

Crisis and Trust

Maxim Ananyev and Sergei Guriev, CEFIR

January 2015

Our research uses the 2008-2009-crisis experience in Russia to identify the relationship between income and trust. In 2009, Russian GDP fell an 8-percent drop in 2009. The impact of the crisis was very uneven among Russian regions because of their differences in industrial structure inherited from the Soviet times. We find that the regions that specialize in producing capital goods, as well as those depending on oil and gas, had a more substantial income decline during the crisis. The variation in the industrial structure allows creating an instrument for the change in income. After instrumenting average regional income, we find that the effect of income on generalized social trust (the share of respondents saying that most people can be trusted) is statistically and economically significant. Controlling for conventional determinants of trust, we show that a 10 percent decrease in income is associated with 5-percentage point decrease in trust. Given that the average level of trust in Russia is 25%, this magnitude is substantial. We also find that the post-crisis economic recovery did not restore the pre-crisis trust level. Trust recovered only in those regions where the 2009 decline in trust was small. In the regions with the large decline in trust during the crisis, trust in 2014 was still 10 percentage points below its pre-crisis level. This has straightforward policy implications: governments should pursue generous countercyclical policies especially in the areas that are the most vulnerable to macroeconomic shocks.

Why do some countries manage to develop and grow while others remain poor? Economists have come up with many convincing answers: geography, human capital, and institutions. Recently, they have also ventured in the neighboring social sciences to understand yet another driver of growth and development: the so-called “social capital” (see, for example, Algan and Cahuc (2010), who establish a causal link between the most conventional measure of social capital, namely, trust, and economic growth). There is now a general agreement that social capital may affect growth not only directly but also through other determinants of economic development: human capital and public goods (Coleman (1988)), good governance (Putnam et al. (1994)), financial development (Guiso et al. (2004)), political participation (DiPasquale

and Glaeser (1999), Berman (1997), Satyanath et al. (2013)), efficiency of the judiciary system (La Porta et al. (1997)), political accountability (Nannicini et al. (2010)), labor market institutions (Algan and Cahuc (2009)).

Social capital is a complex phenomenon. It encompasses the set of values, attitudes, and habits that facilitate cooperation between individuals. In Ananyev and Guriev (2014), we focus on the most conventional measure of social capital – the “interpersonal trust” (or “generalized social trust”). The interpersonal trust is the share of people in a country (or in a subnational region) that answer positively to the following survey question: “Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?”

Given the substantial contribution of social capital (and of trust, in particular) to development and growth, it is important to understand what determines the level of trust in the first place. Some scholars believe that trust is highly persistent: for example, Putnam (1994) traces back the large differentials in trust between Northern and Southern Italy to the thousand-year-old historical legacies of free cities in the North and hierarchical Norman kingdoms in the South. Similarly, Nunn and Wantchekon (2011) show that the lack of trust in certain African societies is driven by the legacies of the slave trade.

However, trust can also change reasonably quickly, in particular, during large-scale socio-economic shocks. In our paper “Effect of Income on Trust: Evidence from the 2009 Crisis in Russia” we study such an episode, namely, the impact of the 2008-09 global crisis on trust in Russia. During this crisis, Russia experienced an acute drop in income; in 2009, Russian GDP contracted by 8% – the largest decline among G20 countries. The fall in GDP in the fourth quarter of 2008 and the first quarter of 2009 was 19% and 17% in annual terms – and the Russian government only started to act in the second quarter of 2009.

Most importantly, the effect of the crisis was very uneven across Russia. If we rank Russian regions by their real GDP per capita growth in 2009, the top quartile would grow by 1 percent, while the bottom quartile would decline by 20 percent.

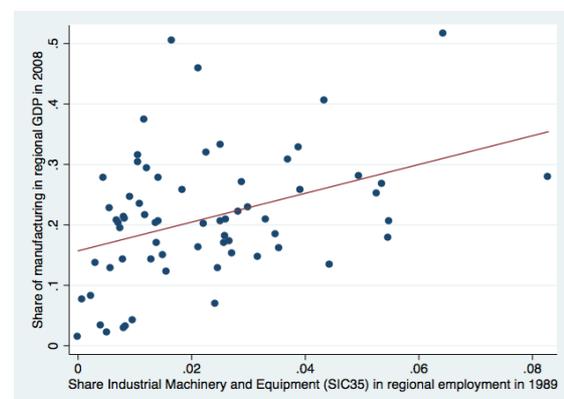
The heterogeneity of the response to the crisis was at least partially explained by the different compositions of the regional economies. As in every recession, the decrease in investment was substantially larger than that in consumption, hence the regions that were more dependent on capital-goods-producing industries, and manufacturing in general, suffered the most. Following the three-fold fall in the global oil prices, the oil sector also declined by about 40 percent. At the same time, the regions specializing in consumer

goods and services experienced only a moderate GDP fall or even continued to grow.

The variation in the composition of regional economies is inherited from Soviet industrialization and is therefore exogenous to the events of 2008-09. We therefore can use the Soviet-era composition of the regional economy to predict the decline in income in 2009. We then use the predicted fall in income to measure the impact of regional income on trust. We find that the effect of a change in income on change in trust is statistically significant and large in magnitude. Controlling for other conventional determinants of trust, we show that a 10 percent decrease in income is associated with a 5-percentage point decrease in the share of respondents who say that most people can be trusted. For Russia, this is a large effect: indeed, the average level of trust in our data is 34 percent for 2008 and 19 percent for 2009.

The persistence of the Soviet economic structure is illustrated in Figure 1. The vertical axis shows the share of manufacturing in regional GDP in 2008. The horizontal axis shows the share of population employed in the production of industrial machinery and equipment in 1989. We see a strong positive association between the two.

Figure 1: Soviet Employment Structure in 1989 and Manufacturing in 2008 in Russian Regions.

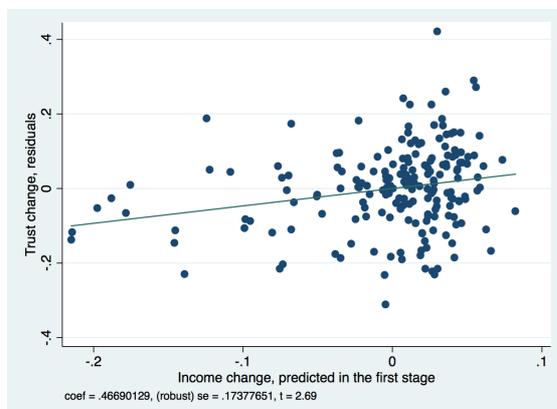


Sources: see Ananyev and Guriev (2014).

Our estimation proceeds in two steps. First, we predict the change in regional GDPs between 2008 and 2009 by the Soviet employment structure (in particular, from the 1989 share of regional population employed in the production of oil and gas, primary metal production, and industrial machinery and equipment). Second, we predict the change in the average interpersonal trust in the region between 2008 and 2009 by the predicted values of changes in GDP. If Soviet industrial structure can affect change in interpersonal trust only through its effect on change in GDP during the crisis, then our estimation recovers a causal effect of the change in GDP on the change in trust.

The main results of our estimation are presented in Figure 2. The vertical axis shows the changes in trust between the years 2009 and 2008 that cannot be explained by other factors (such as changes in crime rate, education, and income inequality). The horizontal axis shows the changes in GDP per capita predicted by the Soviet employment data. When we fit a linear trend to those observations, we see a positive slope that cannot be explained by chance: higher growth in the exogenous component of GDP implies the increase in trust.

Figure 2: Change in Trust and Change in Income between 2009 and 2009 in Russian Regions.



Sources: see Ananyev and Guriev (2014).

Do these results matter for economic policymaking? The answer depends on the persistence of the decline in trust. If the decline in trust is temporary – and the trust increases back to normal as the economy recovers to pre-crisis income levels – then there is no need for urgent policy interventions. For example, Russian GDP was back to 2008 level already in the end of 2011 – so if there were no persistence in trust, then the trust should have recovered as well. However, if the destruction of trust were permanent, then the crisis would incur substantial long-term costs – that could have been mitigated through generous counter-cyclical policies. By supporting incomes during the recession, the government can contain any lasting consequences of crises through the destruction of trust.

In order to understand the persistence of the destruction of the social capital during the 2009 crisis, we commissioned another survey of the same sample of regions in April 2014. By that time, the Russian economy had recovered from the 2009 shock; Russia's GDP even exceeded the pre-crisis level. We found that in the regions where trust declined moderately during the 2009 crisis, trust did reach and even exceeded the pre-crisis levels (by 1.5 percentage points). However, in the regions where the 2009 shock resulted in the large decline in trust, the impact of the shock still persisted in 2014. In the latter regions, trust in 2014 was 10 percentage points below the pre-crisis levels. Our evidence therefore suggests that large shocks to trust may have long-lasting effects. Therefore our research has very clear policy implications: governments should concentrate their counter-cyclical policies in the regions where recessions are likely to result in large decreases in incomes.

References

Yann Algan and Pierre Cahuc. Civic virtue and labor market institutions. *American Economic Review: Macroeconomics*, 1(1):111-145, 2009.

Yann Algan and Pierre Cahuc. Inherited trust and growth. *American Economic Review*, 100(5):2060-2092, 2010.

Maxim Ananyev and Sergei M. Guriev. Effect of Income on Trust: Evidence from the 2009 Crisis in Russia, 2014. Available at SSRN: <http://ssrn.com/abstract=2542001>

Sheri Berman. Civil society and the collapse of the weimar republic. *World politics*, 49(03):401-429, 1997.

James S Coleman. Social capital in the creation of human capital. *American Journal of Sociology*, pages 95-120, 1988.

Denise DiPasquale and Edward L. Glaeser. Incentives and social capital: Are homeowners better citizens? *Journal of Urban Economics*, 45(2):354-384, March 1999.

Luigi Guiso, Paola Sapienza, and Luigi Zingales. The role of social capital in financial development. *American Economic Review*, (3):526-556, 2004.

Tommaso Nannicini, Andrea Stella, Guido Tabellini, and Ugo Troiano. Social capital and political accountability. FEEM Working Paper, 2010.

Nathan Nunn and Leonard Wantchekon. The slave trade and the origins of mistrust in africa. *American Economic Review*, 101(7), 2011.

Robert D Putnam, Robert Leonardi, and Rafaella Y Nanetti. *Making democracy work: Civic traditions in modern Italy*. Princeton University Press, 1994.

Shanker Satyanath, Nico Voigtländer, and Hans-Joachim Voth. Bowling for fascism: Social capital and the rise of the nazi party in weimar germany, 1919-33. Technical report, National Bureau of Economic Research, 2013.

Maxim Ananyev

Maxim.I.Ananyev@gmail.com



Maxim Ananyev is Ph.D. candidate in the Department of Political Science at University of California, Los Angeles. He holds MA in Economics from New Economic School, Moscow and MSc in Physics from Novosibirsk State University, Novosibirsk.

Sergei Guriev

Centre for Economic and Financial Research (CEFIR)

Sergei.Guriev@sciencespo.fr

<http://econ.sciences-po.fr/staff/sergei-guriev>



Sergei Guriev is a Professor of Economics at Sciences Po (Paris). In 2004-13, Dr. Guriev was a tenured professor of economics and rector of the New Economic School in Moscow. He received his Dr. Sc. (habilitation degree) in Economics (2002) and PhD in Applied Math from the Russian Academy of Science (1994), and M.Sc. Summa Cum Laude from the Moscow Institute of Physics in Technology (1993). In 1997-98, Dr. Guriev visited the Department of Economics at M.I.T. for a one-year post-doctoral placement, and in 2003-2004, the Department of Economics at Princeton University as a Visiting Assistant Professor. He has published in international refereed journals including *American Economic Review*, *Journal of European Economic Association*, *Journal of Economic Perspectives* and *American Political Science Review*.