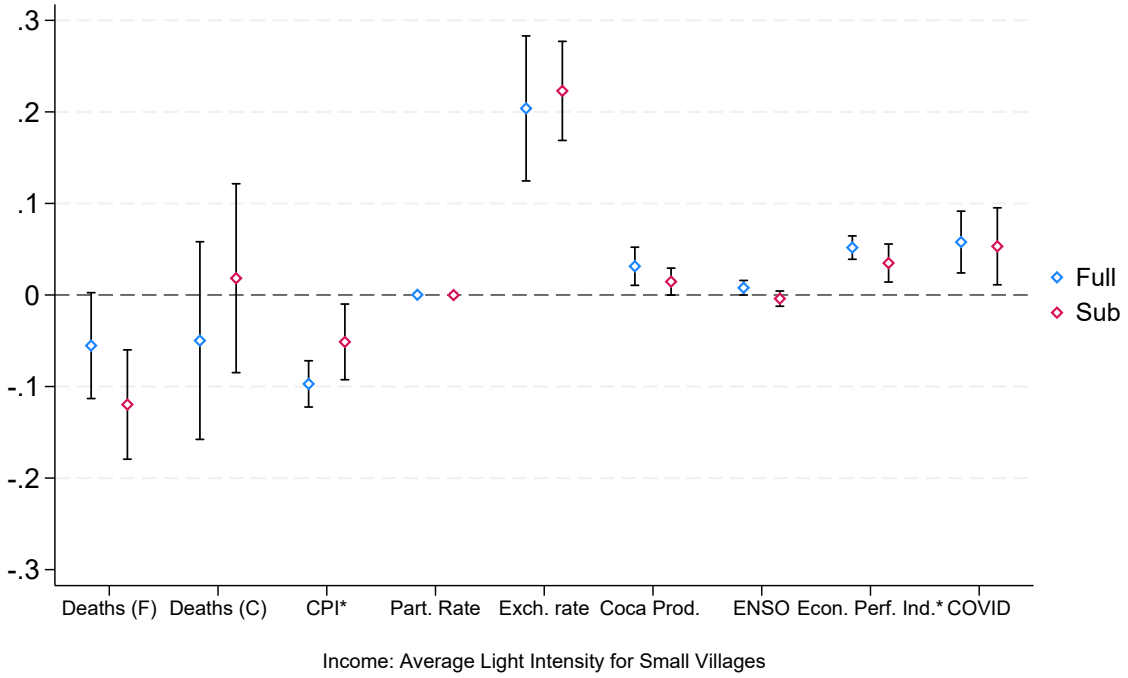

Figure 1: Coefplot

Note: This figure plots the coefficients of table 1 column 4.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Income															
	Survey	Light Intensity			Survey	Light Intensity			Survey	Light Intensity			Survey	Light Intensity		
	GEIH	Big	Medium	Small	GEIH	Big	Medium	Small	GEIH	Big	Medium	Small	GEIH	Big	Medium	Small
Panel A: Full Sample									**Panel B: Sub Sample**							
Log of deaths by fentanyl	-0.001	-0.446**	-0.174***	-0.064***	-0.022	-0.280	-0.157*	-0.055*	-0.019	-1.044*	-0.303***	-0.112***	-0.111	-0.785	-0.326***	-0.120***
	(0.014)	(0.179)	(0.025)	(0.009)	(0.061)	(0.437)	(0.067)	(0.024)	(0.020)	(0.446)	(0.029)	(0.010)	(0.101)	(0.904)	(0.065)	(0.024)
Log of deaths by cocaine					0.172	1.312	-0.070	-0.050					0.127	2.431*	0.079	0.018
					(0.096)	(0.881)	(0.119)	(0.044)					(0.110)	(1.081)	(0.112)	(0.042)
State CPI					0.003	-0.079*	-0.024***	-0.010***					0.009	-0.077	-0.013**	-0.005**
					(0.004)	(0.037)	(0.003)	(0.001)					(0.007)	(0.075)	(0.004)	(0.002)
Participation rate					0.000	-0.002	0.000	0.000					0.003	-0.006	-0.001	-0.000
					(0.003)	(0.016)	(0.001)	(0.000)					(0.003)	(0.012)	(0.002)	(0.001)
Log Exchange rate (COP/USD)					-0.223	2.786*	0.561***	0.204***					-0.148	4.010**	0.626***	0.223***
					(0.126)	(1.270)	(0.085)	(0.032)					(0.160)	(1.531)	(0.066)	(0.022)
Log Estimated Coca Production					-0.012	-0.304	0.075**	0.031**					-0.018	-0.374**	0.038	0.015*
					(0.027)	(0.217)	(0.029)	(0.009)					(0.015)	(0.143)	(0.024)	(0.006)
ENSO index					0.013	-0.073	0.026**	0.008*					-0.007	-0.179	-0.008	-0.004
					(0.017)	(0.103)	(0.008)	(0.003)					(0.018)	(0.137)	(0.011)	(0.003)
Economic Performance Index					0.005	0.016	0.011***	0.005***					0.003	0.033	0.007**	0.003***
					(0.003)	(0.019)	(0.001)	(0.001)					(0.005)	(0.029)	(0.002)	(0.001)
COVID					-0.049	-0.400	0.095**	0.058***					-0.070	-0.196	0.095**	0.053**
					(0.081)	(0.675)	(0.030)	(0.014)					(0.100)	(0.634)	(0.037)	(0.017)
Observations	951	936	936	936	840	819	819	819	690	696	696	696	609	609	609	609
R-squared	0.477	0.694	0.523	0.460	0.551	0.838	0.582	0.525	0.517	0.721	0.603	0.567	0.607	0.861	0.606	0.575
State F.E.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Month F.E.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

*** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered by state

Table 6