

## 1. Introduction

Communism, understood as a “totalitarian system of government in which a single authoritarian party controls state-owned means of production”<sup>1</sup> shaped the socioeconomic conditions of about 40 countries worldwide in the twentieth century. Communist regimes not only maintained ineffective economic systems with low-quality state-owned enterprises and sluggish bureaucratic institutions but also deprived citizens of personal and public forms of freedom. Citizens could not count on the government on the one hand and could not freely organize themselves in alternative economic or social organizations on the other hand (Pop-Eleches et al. 2017). Communist regimes frequently used severe repressive actions for politically incorrect speech or behavior to the extent that practically nobody could feel entirely safe. In order to track down disobedient individuals regimes relied on their expanded terror apparatus involving thousands of collaborators and ordinary citizens secretly reporting against one another (Siedler et al. 2009). Such conditions induced most people to rely on small networks of family and close friends (Dallago 1990; Wedel 1986). Therefore, there was little incentive to trust other members of society, and repressions increased the costs of generalized trust.

While similar conditions characterized other totalitarian and authoritarian regimes in the past, Communism seems to have left a uniquely strong mark on the societies over which it ruled. Pop-Eleches and Tucker (2017, p. 38) claim that the institutions and ideology of Communism led

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<sup>1</sup> <https://www.merriam-webster.com/dictionary/communism>

to “much greater penetration of all levels of society by communist regimes compared to other authoritarian regimes.” They also emphasize that the central role of state in the economy as well as the takeover of the state by a single political party distinguished Communist regimes. The subordination of social and economic activities to Marxism-Leninism, an ideology with a quasi-religious status, brought considerable changes to cultural norms in Communist nations on top of new political and economic systems. A unique historical phenomenon of long-standing global consequences, Communism deserves special attention as a key to understand the contemporary political and economic challenges to the growth of many post-Communist countries.

It is likely that Communist societies developed economic preferences less conducive to capital formation and growth. For instance, Alesina et al. (2007) find that the Communist system made East Germans significantly more supportive of state intervention than West Germans and calculated that this effect would persist over two to four decades. While pro-state preferences need not lead to a slower growth per se, they may indicate a weaker economic agency of citizens and dwarfed entrepreneurship in post-Communist societies. Communism could also have affected social capital formation by decreasing trust. Studies such as Mishler et al. (1997) or Pop-Eleches and Tucker (2011) generally find low to moderate levels of generalized or institutional trust in post-Communist societies. Heineck and Süssmuth (2013) find lower levels of trust in East Germans even 20 years of reunification and assert that distrust is transmitted from the generations that lived in the German Democratic Republic to the next ones.

Moreover, data by Algan and Cahuc (2010), who use the responses of immigrants to the United States to estimate the levels of generalized trust in their respective countries of origin, show that Czech Republic, Germany, Hungary, Poland, Russia, and Yugoslavia have substantially higher levels of trust in 1935 than in 2000. This further suggests that Communism may decrease generalized trust. Trust deficiency, in turn, may be an inhibitor for the political

process and economic activity. The same authors find significant and sizeable positive effects of inherited trust on economic growth. They calculate that if the Central and Eastern European countries had inherited trust as high as that in Sweden, their income per capita would have been from 9 to 69 percent higher in 2000.

These findings motivate the research questions of this paper. I hypothesize that Communism decreases generalized trust and that the effect persists to the period after system transformation. I also expect that the longer the exposure to Communist of a country or an individual, the stronger the effect. However, the main outcomes of this analysis are in opposite to this hypothesis. My results suggest that a longer duration of a Communist regime is associated with an increase in generalized trust, while personally living longer in Communism has no significant effect. There seems to be little heterogeneity of the effects in terms of the length of exposure to the regime. However, additional checks suggest that results may differ to a large extent depending on the region and period. All findings, however, are subject to substantial limitations. The rest of this paper is organized as follows. Section 2 describes data sources and variables. Section 3 briefly presents the empirical tools. Section 4 explains the assumptions, limitations, and challenges to the present analysis. Section 5 reports and comments the results. Section 6 concludes.

## 2. Data

### A. Dependent Variables: Forms of Trust

Trust enters my regressions as a dependent variable. I obtain different measures of interpersonal and institutional trust from waves 1-6 of the World Values Survey (WVS) and a measure of generalized trust from the Global Preferences Survey (GPS). The WVS trust measure is available for 97 countries, including 30 formerly Communist ones, for years 1981-2014. There

is, however, much variation in countries included in each wave, which leaves my panel data unbalanced. The GPS cross-sectional dataset shares respondents with the 2012 Gallup World Poll and includes 76 countries, 21 of which are post-Communist.

The WVS question that has been extensively used in economic literature as a measure of generalized trust asks respondents as follows: “Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?” and denotes the responses as “most people can be trusted” or “you can’t be too careful.” The dataset also includes numerous other questions related to trust in people and confidence in institutions. I select “How much do you trust your family” and “How much do you trust the people you know personally?” and attribute the value of 1 to the answers “trust completely” and “trust somewhat” and the value of 0 to the answers “do not trust very much” and “do not trust at all.” I also take the question “I am going to name a number of organizations. For each one, could you tell me how much confidence you have in them: is it a great deal of confidence, quite a lot of confidence, not very much confidence or none at all?” I choose the answers regarding the government and courts. In this case, I analogously collapse the two positive responses and the two negative responses in order to obtain a binary indicator. The WVS dataset includes demographic information about the respondents, such as their sex, age, income scale, education level. All WVS variables indicate the positions “Missing; Unknown,” “Not asked in survey,” “Not applicable,” “No answer,” “Don’t know” with negative values. I recode them as missing observations, which results in listwise deletion for the purpose of running regressions.

The GPS only has one question regarding trust. The respondents indicate on a scale from 0 to 10 how well the statement “I assume that people have only the best intentions” described them as a person. The GPS reports all values as standardized using the z-score. My GPS dataset

does not include any demographics. Falk et al. (2018) report that the GPS and WVS trust variables are strongly correlated at the 99% confidence level, and thus I consider these two measures of generalized trust as comparable alternatives.

## B. Independent Variables of Interest: Measures of Communism

My dataset on the duration of Communist regimes in each country comes from Harvard Business School's "Rise and Fall of Communism" data visualization project. The original source of data, the "Map of Communism" by the Museum of Communism, is no longer available online. I restrict my sample to the countries that were entirely ruled by a Communist regime in the past. Therefore, I exclude Germany and Yemen, where Communist regimes did not occupy entire territories. I also exclude China, North Korea, Vietnam, Laos, and Cuba, where Communism is still present, since they could act as influential points. I also remove Finland, because this country never had a Communist regime, even though the Communist party had a strong position in the democratic parliament.

Based on the dataset, I create several measures of Communism. Two are country-specific: *Communist regime in the past* takes the value of 1 if a country has ever had a Communist regime and 0 otherwise; *Duration of Communist regime, log* is a logarithmic transformation of the calculated number of years a Communist regime lasted in each country, with number 1 added to each value so as to avoid taking the log of 0. The other ones are individual-specific. I generate dummy variables whose names start with *lived in Communism* and indicate for how many years the respondent was expected to live under a Communist regime. The baseline are people who never lived under a Communist regime, therefore the youngest participants of waves five and six of the WVS from post-Communist countries as well as the respondents from countries that have never been Communist. The variable *lived in Communism*,

*1-25 years* includes both those who were around 25 years old in earlier WVS waves, so during or soon after the fall of Communism in Eastern Europe, along those who were around 50 years old in the later WVS waves. By analogy, the variable *lived in Communism, >25 years* does not distinguish between those little over 25 years old in earlier WVS waves and those over 50 years old in the later WVS waves. I also create *fraction of lifetime under Communism*, which is the proportion of one's expected number of years spent under a Communist regime to one's age based on the declared year of birth.

The individual-specific variables are calculated using the year of birth of the respondent, the year of the survey, and the years when Communist regimes began and ended in each country. The calculations rely on the assumption that each individual lived his or her entire life in the country where the survey was run. Considering this assumption and the fact that Communism in all countries had started before the survey took place, all individuals who lived in a Communist regime are assumed to have experienced Communism since birth. While this certainly leads to some misrepresentation, this is the second-best option given that the variables enabling more precise calculations are not populated in the longitudinal WVS dataset. The correlations between all these measures of Communism are close to perfect and are reported in Appendix.

### C. Other Independent Variables

My dataset also includes variables that serve as either controls or potential channels through which Communism may affect trust. I use the following WVS data on respondents: age, level of education, income scale, and life satisfaction. I also expand my dataset with the following country-level characteristics: the average volume of trade of printed goods and television receivers with Russia over the years 2000-2012 from the United Nations Comtrade Database, the Electoral Democracy Index from the Varieties of Democracy Project (V-Dem), the

GDP per capita (PPP, 2012 international dollars) from the International Monetary Fund, the maximum value of the Gini Index within the period 2007-2017 from the World Bank, and the ethnic fractionalization index from Fearon (2003). Summary statistics for all variables are available in Appendix.

### 3. Models

The goal of the empirical strategy is to measure the effect of Communism in the past on present-day levels of generalized trust in post-Communist countries. I perform a cross-sectional analysis by regressing the GPS and WVS generalized trust measures on the two country-specific measures of Communism described in section 2B. I also gradually apply different control variables. My ordinary least squares regression model with robust standard errors is as follows:

$$Trust_c = \alpha_c + \beta Communism_c + \mathbf{X}_c + \epsilon_c$$

where  $Trust_c$  is the level of generalized trust in the country  $c$ ,  $\alpha_c$  is a constant term,  $Communism_c$  is the measure of Communism,  $\mathbf{X}_c$  is a vector of country-specific variables, and  $\epsilon_c$  is the error term.

The second step of my strategy is a panel data study using waves one through six of the WVS. For this, I use a logistic regression model with time- and country-fixed effects. I cluster the standard errors at the country level. The specification takes the following form:

$$(2) Trust_{i,c,t} = \rho_{i,c,t} + \theta Communism_{i|c} + \mathbf{X}_i + \boldsymbol{\delta}_c + \mathbf{v}_t + \epsilon_{i,c,t}$$

where  $Trust_{i,c,t}$  denotes a given form of trust for the individual  $i$  in the country  $c$  in the year  $t$ ,  $\rho_{i,c,t}$  is a constant term,  $Communism_{i|c}$  denotes either the individual- or country-specific

measure of Communism,  $\mathbf{X}_i$  is a vector of individual-specific variables,  $\delta_c$  are country-fixed effects,  $\mathbf{v}_t$  are year-fixed effects, and  $\varepsilon_{i,c,t}$  is the error term.

## 4. Assumptions and Limitations

### A. Potential Causality

Before proceeding to the analysis of econometric evidence, it is crucial to discuss the assumptions and limitations of this paper, starting with the problem of causality. Whether Communism was exogenous to trust is a historical question. Plausibly, the introduction of Communism can be treated as exogenous. Communism was almost always introduced by the means of violent revolutions. However, some other domestic factors correlated with trust levels, such as the despotic rule of Tsar in pre-1917 Russia, could also have contributed to the success of a revolution. The timing of the fall of Communism could arguably be also considered exogenous for most countries. One argument is that many countries followed the events in Poland, where the success of the Solidarity movement was exceptionally large and due to factors specific to Poland, such as the activity of the Catholic Church and of the Polish Pope John Paul II. In addition to these historical premises, generalized trust does not seem to have been a major factor contributing to the fall of Communism once other direct causes, such as the economic conditions, the popularity of Communist regimes, the international situation, and numerous other circumstances are considered. However, due to my limited expertise in history and to the rather unsophisticated econometric methods, I recommend taking the relationships found in this paper as associations rather than causal effects.



## B. Omitted Variables

Considering that the WVS panel data are unbalanced, time-specific effects are a potential threat to validity. Omitted variable bias may also enter my regressions in the form of time-varying country-specific effects. However, the omitted variables that are the most problematic to this study are the peculiarities of the post-transition period in formerly Communist countries, as these processes could be interpreted as separate from the effects of Communism. The political and economic processes and shocks that characterized post-Communist countries, such as rapid privatization, initial surges in unemployment and later accelerations of growth or stagnation, corruption, or lustration potentially had large influence on different forms of trust.<sup>2</sup> For example, Horne (2014) asserts that lustration builds institutional trust but undermines generalized trust. For some of the processes, such as lustration or privatization, I do not have data. Others, such as the GDP or Gini index, would suffer from reverse causality. Therefore, my choice is to consider these omitted factors as additional channels through which Communism has historically affected trust, even though this approach is certainly imperfect.

## C. Problems with Data

In addition to observations from many countries not appearing consistently in time, there are other potential problems with the data. Although the WVS and the GPS are methodologically sophisticated projects, international survey data suffer from imperfections, from sample randomization to the ways respondent answer questions. More specifically, questions about trust may or may not accurately represent internalized trust that translates into behaviors of socioeconomic significance. For example, Glaeser and Laibson's (2000) experiment suggests that

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<sup>2</sup> A process whereby post-Communist countries introduced limits on the participation of former Communist officials in positions of influence in society after political system transformation, often revealing the details of their involvement in the bygone regime

the trust questions may reflect trustworthiness rather than trust. However, these questions remain extensively used by economists in different contexts and seem to indicate important patterns regardless. For instance, Algan and Cahuc (2010) demonstrate that the WVS trust question has predictive power for economic growth.

A potential problem with survey data directly related to Communism is that information in Communist countries seems to have been more salient and more closely related to trust than in other countries. Openness was penalized; sharing values, beliefs, and preferences was costly due to strict enforcement of the Communist ideology. If consequences of these adverse incentives are permanent, the samples in Communist and post-Communist countries suffer from selection bias. Thus, the answers to questions related to trust may be positively skewed. This problem remains to be solved by future research; my paper relies on the assumption that this is not a large issue.

#### D. Problems with Methods

Finally, there is an array of methodological issues that may challenge the results of my paper. Choices made when cleaning data could have distorted them, possibly even in a systematic way. The potentially problematic procedures I performed include the collapse of factor variables into binaries, listwise deletion in regressions (rather than multiple imputation), calculation of new measures of Communism, and possible coding errors. Moreover, the combination of individual-level data and the country-level assignment of Communism likely increased statistical power disproportionately with respect to new information added. These evident issues, along with other potentially omitted ones, dictate a reserved approach to any results reported.

## 5. Results

### A. Country-Level Evidence

I start the country-level analysis with two-sample t-tests with unequal variances for a difference in mean trust scores between post-Communist and never Communist countries for both GPS and WVS measures. The latter is restricted to wave 6 only for comparability. The results are inconclusive, as the differences between these two groups of countries take slightly negative or slightly positive values depending on the measure. The p-values in both tests are large, indicating that the effect of Communism in the past on generalized trust in 2012 is negligible. Possibly, Communism did not have a significant impact on generalized trust at all, or the effect faded away within two decades.

Table 1.

**Two-sample t-test with unequal variances for a difference in mean trust scores in post-Communist and never Communist countries.**

obs., non-Communist	obs., post-Communist	mean, never Communist	mean, post-Communist	difference	st. error	t-value	p-value
44	13	.219	.253	-.034	.049	-.7	.482
55	17	-.031	-.038	.007	.077	.1	.921

The first row reports scores for the WVS (wave 6) measure, and the second row reports scores for the GPS measure.

Despite these unpromising initial results, I proceed with logistic regressions of generalized trust on the logarithm of the number of years of a Communist regime with gradually added explanatory variables. The two control variables added are ethnic fractionalization and cultural connectedness to Russia (as measured with trade data). Homogeneity has been found to be a predictor of generalized trust. Perhaps the homogeneity of many Communist nations was a factor that made class war more salient and contributed to the success of Communism in these countries. In Russia, the level of generalized trust is low. Potentially, the Russian domination in the Soviet world made Communist countries embrace many aspects of the Russian culture along

with those of the Communist system. For example, Traps (2009) found trade with Russia to be significantly correlated with trust. Although income measured with the GDP per capita, income equality measured with the Gini index, and regime type after the fall of Communism are some of the potential channels through which Communism may influence trust, these variables also enter my last two regressions for reference. This analysis, therefore, introduces additional information and may possibly change the outcomes.

Table 2.

VARIABLES	Duration of Communist Regime and Generalized Trust							
	(1) GPS	(2) WVS	(3) GPS	(4) WVS	(5) GPS	(6) WVS	(7) GPS	(8) WVS
duration of Communist regime, log	-0.005 (0.017)	0.008 (0.009)	-0.006 (0.017)	0.007 (0.011)	-0.016 (0.017)	-0.008 (0.015)	-0.002 (0.023)	0.002 (0.014)
Fearon 2003 ethnic fractionalization			-0.163 (0.147)	-0.163* (0.090)	-0.197 (0.155)	-0.160* (0.090)	-0.082 (0.170)	-0.017 (0.074)
trade of printed goods and TV receivers with Russia					0.000 (0.000)	0.000* (0.000)	0.000 (0.000)	0.000 (0.000)
GDP PC PPP, 2012 int. \$							0.000*** (0.000)	0.000*** (0.000)
Max WB Gini Index within 2007-2017							-0.002 (0.004)	-0.002 (0.002)
V-Dem Electoral Democracy Index							-0.299 (0.183)	-0.049 (0.075)
Observations	72	57	71	54	67	50	65	46
R-squared	0.001	0.009	0.023	0.075	0.049	0.143	0.246	0.478
F-test			0.67	3.07	1.56	2.99	6.95	7.86
Prob > F			0.52	0.06	0.21	0.04	0.00	0.00

This table reports regression coefficients with standard errors in parentheses. The dependent variable in each regression is the proportion of respondents who agree with the statement 'Most people can be trusted' to respondents who agree with the statement 'You can't be too careful'. The years are 2009-2012 for the WVS and 2012 for the GPS. The control variables are the average volume trade of printed goods and television receivers with Russia from the United Nations Comtrade Database, the Gross Domestic Product Per Capita in 2012 International Dollars adjusted for purchasing power parity from the International Monetary Fund, the World Bank Gini Index, the ethnic fractionalization index from Fearon (2003), and the V-Dem Electoral Democracy Index. The data on Communism come from the Museum of Communism, and the data on trust come from the WVS and the GPS. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Not unexpectedly, this procedure has not lent more credence to my hypothesis. It does not seem to matter for how long a country was Communist for the level of generalized trust there, regardless of the source of the trust variable and regardless of additional factors included in regression. However, none of country's income level, equality, democracy, or even ethnic fractionalization is significantly different from zero when they enter a regression together. These results not only seem counterintuitive but also are in contrary to the finding of Alesina and Ferrara (2003) that ethnic fragmentation and income inequality decrease trust. Considering

another significant weakness of these country-level estimations, namely the small sample sizes they rely on, I consider these results inconclusive.

## B. Individual-Level Evidence

### I. Initial Evidence

Individual-level data give not only more statistical power with the vastly increased number of observations, but also the possibility to investigate the heterogeneity of results depending on individual-level factors. This part, however, is only possible with the WVS dataset. A two-sample t-test indicates that post-Communist countries have lower levels of generalized trust than the countries that have never been Communist. The difference between these two groups is rather small yet non-trivial and statistically significant.

Table 3.

**Two-sample t-test with unequal variances for a difference in mean trust scores in post-Communist and never Communist countries.**

obs., non-Communist	obs., post-Communist	mean, never Communist	mean, post-Communist	difference	st. error	t-value	p-value
225637	68490	.255	.235	.021	.002	11.05	0

This indication of significance motivates additional regressions, starting with generalized trust on a binary variable indicating for Communist. Table 4 shows the results of logistic regressions with gradually added country- and time-fixed effects in Columns 1-3. Extra individual-level variables related to education, income, and life satisfaction are added to the regression that is reported in the last column.

Table 4.

Experience of Communism and Generalized Trust				
VARIABLES	(1)	(2)	(3)	(4)
Communist regime in the past	-0.113*** (0.010)	1.266*** (0.000)	1.590*** (0.188)	1.290*** (0.006)
level of education				0.050*** (0.013)
income scale				0.038*** (0.008)
life satisfaction				0.049*** (0.010)
Observations	294,127	294,127	294,127	231,228
Country FE	No	Yes	Yes	Yes
Year FE	No	No	Yes	Yes
chi-square test				44.24
Prob > chi2				1.34e-09

This table reports logistic regression coefficients with standard errors in parentheses. The dependent variable in each regression is a binary variable indicating 1 if the respondent agrees with the statement 'Most people can be trusted' and 0 if the respondent agrees with the statement 'You can't be too careful'. Each regression includes one of the two binary measures of Communism: 'Communist regime in the past', which indicates whether a country has ever been under a Communist rule, and 'Lived under Communism', which indicates whether an individual has ever lived at least a year at the time when the country was under a Communist rule. The responses come from years 1981-2014. The data on Communism come from the Museum of Communism, and the data on trust, life satisfaction, education level, and income scale come from the World Values Survey. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Surprisingly, controlling for country-fixed effects makes the effect of Communism on generalized trust positive, larger in magnitude, and more statistically significant. The addition of year-fixed effects further increases the coefficient, which may be understood as controlling for the abatement of the effect along with controlling for other time-varying factors affecting trust. If the result in Column 3 is accurate, living in a post-Communist country makes individuals on average 1.59 times more likely to trust most people. This outcome is against my hypothesis, literature, and intuition. Column 4 isolates potential differences between respondents in the two groups of countries. After including the effect of life satisfaction and the effects of education and income as relative levels within a country, the coefficient on Communism remains large and

significant. The results from this column, however, should be taken with caution. Potentially, Communism and trust may jointly determine factors such as life satisfaction, which may not be a good choice for controls.

## II. Alternative Measures of Communism

These unexpected results call for additional analyses using alternative measures of Communism. The introduction of two continuous measures, *duration of Communist regime, log* and *fraction of lifetime under Communism*, adds new information to the analysis by differentiating Communist countries and by drawing a distinction between country-specific and individual-specific treatments. Before inserting the new explanatory variables into a new series of regressions, it is worth comparing all three measures in a simple logistic regression of generalized trust without any controls. As expected, all coefficients have negative signs. The standard errors of the continuous variables are relatively larger, but the statistical significance remains below the 1% level.

**Table 5.** Measures of Communism and Generalized Trust

VARIABLES	(1)	(2)	(3)
Communist regime in the past	-0.113*** (0.010)		
duration of Communist regime, log		-0.026*** (0.003)	
fraction of lifetime under Communism			-0.134*** (0.014)
Observations	294,127	294,127	294,127

This table reports the results of logistic regression on different measures of Communism. Standard errors are indicated in parentheses below the coefficients. The dependent variable in each regression is a binary variable indicating 1 if the respondent agrees with the statement 'Most people can be trusted' and 0 if the respondent agrees with the statement 'You can't be too careful'. The years are 1981-2014. The data on Communism come from the Museum of Communism, and the data on trust come from the World Values Survey. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Once controlled for fixed effects, the duration of a Communist regime is also associated with increased levels of generalized trust. The pattern of coefficients on this variable across regressions is analogous to that of the binary indicator of a Communist regime. This, however, is not solely a result of an information overlap between these two measures, because the variable also gives large, positive, and mostly significant coefficients when the sample is restricted to formerly Communist countries only, as reported in [Table D](#) in Appendix.

Interestingly, the effect of having experienced Communism personally is weak, as shown in Column 1 of [Table 6](#) and visualized by [Figure A](#) in Appendix. The coefficient is not robust to fixed effects and loses significance in Columns 2b-4b. The results from this table possibly demonstrate that the experience of Communism impacts people living in such a regime through changing the culture of the entire society rather than through having a strong direct effect on individuals. This is consistent with the intergenerational transmission theory proposed in [Tabellini \(2008\)](#) and confirmed in [Heineck and Süssmuth's \(2013\)](#) study of trust in West and East Germany.

[Table 6.](#)

VARIABLES	Experience of Communism and Generalized Trust							
	(1a)	(2a)	(3a)	(4a)	(1b)	(2b)	(3b)	(4b)
Communism <sup>+</sup>	-0.026*** (0.003)	0.327*** (0.000)	0.411*** (0.049)	0.333*** (0.002)	-0.134*** (0.014)	0.029 (0.192)	-0.084 (0.188)	0.283 (0.251)
level of education				0.050*** (0.013)				0.051*** (0.013)
income scale				0.038*** (0.008)				0.038*** (0.008)
life satisfaction				0.049*** (0.010)				0.051*** (0.010)
Observations	294,127	294,127	294,127	231,228	294,127	294,127	294,127	231,228
Country FE	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Year FE	No	No	Yes	Yes	No	No	Yes	Yes
chi-square test				44.24				45.44
Prob > chi2				1.34e-09				3.23e-09

This table reports logistic regression coefficients with standard errors clustered by country in parentheses. The dependent variable in each regression is a binary variable indicating 1 if the respondent agrees with the statement 'Most people can be trusted' and 0 if the respondent agrees with the statement 'You can't be too careful'. The responses come from years 1981-2014. The data on Communism come from the Museum of Communism, and the data on trust, life satisfaction, education level, and income scale come from the World Values Survey. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

<sup>+</sup> In Columns 1a-4a, this stands for *duration of Communist regime, log*. In Columns 1b-4b, this stands for *fraction of lifetime under Communism*.



### III. Heterogeneity

In Table 7, I attempt to find potential heterogeneity in generalized trust between individuals who experienced Communism for different periods of time. This setup makes it possible to control for age and for intergenerational transmission to some extent. The results show little evidence for heterogeneity. Without fixed effects, the ones who experienced less Communism seem to have higher levels of distrust than those who lived longer in a Communist regime. If this is accurate, it contradicts my hypothesis that the longer an individual experiences Communism, the less he or she trusts others. Alternatively, it may indicate complex underlying patterns. For example, living longer under a Communist regime may increase belief in Marxism-

Table 7.

Heterogeneity in Experience of Communism and Generalized Trust				
VARIABLES	(1)	(2)	(3)	(4)
lived in Communism, 1-25 years	-0.142*** (0.016)	-0.102 (0.091)	-0.088 (0.066)	-0.100 (0.105)
lived in Communism, >25 years	-0.099*** (0.012)	-0.090 (0.111)	-0.093 (0.084)	-0.060 (0.140)
age				0.004*** (0.001)
level of education				0.056*** (0.014)
income scale				0.039*** (0.008)
life satisfaction				0.050*** (0.010)
Observations	294,127	294,127	294,127	231,228
Country FE	No	Yes	Yes	Yes
Year FE	No	No	Yes	Yes
chi-square test				47.70
Prob > chi2				1.36e-08

This table reports logistic regression coefficients with standard errors clustered by country in parentheses. The dependent variable in each regression is a binary variable indicating 1 if the respondent agrees with the statement 'Most people can be trusted' and 0 if the respondent agrees with the statement 'You can't be too careful'. The responses come from years 1981-2014. The data on Communism come from the Museum of Communism, and the data on trust, age, life satisfaction, education level, and income scale come from the World Values Survey. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Leninism, which implicitly assumes that people can trust each other in the absence of market mechanisms. Another explanation could be that living longer in *post-Communism* decreases trust due to adverse aspects of system transformation, such as rapid privatization, corruption, or lack of transitional justice. These conjectures, however, lack statistical evidence once fixed effects are controlled for, as Columns 2-4 demonstrate.

Further investigation in the potential heterogeneity, by adjusting the threshold of variable split, does not bring any significant results once fixed effects are included. However, [Table E](#) and [Figure B](#) and in Appendix report an interesting break at three fourths of one's lifetime, where the effect of Communism changes its sign from negative to positive, provided other factors are not controlled for.

#### IV. Checks

This subsection provides a comparative perspective on the outcomes obtained so far. First, in order to find some indications of consistency of my methods with previous literature, I regress various forms of trust from on my two main measures of Communism, *duration of Communist regime, log* and *fraction of lifetime under Communism*. Raw regressions of the forms of trust on *fraction of lifetime under Communism* are visualized in [Figure C](#) in Appendix. Country-fixed effects and the three demographic variables used thus far are included in each regression for comparability. However, this sample only includes wave six of the WVS to ensure data availability on all four measures of trust.

Columns 3a and 4b indicate that Communism in the past is negatively associated with present-day trust government and courts, which indeed confirms findings such as in Pop-Eleches (2010), who reports a negative relationship between Communism and trust in political parties. Column 2a suggests that Communism increases trust in people known personally, which supports the widely accepted view in political science that Communism fosters reliance on small networks. However, the remaining results are counterintuitive. For example, the duration of a Communist regime decreasing trust in family is generally surprising, although it reminds of the totalitarian practice in the Soviet Union or the German Democratic Republic of incentivizing children to report against their parents. The positive effect in Column 4a would mean that people living in countries that were Communist for a long time have on average higher confidence in courts than people in other countries. If this were not puzzling enough, the coefficient stands in contradiction to the negative coefficient in corresponding Column 4b obtained with a person-specific measure of Communism. Overall, the results of Table 8 indicate some congruity with literature but are rather not consistent enough to validate the outcomes from the previous subsections.

Table 8.

VARIABLES	Experience of Communism and Forms of Trust							
	(1a) family	(2a) personally	(3a) government	(4a) courts	(1b) family	(2b) personally	(3b) government	(4b) courts
Communism <sup>+</sup>	-0.225*** (0.008)	0.056*** (0.004)	-0.074*** (0.004)	0.115*** (0.004)	-0.489 (0.420)	0.131 (0.141)	0.133 (0.190)	-0.511*** (0.182)
age	0.005** (0.002)	0.004*** (0.001)	0.007*** (0.002)	0.002 (0.001)	0.006*** (0.002)	0.004*** (0.001)	0.006*** (0.002)	0.003** (0.001)
level of education	0.096*** (0.026)	0.058*** (0.010)	-0.021 (0.014)	0.001 (0.011)	0.098*** (0.026)	0.058*** (0.010)	-0.021 (0.014)	0.003 (0.011)
income scale	0.073*** (0.025)	0.046*** (0.012)	0.054*** (0.010)	0.062*** (0.009)	0.072*** (0.025)	0.047*** (0.012)	0.054*** (0.010)	0.061*** (0.009)
Observations	71,261	72,060	71,404	71,317	71,261	72,060	71,404	71,317
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
chi-square test	18.29	46.89	57.94	46.03	19.79	55.78	63.51	55.73
Prob > chi2	0.000383	3.67e-10	0	5.59e-10	0.000551	0	0	0

This table reports binary logistic regression coefficients with standard errors in parentheses. In all regressions, standard errors are clustered by country. The dependent variable in each regression is a binary variable indicating 1 if an individual completely or somewhat trusts in family or people they know personally; or if an individual has a great deal or quite a lot of confidence in the government or courts. The data on Communism come from the Museum of Communism, and the data on trust, age, education level, and income scale come from the 2010-2014 wave of the World Values Survey. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

<sup>+</sup> In Columns 1a-4a, this stands for *duration of Communist regime, log*. In Columns 1b-4b, this stands for *fraction of lifetime under Communism*.

It is possible that some of these unexpected results come from divergent trajectories that many countries followed after the fall of Communism in early 1990s. Although the regressions in [Table 6](#) control for year-fixed effects, the panel data are unbalanced thus leaving the possibility that positive relationships are driven by the more recent observations. [Table 9](#) may shed more light on this by repeating those regressions on a subsample limited to the 1981-1992 wave of the WVS. After country-fixed effects, the outcomes show Communism as a factor decreasing generalized trust. This is consistent with the hypothesis of this paper but contradicts the main results of the preceding sections. A conclusion that reconciles the contradiction is that Communism decreases generalized trust only for as long as it rules over a society. However, the only six Communist and post-Communist countries included are Central and Eastern European. Moreover, given little variation to be captured by the continuous measures of Communism, the effects reflect not much more than whether a country was Communist or not. Therefore, the proposed conclusion is to be taken with due caution.

[Table 9.](#)

Experience of Communism and Generalized Trust				
VARIABLES	(1)	(2)	(3)	(4)
duration of Communist regime, log	0.019*** (0.007)	-0.024*** (0.000)		
fraction of lifetime under Communism			0.024 (0.037)	-1.103*** (0.380)
Observations	33,812	33,812	33,812	33,812
Country FE	No	Yes	No	Yes

This table reports logistic regression coefficients with standard errors clustered by country in parentheses. The dependent variable in each regression is a binary variable indicating 1 if the respondent agrees with the statement 'Most people can be trusted' and 0 if the respondent agrees with the statement 'You can't be too careful'. The responses come from years 1981-1992. There are 21 countries, of which 6 are Communist or post-Communist. The data on Communism come from the Museum of Communism, and the data on trust, sex, age, life satisfaction, education level, and income scale come from the World Values Survey. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## 6. Concluding Discussion

Although Communism is a diverse phenomenon that may have different effects depending on a country, this paper analyzed its relationship with trust at the global scale. The results are surprising and do not strictly follow a pattern. The effect of Communism on generalized trust is not strong enough to show up in an analysis of country averages; only by taking individual level data, the effects show up as significant. While some results are intuitive, like the less trust in government and courts, other ones, like decreased trust in family and increased generalized trust, contrast with intuition and previous literature.

The main finding of the paper is that Communism in the past is a predictor of higher generalized trust across countries and years; this suggests rejection of my hypothesis. One possible explanation is that while Communist regime negatively affects many aspects of social and economic life, it nonetheless brings citizens closer: in solidarity, they cooperate to overcome hardships. Moreover, egalitarian aspects of Communism may increase generalized trust. Income equality may reduce distrust, and Communist propaganda possibly diminishes the importance of previously salient forms of heterogeneity within a nation, such as religious identity. Moreover, the commonplace practice of sweeping problems under the rug and large-scale censorship of media may reduce the amount of negative information about other members of society. Communism affected citizens through these channels for longer than through crimes committed during revolutions and upon establishments of regimes. Plausibly, even later repressions did not affect people at large but rather those more directly involved in anti-Communist activity. If generalized trust indeed increased in Communist countries, this is a positive and optimistic outcome and a counterbalance to decreased institutional trust found in political science papers.

However, this effect is not necessarily universal. Results obtained with a Central and Eastern European subsample from the late Communist period show an opposite trend to the main findings. Moreover, the main outcomes are statistically sound only for the variable denoting the duration of Communism in a country, while the variable reflecting individual exposure to Communism does not give evidence for a change in any other form of trust than confidence in courts, which decreased. This divergence suggests intergenerational transmission, whereby trust is passed down generations. Individual experience of Communism yields to the effect of Communism on culture, which then seems the decisive factor for preference formation. Finally, I found little support for heterogeneity depending on the length of exposure to Communism.

This research has investigated Communism holistically. However, Communist regimes vastly differed across countries and years. Future research could exploit the cross-country heterogeneity in Communist systems and the authoritarian practices of their regimes. This could be done by focusing on specific aspects of Communism, such as repressive actions against citizens. In Appendix, I propose a Communist Repressions Index that would quantify the extent of totalitarian repressions in each Communist country. Considering limited availability of detailed international data, collecting and compiling more information on Communist regimes could support more accurate calculations. Given the imperfect nature of the survey measures of trust, running experimental studies in post-Communist countries could vastly improve the understanding of realities therein. Another idea for interesting quantitative research would be setting Communism in a comparative perspective with respect to other totalitarian and authoritarian regimes or other socialist economies. More work could also be done to distinguish the effects of Communism from the effects of post-Communist transitions.

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# Appendix

Table A.

**Country-Level Summary Statistics**

Variable	Obs	Mean	Std. Dev.	Min	Max
GPS generalized trust	72	-.033	.276	-.706	.609
WVS generalized trust	19	.188	.172	.028	.674
WVS generalized trust, 2009-2018	57	.227	.152	.028	.674
WVS generalized trust, 1981-1995	23	.302	.128	.06	.567
Communist regime in the past	209	.163	.37	0	1
duration of Communist regime in the past	209	7.976	19.543	0	74
GDP PC PPP, 2012 int. \$	189	19029.648	21145.29	719.914	126618.38
Max WB Gini Index within 2007-20	159	43.957	9.224	27.5	65.8
Fearon 2003 ethnic fractionalization	147	.494	.255	.004	1
V-Dem Electoral Democracy Index	165	.55	.251	.02	.922
trade of printed goods and TV receivers with Russia	144	8318.269	23697.11	.03	165258.11

Table B.

**Individual-Level Summary Statistics**

Variable	Obs.	Mean	Std. Dev.	Min	Max
WVS generalized trust	294127	.25	.433	0	1
trust in your family	143004	.973	.163	0	1
trust in government	266074	.454	.498	0	1
trust in courts	233701	.521	.5	0	1
trust in people you know personally	142082	.778	.415	0	1
Communist regime in the past	308879	.232	.422	0	1
duration of Communist regime in the past	308879	13.454	25.275	0	74
number of years lived under Communism	308879	7.23	15.208	0	74
fraction of lifetime under Communism	308879	.158	.307	0	1
female	305352	.518	.5	0	1
age	308879	40.76	16.149	0	103
life satisfaction	303783	6.562	2.46	1	10
level of education	267597	4.747	2.229	1	8
income scale	280877	4.666	2.346	1	10
GDP PC PPP, 2012 int. \$	295713	14770.517	14921.785	811.064	117518.7
Maximal WB Gini Index within 2007-2017	291485	43.431	9.651	27.5	64.8
Fearon (2003) ethnic fractionalization	300446	.45	.243	.004	.953
V-Dem Electoral Democracy Index	305316	.599	.243	.022	.924

Experience of Communism in Communist Countries Only Correlations between measures

of Communism

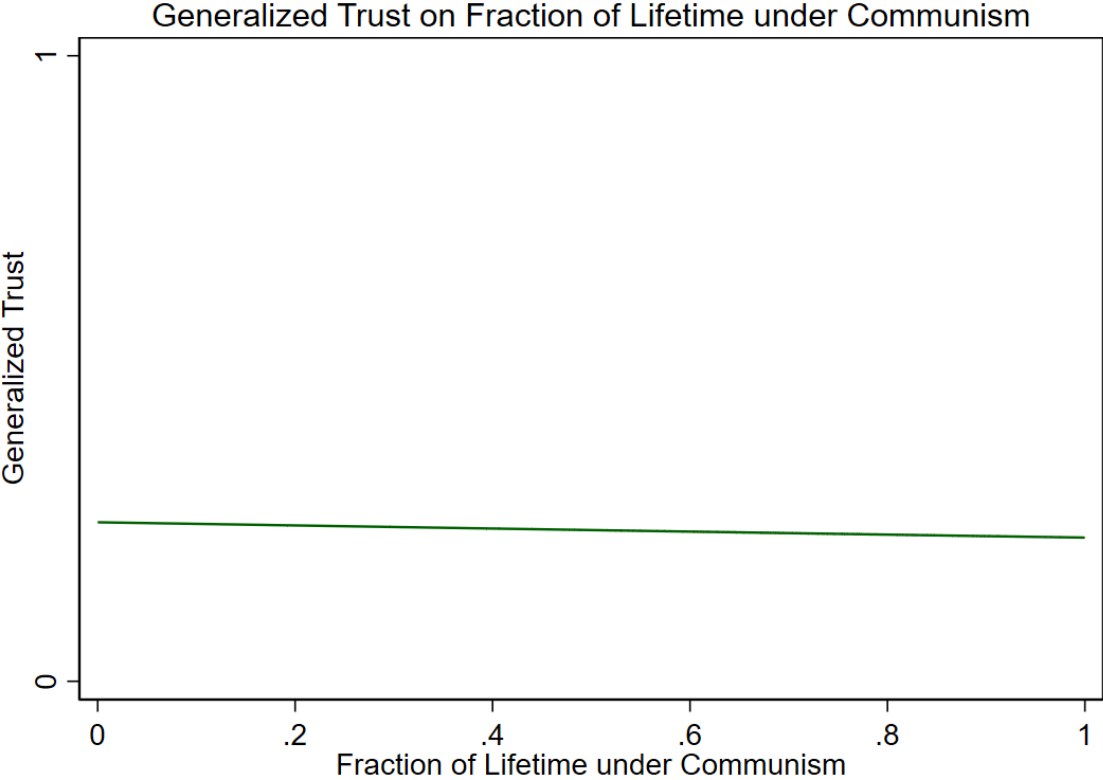
Table C.

**Correlations between measures of Communism**

Variables	(1)	(2)	(3)
(1) Communist regime in the past	1.000		
(2) duration of Communist regime	0.998	1.000	
(3) fraction of lifetime under Communism	0.937	0.939	1.000

Individual Experience of Communism and Generalized Trust

Figure A.



## The Experience of Communism and Generalized Trust, Communist Countries Subsample

Table D.

Experience of Communism in Communist Countries and Generalized Trust								
VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Communism <sup>+</sup>	0.441*** (0.038)	1.473*** (0.000)	0.072 (0.357)	1.772*** (0.033)	0.101** (0.042)	0.029 (0.195)	-0.117 (0.119)	0.299 (0.237)
level of education				0.030* (0.016)				0.034** (0.016)
income scale				0.015 (0.014)				0.016 (0.015)
life satisfaction				0.071*** (0.011)				0.076*** (0.009)
Observations	68,490	68,490	68,490	56,572	68,490	68,490	68,490	56,572
Country FE	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Year FE	No	No	Yes	Yes	No	No	Yes	Yes
chi-square test				7926				115.9
Prob > chi2				0				0

This table reports logistic regression coefficients with standard errors clustered by country in parentheses. The dependent variable in each regression is a binary variable indicating 1 if the respondent agrees with the statement 'Most people can be trusted' and 0 if the respondent agrees with the statement 'You can't be too careful'. The responses come only from countries that have been Communist in the past and includes years 1981-2014. The data on Communism come from the Museum of Communism, and the data on trust, life satisfaction, education level, and income scale come from the World Values Survey. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

<sup>+</sup> In Columns 1a-4a, this stands for *duration of Communist regime, log*. In Columns 1b-4b, this stands for *fraction of lifetime under Communism*

## Further Investigation of Heterogeneity

Figure B.

Correlation between Generalized Trust and Years of Life under Communism

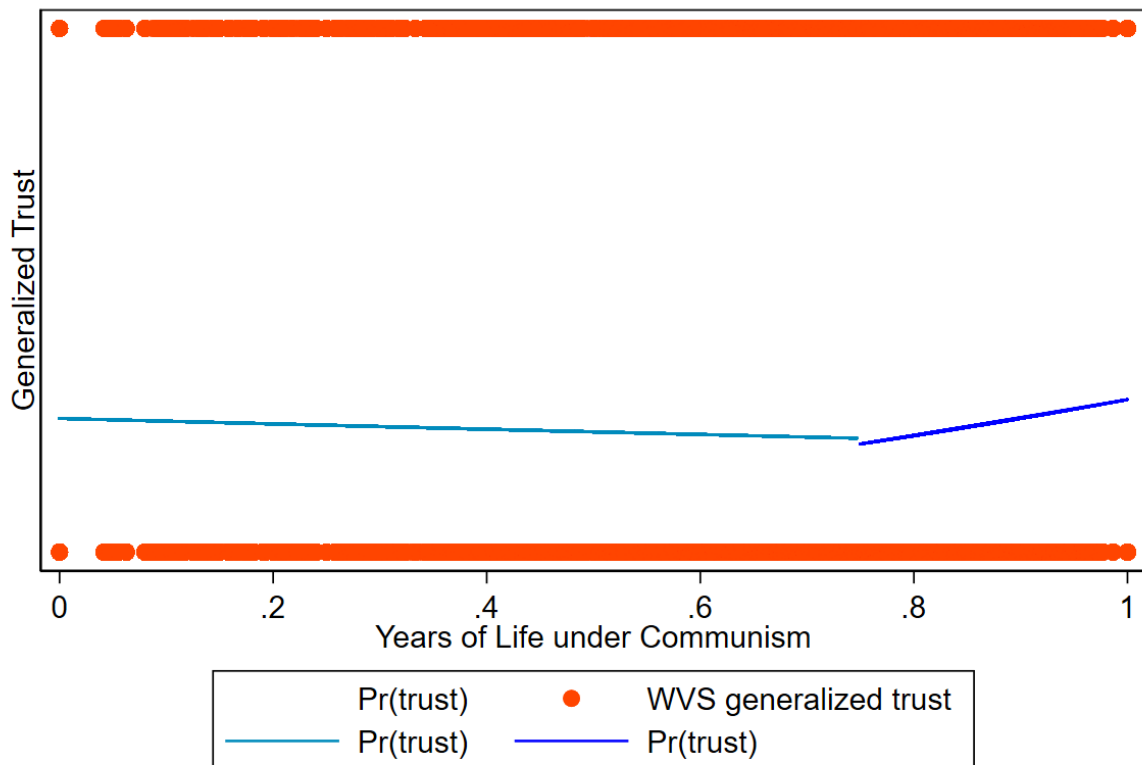


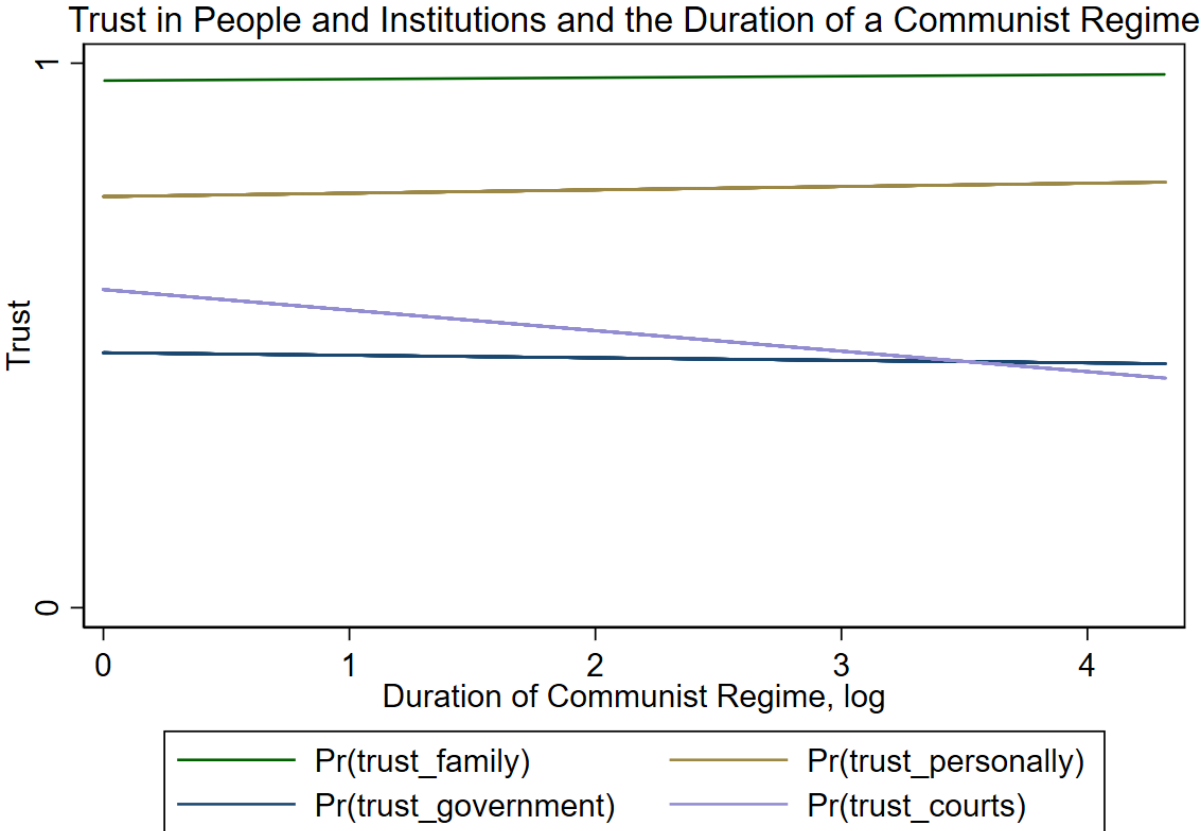
Table E.

Heterogeneity in Experience of Communism and Generalized Trust						
VARIABLES	(1) < 3/4	(2) ≥ 3/4	(3) < 3/4	(4) ≥ 3/4	(5) < 3/4	(6) ≥ 3/4
Fraction of lifetime under Communism, up until 3/4	-0.281*** (0.023)		-0.170 (0.154)		-0.242 (0.174)	
Fraction of lifetime under Communism, 3/4 or higher		1.825*** (0.192)		0.039 (0.579)		-1.065* (0.575)
age					0.004*** (0.001)	0.006*** (0.002)
level of education					0.059*** (0.015)	0.036*** (0.012)
income scale					0.053*** (0.009)	0.020 (0.015)
Observations	263,121	31,006	263,121	31,006	211,721	22,900
Country FE	No	No	Yes	Yes	Yes	Yes
Year FE	No	No	Yes	Yes	Yes	Yes
chi-square test			1.219		40.27	21.92
Prob > chi2			0.270		3.80e-08	0.000208

This table reports logistic regression coefficients with standard errors in parentheses. In regressions 1-2, standard errors are heteroskedasticity-robust. In regressions 3-6, standard errors are clustered by country. The dependent variable in each regression is a binary variable indicating 1 if the respondent agrees with the statement 'Most people can be trusted' and 0 if the respondent agrees with the statement 'You can't be too careful'. The years are 1981-2014. The data on Communism come from the Museum of Communism, and the data on trust, age, life satisfaction, education level, and income scale come from the World Values Survey. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Experience of Communism and Forms of Trust

Figure C.



## Developing Communist Repressions Index

A Communist Repressions Index could be developed using variables *duration* of Communism (in years), *time passed* since the fall of Communism (in years), and *repression* of a totalitarian regime (levels from 0 to 3). It seems necessary to take into account the duration of Communism, since any treatment tends to have a larger effect the longer it is applied. In a sociopolitical context, duration of a regime changes how many generations went under its influence and how deeply it may have eradicated the collective memory of the previous (non-Communist) system. Perhaps it would be useful to also consider the possibility that the treatment effects fade with time. Communist repressions, such as surveillance, censorship, and severe punishments, could have been the channels through which Communist regimes decreased levels of trust in public institutions and in other citizens. In the absence of a systematic classification of Communist repressions, two descriptive historical sources could be used to quantify Communist crimes and repressions: the international dataset on Communist crimes by the Estonian Institute of Historical Memory and *The Black Book of Communism* by Courtois et al. (1999). Values 0, 1, 2, or 3 could be attributed to a given decade in a given country when repressions were negligible, mild, medium, or severe, respectively. A possible method of calculation is the following:

$$\text{communism index} = \text{duration} * \text{repressions} - \text{time passed}$$

An assumption of this model is that each three-year period cancels a year of severe repressions, two years of medium repressions, or three years of mild repressions. The index would then be scaled from 0 to 100, where higher means a more intensive treatment effect. Alternatively, this assumption could be avoided by skipping the variable *time passed*.