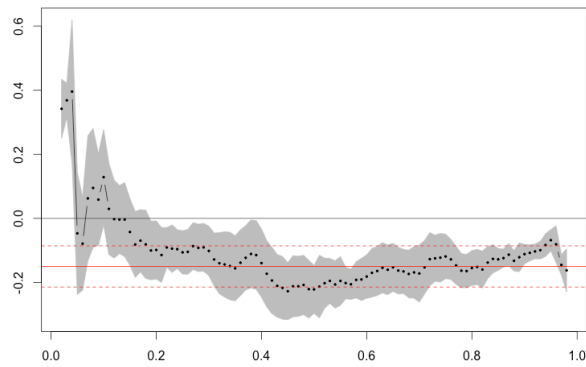


SUPPLEMENTARY MATERIALS

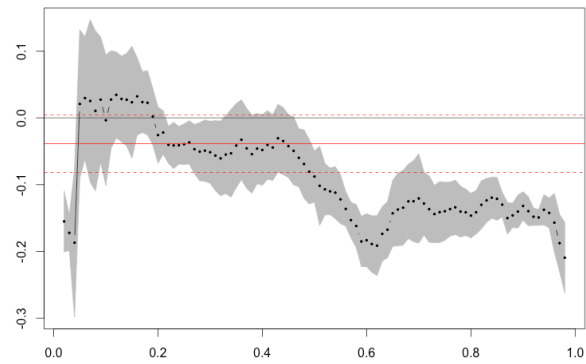
APPENDIX 1

The panels below demonstrate visually the trends in the coefficients of interest (price, GDP, and their interaction; y-axes) across increasing quantiles of consumption (x-axis) in the main model. Mean estimates of elasticity at each quantile are represented by black dots, and 95% confidence intervals are shaded in grey. Mean and 95% confidence intervals for global average elasticity estimates (OLS) are in solid and dashed red lines, respectively.

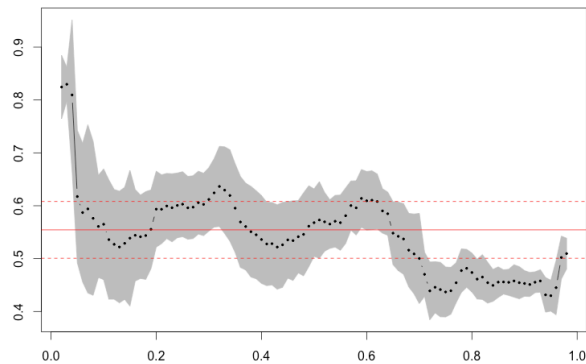
Panel (a): variation in coefficient on price



Panel (b): variation in coefficient on price-GDP interaction



Panel (c): variation in coefficient on GDP



APPENDIX 2

The following four tables contain price elasticity estimates and their 95% confidence intervals for 179 countries with complete data in the dataset. The estimates are derived from the main model described in the text and the observed levels of each of the covariates in the year 2012.

Table (a): low income countries

	point estimate	lower bound	upper bound
Cambodia	0.135	0.074	0.201
Tajikistan	0.155	0.086	0.222
Bangladesh	0.190	0.121	0.255
Chad	0.209	0.139	0.281
The Gambia	0.215	0.144	0.288
Kenya	0.218	0.153	0.292
Tanzania	0.229	0.158	0.303
Benin	0.234	0.161	0.304
Myanmar	0.252	0.182	0.323
Haiti	0.255	0.180	0.330
Uganda	0.263	0.189	0.339
Rwanda	0.263	0.183	0.339
North Korea	0.267	0.197	0.342
Nepal	0.270	0.194	0.347
Burkina Faso	0.275	0.193	0.357
Sierra Leone	0.290	0.213	0.365
Afghanistan	0.305	0.218	0.387
Comoros	0.307	0.231	0.385
Guinea-Bissau	0.316	0.236	0.403
Guinea	0.317	0.234	0.398
Mali	0.320	0.245	0.399
Mozambique	0.320	0.240	0.401
Ethiopia	0.320	0.241	0.401
Togo	0.328	0.247	0.410
Madagascar	0.352	0.269	0.433
Malawi	0.369	0.283	0.454
Central African Republic	0.389	0.301	0.475
Niger	0.390	0.300	0.479
Somalia	0.401	0.309	0.487
Eritrea	0.408	0.323	0.496
Zimbabwe	0.437	0.343	0.533
Liberia	0.439	0.337	0.531
Burundi	0.458	0.363	0.559
Democratic Republic of the Congo	0.567	0.461	0.681

Table (b): lower-middle income countries

	point estimate	lower bound	upper bound
Ukraine	-0.124	-0.188	-0.058
El Salvador	-0.111	-0.172	-0.049
Egypt	-0.073	-0.132	-0.011
Armenia	-0.071	-0.133	-0.013
Samoa	-0.070	-0.133	-0.009
Bhutan	-0.065	-0.128	-0.006
Georgia	-0.062	-0.123	-0.004
Guatemala	-0.059	-0.121	-0.003
Guyana	-0.058	-0.115	-0.002
Sri Lanka	-0.058	-0.119	0.005
Vanuatu	-0.055	-0.116	0.003
Paraguay	-0.045	-0.103	0.015
Mongolia	-0.038	-0.096	0.021
Swaziland	-0.034	-0.096	0.024
Bolivia	-0.026	-0.088	0.031
Syria	-0.024	-0.084	0.034
Indonesia	-0.022	-0.085	0.040
Morocco	-0.021	-0.081	0.038
Cape Verde	0.003	-0.055	0.064
Honduras	0.006	-0.055	0.067
Kiribati	0.013	-0.047	0.071
Philippines	0.016	-0.042	0.075
India	0.025	-0.035	0.084
Vietnam	0.051	-0.014	0.109
Moldova	0.061	-0.001	0.122
Uzbekistan	0.062	-0.001	0.123
Nicaragua	0.063	0.000	0.125
Laos	0.080	0.014	0.149
Solomon Islands	0.086	0.020	0.153
Papua New Guinea	0.086	0.017	0.152
Pakistan	0.103	0.039	0.165
Ghana	0.110	0.049	0.171
Djibouti	0.110	0.046	0.176
Nigeria	0.128	0.062	0.197
Kyrgyzstan	0.133	0.067	0.193
Mauritania	0.139	0.071	0.210
Sudan	0.146	0.082	0.210
Cameroon	0.148	0.085	0.211
Yemen	0.148	0.076	0.214

Sao Tome and Principe	0.161	0.092	0.231
Lesotho	0.196	0.126	0.265
Senegal	0.198	0.128	0.270
Zambia	0.209	0.137	0.279
Cote d'Ivoire	0.217	0.146	0.293

Table (c): upper-middle income countries

	point estimate	lower bound	upper bound
Seychelles	-0.432	-0.519	-0.350
Hungary	-0.332	-0.415	-0.258
Belarus	-0.286	-0.360	-0.209
Malaysia	-0.286	-0.360	-0.210
Gabon	-0.279	-0.347	-0.208
Panama	-0.276	-0.352	-0.202
Lebanon	-0.274	-0.346	-0.204
Mexico	-0.269	-0.344	-0.202
Turkey	-0.267	-0.338	-0.191
Botswana	-0.265	-0.337	-0.197
Mauritius	-0.261	-0.333	-0.190
Kazakhstan	-0.259	-0.327	-0.191
Grenada	-0.254	-0.328	-0.184
Bulgaria	-0.250	-0.316	-0.178
Saint Lucia	-0.243	-0.307	-0.173
Costa Rica	-0.239	-0.311	-0.171
Venezuela	-0.232	-0.302	-0.164
Turkmenistan	-0.226	-0.296	-0.161
Dominica	-0.226	-0.293	-0.162
Romania	-0.223	-0.292	-0.154
Iran	-0.221	-0.286	-0.155
Brazil	-0.208	-0.272	-0.143
Suriname	-0.207	-0.273	-0.141
Cuba	-0.204	-0.275	-0.132
Azerbaijan	-0.202	-0.271	-0.130
Montenegro	-0.199	-0.268	-0.128
Dominican Republic	-0.197	-0.259	-0.131
Serbia	-0.192	-0.255	-0.129
South Africa	-0.191	-0.255	-0.130
Saint Vincent and the Grenadines	-0.187	-0.253	-0.116
Peru	-0.186	-0.254	-0.119
Colombia	-0.186	-0.246	-0.117
Macedonia	-0.186	-0.251	-0.117
Thailand	-0.171	-0.234	-0.107

China	-0.162	-0.226	-0.099
Jamaica	-0.159	-0.224	-0.092
Tunisia	-0.149	-0.211	-0.087
Belize	-0.146	-0.206	-0.078
Ecuador	-0.145	-0.210	-0.077
Albania	-0.140	-0.199	-0.079
Bosnia and Herzegovina	-0.132	-0.198	-0.070
Algeria	-0.128	-0.190	-0.068
Maldives	-0.118	-0.180	-0.055
Tonga	-0.108	-0.172	-0.044
Namibia	-0.098	-0.164	-0.038
Angola	-0.073	-0.135	-0.014
Jordan	-0.058	-0.117	0.004
Iraq	-0.020	-0.081	0.041
Fiji	-0.019	-0.082	0.039

Table (d): high income countries

	point estimate	lower bound	upper bound
Qatar	-0.676	-0.795	-0.558
Luxembourg	-0.647	-0.758	-0.538
Singapore	-0.589	-0.697	-0.481
Andorra	-0.585	-0.687	-0.476
United Arab Emirates	-0.567	-0.669	-0.458
Norway	-0.566	-0.676	-0.462
Brunei	-0.548	-0.652	-0.444
Kuwait	-0.545	-0.651	-0.445
United States	-0.534	-0.625	-0.437
Switzerland	-0.520	-0.623	-0.426
Austria	-0.510	-0.614	-0.409
Australia	-0.510	-0.614	-0.414
Netherlands	-0.502	-0.591	-0.403
Canada	-0.502	-0.600	-0.405
Sweden	-0.499	-0.598	-0.399
Ireland	-0.497	-0.602	-0.401
Iceland	-0.491	-0.586	-0.397
Germany	-0.490	-0.588	-0.394
Belgium	-0.483	-0.576	-0.388
Denmark	-0.477	-0.566	-0.382
United Kingdom	-0.476	-0.573	-0.382
Finland	-0.475	-0.568	-0.379
Japan	-0.468	-0.561	-0.380
France	-0.462	-0.544	-0.369

The Bahamas	-0.450	-0.542	-0.362
South Korea	-0.441	-0.531	-0.349
Israel	-0.437	-0.526	-0.354
Italy	-0.434	-0.524	-0.346
Spain	-0.432	-0.523	-0.343
New Zealand	-0.424	-0.510	-0.338
Oman	-0.414	-0.501	-0.327
Slovenia	-0.412	-0.498	-0.323
Czech Republic	-0.404	-0.486	-0.320
Trinidad and Tobago	-0.399	-0.482	-0.317
Bahrain	-0.399	-0.484	-0.305
Barbados	-0.398	-0.484	-0.313
Malta	-0.395	-0.477	-0.306
Cyprus	-0.391	-0.474	-0.305
Saudi Arabia	-0.389	-0.476	-0.308
Greece	-0.389	-0.472	-0.308
Equatorial Guinea	-0.388	-0.473	-0.304
Slovakia	-0.375	-0.458	-0.294
Portugal	-0.367	-0.447	-0.289
Estonia	-0.345	-0.422	-0.260
Poland	-0.345	-0.426	-0.270
Lithuania	-0.325	-0.404	-0.250
Croatia	-0.308	-0.387	-0.232
Russia	-0.308	-0.382	-0.234
Antigua and Barbuda	-0.305	-0.380	-0.233
Chile	-0.302	-0.382	-0.225
Latvia	-0.293	-0.359	-0.221
Uruguay	-0.277	-0.353	-0.199

APPENDIX 3

As described in the main text, I fit a model similar to the main model, except it did not include an interaction term:

$$\ln(\text{consumption}_{it}) = \beta_0 + \beta_1 \ln(\text{price}_{it}) + \beta_2 \ln(\text{GDP}_{it}) + \beta_3 P_{it} + \beta_4 O_{it} + \beta_5 W_{it} + \beta_6 E_{it} + \sum_{k=1}^4 \gamma_k I_t + \epsilon_{it}$$

This was done to check that the model with interaction term was consistent with a simpler model. In this case, the quantity of interest is simply β_1 , which represents the price elasticity. The results of this model are provided below. The trends are similar to those in the interaction model, though the numerical estimates vary less.

	OLS	Quantile Regression				
		t = 0.10	t = 0.25	t = 0.50	t = 0.75	t = 0.90
ln(price)	-0.15 (0.04)	0.12 (0.09)	-0.12 (0.05)	-0.19 (0.05)	-0.15 (0.03)	-0.06 (0.01)
ln(GDP)	0.52 (0.03)	0.56 (0.06)	0.57 (0.03)	0.48 (0.03)	0.37 (0.02)	0.34 (0.01)
"P" policy	-0.26 (0.09)	-0.56 (0.22)	-0.20 (0.13)	-0.01 (0.08)	-0.09 (0.08)	-0.08 (0.02)
"O" policy	0.10 (0.08)	0.04 (0.21)	0.15 (0.14)	0.00 (0.08)	-0.04 (0.06)	-0.22 (0.02)
"W" policy	-0.05 (0.08)	-0.21 (0.19)	0.07 (0.19)	0.00 (0.06)	-0.25 (0.05)	-0.10 (0.04)
"E" policy	-0.15 (0.08)	0.22 (0.16)	-0.14 (0.12)	-0.22 (0.08)	-0.17 (0.04)	-0.39 (0.04)
year 2009	0.02 (0.08)	0.04 (0.17)	0.04 (0.11)	0.02 (0.09)	0.00 (0.05)	0.02 (0.03)
year 2010	0.03 (0.08)	0.06 (0.18)	0.05 (0.11)	0.02 (0.09)	0.03 (0.05)	0.05 (0.02)
year 2011	0.05 (0.08)	0.07 (0.19)	0.02 (0.11)	0.05 (0.09)	0.04 (0.06)	0.05 (0.03)
year 2012	0.05 (0.08)	0.08 (0.19)	0.04 (0.12)	0.04 (0.08)	0.06 (0.06)	0.07 (0.02)
Intercept	0.86 (0.07)	-0.41 (0.14)	0.33 (0.09)	0.95 (0.08)	1.47 (0.05)	1.70 (0.03)

OLS = ordinary least squares; GDP = per capita gross domestic product
Robust standard errors given in parentheses, **bolded** values indicate $p < 0.05$

We also split the dataset into individual years and tested the trends for 2008 and 2012. The model in this case is:

$$\ln(\text{consumption}) = \beta_0 + \beta_1 \ln(\text{price}) + \beta_2 \ln(\text{GDP}) + \beta_3 \ln(\text{price}) * \ln(\text{GDP}) + \beta_4 P + \beta_5 O + \beta_6 W + \beta_7 E + \epsilon_{it}$$

In either subset of data, I obtained substantively similar results to those in the main model; however, the standard errors were larger owing to lack of statistical power

(~45% for the quantities of interest in either year). Representative traces of the coefficients of interest (β_1 and β_3) similar to those in Appendix 1 are provided below.

