Opium for the Masses: How Foreign Media Can Stabilize Authoritarian Regimes

Online Supplement

This online supplement contains the results of additional analyses that had to be omitted from the paper because of space limitations.

I. LARF ordered probit

Table A presents LARF estimates based on an ordered probit link function that takes the ordered categorical nature of the outcome variables into account. We show simulated first differences instead of hard-to-interpret ordered probit coefficient estimates. The local average treatment effect estimate is the average change for compliers in the expected probability of choosing each of the four response categories. Model-based imputation is used to impute missing potential outcomes under treatment and control, with covariates held at their observed values.

The ordered probit results are qualitatively similar to the results from the linear specifications presented in Table 3 in the paper. For all three outcome variables, West German television exposure on average increases (decreases) the probability of fully agreeing (fully disagreeing) with the survey statements by about 0.06 to 0.13 (0.03 to 0.04).

Table A: Effect of West German television exposure on regime support: First differences from ordered probit LARF estimator

Expected shift in $Pr(Y = j)$	j = 1 fully disagree	j = 2 largely disagree	j = 3 largely agree	j = 4 fully agree
Convinced of Leninist/Marxist worldview				
West German tv	−0.038	−0.050	0.022	0.065
Upper CI bound	(−0.000)	(−0.004)	(0.155)	(0.145)
Lower CI bound	(−0.069)	(−0.267)	(0.002)	(0.008)
Feel closely attached to East Germany				
West German tv	−0.026	−0.073	−0.028	0.127
Upper CI bound	(−0.000)	(−0.013)	(0.115)	(0.261)
Lower CI bound	(−0.125)	(−0.303)	(−0.080)	(0.041)
Political power exercised in ways consistent with my views				
West German tv	−0.036	−0.064	0.044	0.056
Upper CI bound	(−0.000)	(−0.004)	(0.180)	(0.117)
Lower CI bound	(−0.063)	(−0.264)	(0.003)	(0.004)

The table shows treatment effect estimates with upper and lower bounds for cluster-adjusted .95 confidence intervals in parentheses. Estimates are average treatment effects for compliers in first differences, i.e., average changes in the expected $Pr(Y = j)$ for compliers under treatment and control. All specifications include the limited covariate set. $N = 3426$ for all specifications.

II. Subsample comparison

We have checked the robustness of the results presented in Table 3 in the paper by re-estimating our specifications for six sub-samples, each composed of respondents living in Dresden and in one of the districts with access to West German television (East Berlin, Erfurt, Karl-Marx-Stadt, Magdeburg, Leipzig, and Schwerin).[1] We use this sub-group analysis to capitalize on potential variation in unobserved confounders associated with these districts. If there was regional variation in unobserved confounders such as respondents' levels of preference falsification, there should be heterogeneity in treatment effect estimates across these sub-samples.

Table B demonstrates that this is not the case for any of the districts except East Berlin.[2] It shows linear LARF treatment effect estimates (using the limited covariate set) for each sub-sample. Across sub-samples, treatment effect estimates are similar in effect size and statistical significance. They are also close to the estimates obtained for the whole sample (Table 3 in the paper). Such stability in estimates confirms that our results are not driven by regionally varying confounders.

[1] We had to exclude the Cottbus district from this analysis because only 66 respondents in our sample reside there.

[2] It was well known that living conditions in East Berlin were better than in the rest of East Germany. Many of the outliers in Figure 2 in the paper are due to East Berlin.

Table B: Effect of West German television exposure on regime support (sub-samples)

	Outcome variable			
	Y1	Y2	Y3	N
Schwerin	0.285	0.490	0.350	976
	(0.130)	(0.109)	(0.123)	
Magdeburg	0.322	0.399	0.223	1333
	(0.074)	(0.066)	(0.070)	
East Berlin	0.133	0.099	-0.006	1203
	(0.084)	(0.074)	(0.074)	
Leipzig	0.338	0.498	0.435	1061
	(0.100)	(0.087)	(0.086)	
Karl-Marx-Stadt	0.147	0.219	0.212	1417
	(0.075)	(0.064)	(0.065)	
Erfurt	0.137	0.151	0.123	1433
	(0.073)	(0.065)	(0.067)	

The table shows average treatment effect estimates for compliers from the linear LARF estimator. Cluster-adjusted standard errors are shown in parentheses. All models include the limited covariate set. Each row presents estimates for a different subgroup, i.e., estimates for a sample with Dresden assigned to control and one other district assigned to treatment. Y1 = *Convinced of Leninist/Marxist worldview.* Y2 = *Feel closely attached to East Germany.* Y3 = *Political power exercised in ways consistent with my views.*

III. Replication I: Alternative survey

Replication is as important in observational studies as it is in randomized experiments because biases particular to the circumstances of one study may not be present in other studies (Rosenbaum 2002). Our results will be strengthened if they can be replicated with different samples collected in different places at different times. Here we replicate our findings using a survey conducted in 1984.[3] It contains about 3000 respondents from several smaller East German cities (Halle, Schwerin, Dessau, Magdeburg, Bitterfeld, Greifswald) and also 950 respondents from the Dresden district.

We have attempted to make this replication as similar as possible to the analysis presented in the paper. For now, we exclude Greifswald respondents from the sample since many of them had no access to West German television (see below). The instrument is again coded 0 for respondents from the Dresden district and 1 for respondents from other districts. The treatment indicator is again based on a question that asks respondents how often they watch West German television. The six response categories are daily, two to five times per week, once per week, once or twice per month, less often, and never. The treatment indicator is coded 1 for respondents who fall in the first four response categories and 0 for all others.[4] The correlation between exposure to West German television and place of residence is again very high (.40).

We have chosen outcome variables that are as close as possible to the questions in the 1988/89 survey:

- *"I am proud of being a citizen of our socialist country."*
- *"It is personally important for me to help advance socialism."*
- *"Socialism can only succeed if workers and farmers have a firm grasp on political power under the leadership of the communist party."*

[3] Zentralarchiv für Empirische Sozialforschung ZA 6129: Friedensstudie 1983.

[4] Results are similar if respondents in the first 3 response categories are coded as treated or if only respondents in the last response category are coded as controls.

The four response categories are similar to the ones used in the 1988/89 survey (strongly disagree to strongly agree). We again use a limited and an extensive set of covariates.[5] As before, we discretize all variables to avoid functional form assumptions.

Results are displayed in Table C, which shows average treatment effect estimates for all three outcome variables and both covariate sets. Standard errors are again adjusted for clustering. Given the earlier similarity between LARF and 2SLS estimates we only present 2SLS results here.

Across all models, West German television exposure has a positive effect on East Germans' support for the communist regime. Effect sizes are comparable to the results reported in Table 3 in the paper; all estimates are statistically significant at conventional levels. Even though the survey was conducted in different districts five years earlier and survey questions differ somewhat from the questions in the 1988/89 survey, we can fully replicate our results.

[5]The limited set contains age and gender (no information on parents' occupational classification is available). The extensive set adds educational attainment, occupational classification, marriage status, number of children, and employment status (no information on net income is available) to the limited set.

Table C: Effect of West German television exposure on regime support: Replication with 1984 survey

I am proud of being a citizen of our socialist country		
Covariate set	Limited	Extensive
West German tv	0.467	0.465
Standard error	(0.113)	(0.106)
N	2901	2901

It is personally important for me to help advance socialism		
Covariate set	Limited	Extensive
West German tv	0.366	0.390
Standard error	(0.128)	(0.128)
N	2897	2897

Socialism can only succeed if workers and farmers have a firm grasp on political power under the leadership of the communist party		
Covariate set	Limited	Extensive
West German tv	0.137	0.146
Standard error	(0.073)	(0.073)
N	2897	2897

Results are 2SLS estimates with cluster-adjusted standard errors in parentheses. The limited covariate set includes age and gender. The extensive covariate set adds educational attainment, occupational classification, marriage status, number of children, and employment status to the limited set. Response categories are coded as fully disagree = 1, largely disagree = 2, largely agree = 3, and fully agree = 4. 950 respondents living in the Dresden district are assigned to the control group.

IV. Replication II: Alternative control group

The 1984 survey allows for another type of replication. It contains 167 respondents from the town of Greifswald, which had limited access to West German over-the-air television broadcasts due to its location in the Northeastern corner of East Germany (cf. Figure 1 in the paper). If we can replicate our results with this group of respondents, the possibility is ruled out that the results reported in the paper are driven by some unobserved confounder particular to the Dresden district.

We drop all respondents from the Dresden district for this replication; only Greifswald respondents are "assigned" to the control group. Note that this dramatically reduces the sample size for the assigned control group from 950 to 167. Although the correlation is now lower than before, West German television exposure and place of residence are still correlated (.15). We fit the same specifications as in the previous section.

Table D displays the estimates. Similar to the results in Table C, we again see a positive effect of West German television exposure on support for the communist regime. The estimated average treatment effects are substantively important for all outcome variables and both covariate sets. Half of the estimates are significant at conventional levels despite the small number of respondents in the assigned control group. The fact that we again find a positive treatment effect — even though we are using respondents living in another East German city as assigned control group — demonstrates the robustness of our results.

Table D: Effect of West German television exposure on regime support: Replication with 1984 survey and Greifswald respondents

I am proud of being a citizen of our socialist country		
Covariate set	Limited	Extensive
West German tv	1.770	1.218
Standard error	(0.843)	(0.864)
N	2155	2155

It is personally important for me to help advance socialism		
Covariate set	Limited	Extensive
West German tv	1.598	1.920
Standard error	(1.564)	(1.276)
N	2154	2154

Socialism can only succeed if workers and farmers have a firm grasp on political power under the leadership of the communist party		
Covariate set	Limited	Extensive
West German tv	0.645	0.856
Standard error	(0.380)	(0.382)
N	2156	2156

Results are 2SLS estimates with cluster-adjusted standard errors in parentheses. The limited covariate set includes age and gender. The extensive covariate set adds educational attainment, occupational classification, marriage status, number of children, and employment status to the limited set. Response categories are coded as fully disagree = 1, largely disagree = 2, largely agree = 3, and fully agree = 4. 167 respondents living in Greifswald are assigned to the control group.