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A Comment on "Inherited Trust and Growth"

Daniel Müller
School of Economics and Finance, Queensland University of Technology

Benno Torgler
School of Economics and Finance, Queensland University of Technology

Eric M. Uslaner
Department of Government and Politics, University of Maryland

Abstract

Algan and Cahuc (2010) argue that "inherited trust" is a key factor in explaining growth rates across countries. They derive a measure of inherited trust by linking respondents' "home countries" in the United States General Social Survey (1972-2004) and the 2000 wave of the World Values Survey. Algan and Cahuc then estimate trust levels for people born before 1910 (inherited trust in 1935) and afterwards (inherited trust in 2000). They show a strong link between economic growth rates and inherited trust. We do not challenge this result, but we do argue that: (1) the 2000 World Values Survey has many anomalous results; (2) the estimates for inherited trust in 1935 are mostly based upon tiny samples for most ethnic heritage groups in the General Social Survey; and (3) Algan and Cahuc's findings are based upon two-tailed rather than one-tailed tests. We reestimate their model using the more reliable waves of the World Values Survey and find much weaker relationships between inherited trust in 1935 and trust in the home country. We also suggest caution in the overall measure of inherited trust in 1935.

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Contact: Daniel Müller - d3.mueller@qut.edu.au, Benno Torgler - benno.torgler@qut.edu.au, Eric M. Uslaner - euslaner@umd.edu.
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1. Introduction

In their paper "Inherited Trust and Growth" (2010) Algan and Cahuc (AC henceforth) present a novel approach for exploring the causal relationship between interpersonal trust and economic growth. Their key innovation is the use of trust levels inherited by US immigrants and their descendants to create a novel time varying measure of the level of trust, assuming a stable transmission of values from generation to generation. As a result they are able to control for country-fixed effects and to alleviate the problem of reverse causality, a concern which usually plagues other studies when estimating the causal effect of trust on growth. They find substantial evidence of a significant, positive and robust impact of trust on economic growth which is in line with other research on the topic (see, e.g., Stephen Knack and Philip Keefer 1997 and Rafael La Porta et al. 1997 for two of the first studies). The difference is that the new measure presented by AC allows a more confident interpretation of the findings as indeed being causal.

One should note that this comment paper does not challenge the macroeconomic results obtained by AC with respect to the causal effect of trust on growth, but rather tries to add our understanding of the roots and the evolution of interpersonal trust. One anecdote highlights the importance of our contribution: analysing citations of the AC paper through Google Scholar on March 27, 2012 reveals that most of the 87 papers citing AC's work are themselves directly concerned with the trust and not the growth aspect (less than five papers are related to growth). This illustrates the main area of interest in AC's work and demonstrates the need to add knowledge here. We are going to revisit some evidence regarding the extent to which trust is a stable value, and the degree to which it is formed by one's social environment. We will try to provide a more rigorous discussion of the theoretical foundations of trust, an aspect which (in our view) is missing from the AC paper. Moreover, we will present some robustness checks of AC's results by using *all* other waves of the World Values Survey (WVS) and a wave of the European Values Survey (EVS) to measure trust in the home country. AC elected to use only the 2000 wave of the WVS[1], and there are several reasons one could have serious reservations about this wave. For example, it seems that trust could be misestimated in Canada by 15 percent. Three other surveys completed during the same year (2000 Canadian Election Study, the Quebec Referendum Survey (conducted throughout Canada), and the University of British Columbia Economy Security Community Survey) show trust at 54%[2], which is the same level as the 1995 WVS). Iran's extremely high level of trust in 2001 (65%) falls to a more "reasonable" estimate of 11% in 2005 WVS. Iraq has a considerably higher level of trust than the UK (41% vs. 29%) although the 2007 UK Citizenship Survey gives a more reasonable 44% for the UK. The degrees of trust recorded in Vietnam at 40% (2001) or 53% (2005), Indonesia at 43% (2005), and Cyprus at 13% (2005) are also puzzling. Spain was at 34% in 2000 and 20% in 2005. Trust in government is reported at 78% for Azerbaijan and 99% for Vietnam and China[3]. Nigerians are the happiest people in the world. Across all 2001 respondents, 3.6 percent said that they did unpaid voluntary work for environmental organizations. Even where environmental activists seem numerous, just two percent of Danes and Dutch respondents said that they performed such voluntary work—with Swedes a bit higher at 4 percent. The most active environmental activists were found in China (28 percent), Tanzania (21 percent), and Bangladesh (19 percent), followed by Greece (9 percent), Vietnam (8 percent), Uganda (7 percent), Algeria

[1] Switzerland and Norway was derived from the wave 1995.

[2] WVS question: Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people? (1=Most people can be trusted, 0=Can't be too careful).

[3] Trust in the government was dichotomized to provide simple interpretations (A great deal/quite a lot = 1, not very much/none at all= 0).

(6 percent), and India (5 percent). These anomalous results suggest that there are real doubts as to the utility of the 2000 (and possibly the 2005) WVS as indicators of inherited trust.

2. On the Stability of Trust over Time

While AC note that "a component of trust can be inherited, but that trust can also evolve over long periods" (p. 2062), they lack a closer discussion on the stability of trust as a social value. In fact, there are at least two distinct approaches to trust. Firstly, there is a "generalized trust" view, which is usually the perspective implicitly taken by economists (see, e.g., Knack and Keefer 1997). This *cultural* view on trust is captured by the "most people can be trusted" WVS question. It implies that the propensity to trust others is not shaped by immediate experience, but rather is learned early in life, (Eric Uslaner 2002, Dietlind Stolle and Marc Hooghe 2004) and traces trust back to parental trust, grandparents' trust and even further (Robert Putnam 1993). With this view in mind, we should expect the levels of trust of US immigrants to be stable over time and highly correlated with trust in the country of origin. The second view on trust can be described as *experiential* approach, in which trust stems from daily socialization with other people and is based on everyday experiences. People decide, judging on experience, whether they trust others or not. This approach predicts that trust is more labile than under the cultural view. The relative importance of either view remains unclear in AC's work. Uslaner (2008) finds more supportive evidence for the cultural argument, since who your ancestors matters much more than who your neighbors are.

In their Table 1 AC show regression results on inherited trust for the two different cohorts (1935 and 2000) by different ethnicities. These findings are mostly in line with Uslaner (2008). However, the level of trust reported in the reference group implemented by AC (namely 1935 in Sweden) is surprisingly low. It is in fact lower than values for most of the Continental and Eastern European countries such as Portugal, Poland, Hungary, France and Belgium. While is true that in the 1920s Sweden experienced substantial labor disputes and class conflicts which may suggest low levels of trust, on the other hand, the period 1891 to 1934 led to the creation of the Swedish welfare state (sickness benefit societies, security for the aged, regulation and subsidization of unemployment societies) that benefitted from a spirit of trust (Bo Rothstein 2005).

The 2000 measure for Sweden is in AC's sample not among the top group but instead reports a medium level of trust, which contradicts other insights indicating that Swedish people and Scandinavians in general are among the most trusting individuals in the world (Uslaner 2008). Another interesting example is the case of Hungary. AC estimate the inherited trust of US Americans with an Hungarian background to be higher than that of Sweden itself in 2000 for both periods, and higher than that of France and Germany in 2000. This seems quite surprising, since countries with a history of communist regimes usually report at the lower end of the trust scale. When one looks at the General Social Survey data, these anomalous results may be explained by sample sizes. Inherited trust in 1935-38 is calculated among respondents born before 1910 (AC, p. 2066); in the 1972-2004 GSS, there were 11 respondents of Hungarian descent (45 percent of whom believed that "most people can be trusted") and 35 of Swedish background (48 percent trusting). These are tiny samples on which to base bold conclusions. Only for England, Germany, Ireland, and Scotland are there more than 100 respondents for inherited trust in 1935-38, and only for Africa, the Netherlands, and Norway are there between 40 and 100 respondents.

The small N's for inherited trust in 1935-38 lead to other anomalous results: The simple correlation across 44 ethnic groups in the GSS between the two measures of inherited trust is just 0.655, compared to a powerful result for inherited trust in 2000 and generalized trust ($r = 0.979$), which is even stronger than as the simple aggregate correlation between trust in 1990

and 1995 in the World Values Survey (r = 0.923). The simple correlation between inherited trust in 1935-38 and generalized trust is 0.667, far lower than we would expect for such a stable attitude. These sample sizes have clear consequences: The correlation between the two indicators of inherited trust is higher for countries with higher levels of faith in people—and larger samples[4].

3. On the Correlation between Inherited Trust and Trust in the Source Country

In Table 3 AC take a closer look at the correlation between inherited trust for the years 2000 and 1935, and trust in the source country, a measure which they approximate using data from the 2000 wave of the WVS. They find a significant correlation for the inherited trust in 2000 but not for the trust inherited in 1935, suggesting that trust transmitted in 1935 from the source country was different from the level in 2000. They attribute this finding to the convergence effect of trust (experiential view) over time: "convergence of inherited trust of US immigrants as the time spent in the host country increases" (p. 2069). However, it is worth noting that there is indeed a significant correlation for trust inherited in 1935, if a one sided test is considered. In our view, this is the appropriate test as it cannot reasonably be argued that a negative correlation between trust in the home country and inherited trust is equally likely. The t-statistic here is 1.56 which is significant for a one-sided test at the 10% level. Nevertheless, we depict here the results in our Table 1 using a two sided test to ensure comparability with AC's table. Moreover, the picture is different when we take a closer look at the other WVS waves and the 2000 EVS controlling for the same factors as did AC[5]. For a WVS wave later the coefficient is also statistically significant while for earlier waves (1981, 1990, 1995) trust in home country is not statistically significant. The correlation of trust in 1935 and trust in the home country using the EVS is statistically significant at the 5 percent level. They also report that the third column confirms their findings focusing on inherited trust in 2000 for the subgroup of fourth-generation immigrants reporting a correlation that is statistically significant at the 5 percent level. However, in three other waves the coefficient is not statistically significant. Surprisingly, the correlation is significant in the 1995 wave and the first one (WVS 1981). Such findings make any interpretation very difficult. We therefore suggest caution in the overall measure of inherited trust in 1935. However, the good news is that in all five waves we explored there is a strong correlation between inherited trust in 2000 in the US and trust in home country (always statistically significant at the 1 percent level). Additionally, Figures 1, 2 and 3 depict the unconditional correlation between trust in the home country and inherited trust estimated with the other WVS/EVS waves, analogous to Figures 1 and 2 in AC. The results mainly coincide with the results depicted by Figures 1 and 2 in AC. The R2 is in all cases clearly larger using the inherited trust in 2000 than with the inherited trust in 1935. Overall, the correlations we observe for inherited trust in 2000 are substantially larger in three cases (between 0.35 and 0.50 compared to 0.19 in AC).

[4] We regressed inherited trust for 1935-38 against inherited trust for 2000 aggregated by ethnic and calculated the residuals. The correlation across 44 ethnic groups between the residuals and generalized trust is 0.728.

[5] We only had problems identifying the method by which AC had actually calculated a value for "Africa". We contacted them without receiving a response and therefore circumvented that problem by using the trust value of Nigeria, for two reasons: first, Nigeria is the most populous country in Africa. Second, Nigeria appears in three WVS waves. South Africa is the only African country that can be observed in more waves. However, unlike South Africa, Nigeria actually lies within the region where most African-American's ancestors come from. .

Table I: Robustness Test on the Correlation Between Inherited Trust of US Immigrants and Trust in Their Source Country

	(1) Inherited Trust in 2000	(2) Inherited Trust in 1935	(3) Inherited Trust in 2000 4th generation
Trust in home country WVS 2000 (Algan & Cahuc, AER 2010)	0.462***	0.419	0.461**
	(0.142)	(0.268)	(0.211)
Observations	4491	6535	2065
R2	0.077	0.08	0.066
Trust in home country WVS 2005	0.331***	0.052	0.104
	(0.050)	(0.118)	(0.077)
Observations	4134	5696	1729
R^2	0.062	0.055	0.047
Trust in home country EVS 2000	0.228***	0.137**	0.035
	(0.059)	(0.047)	(0.087)
Observations	3650	5385	1608
R^2	0.055	0.057	0.048
Trust in home country WVS 1995	0.556**	0.715*	0.606*
	(0.213)	(0.345)	(0.325)
Observations	2923	4815	1458
R^2	0.086	0.098	0.092
Trust in home country WVS 1990	0.519***	0.533*	0.369
	(0.176)	(0.230)	(0.287)
Observations	4458	6529	2062
R^2	0.076	0.083	0.060
Trust in home country WVS 1981	0.467***	0.116	0.289***
	(0.054)	(0.171)	(0.084)
Observations	2647	3872	1113
R^2	0.07	0.059	0.045

Notes: Dependent variable is the level of inherited trust. Trust in the home country is the average trust in the source country at the given time. Standard errors in parentheses, * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. We use the same control variables as AC in their Table 3.
Sources: WVS 1981, 1990, 1995, 2005, EVS 2000, GSS 1977-2004

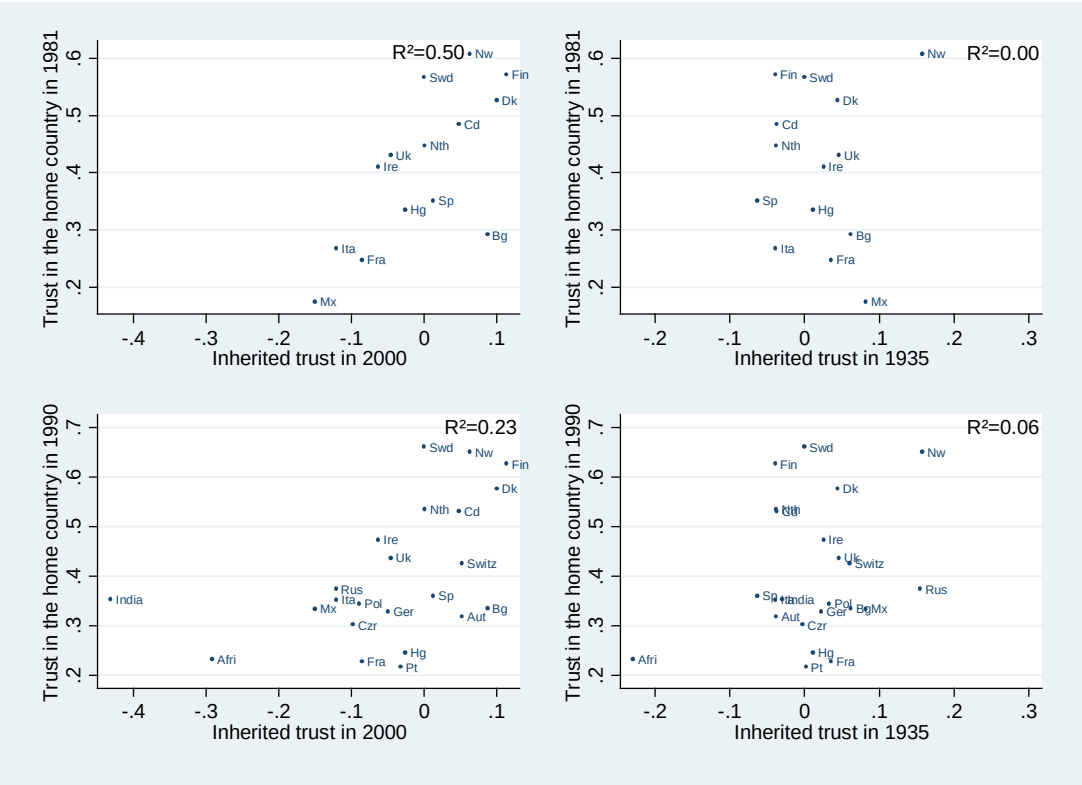

Figure 1: Robustness tests on the correlation between trust in the home country and inherited trust of descendants of US immigrants. The data for trust in the home country is taken from the World Values Survey of 1981 and 1990 respectively. Inherited trust data is taken from Algan and Cahuc (2010).

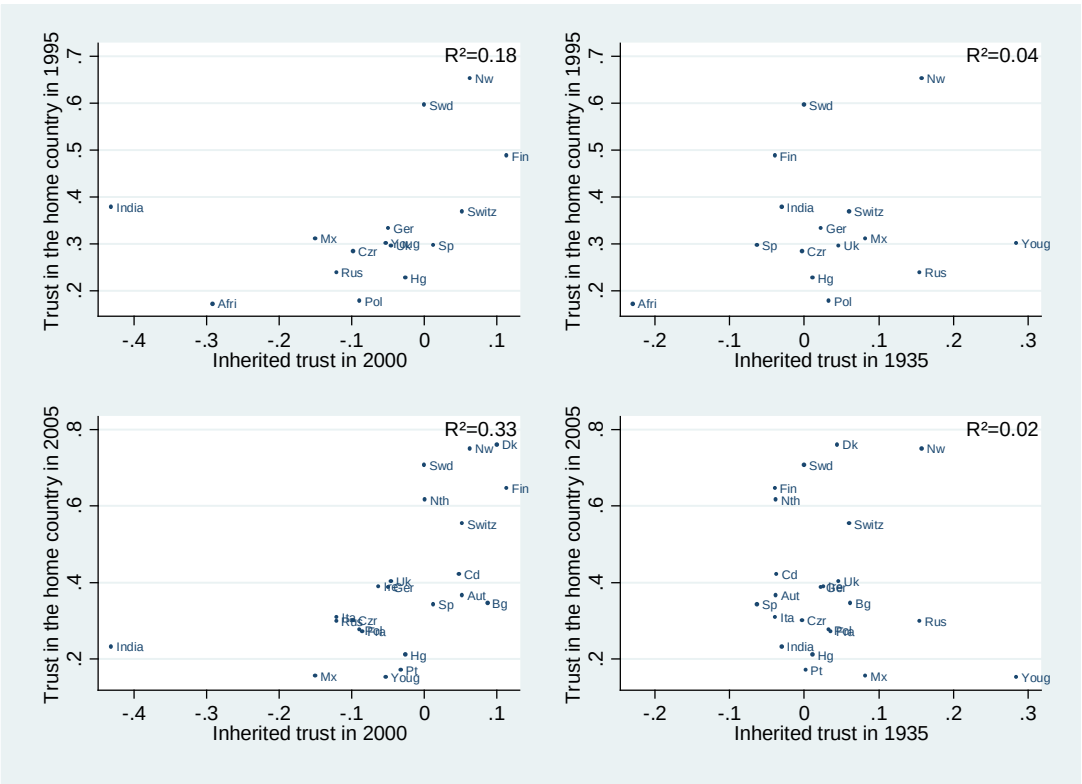

Figure 2: Correlation between trust in the home country and inherited trust of descendants of US immigrants. The data for trust in the home country is taken from the World Values Survey of 1995 and 2005 respectively.

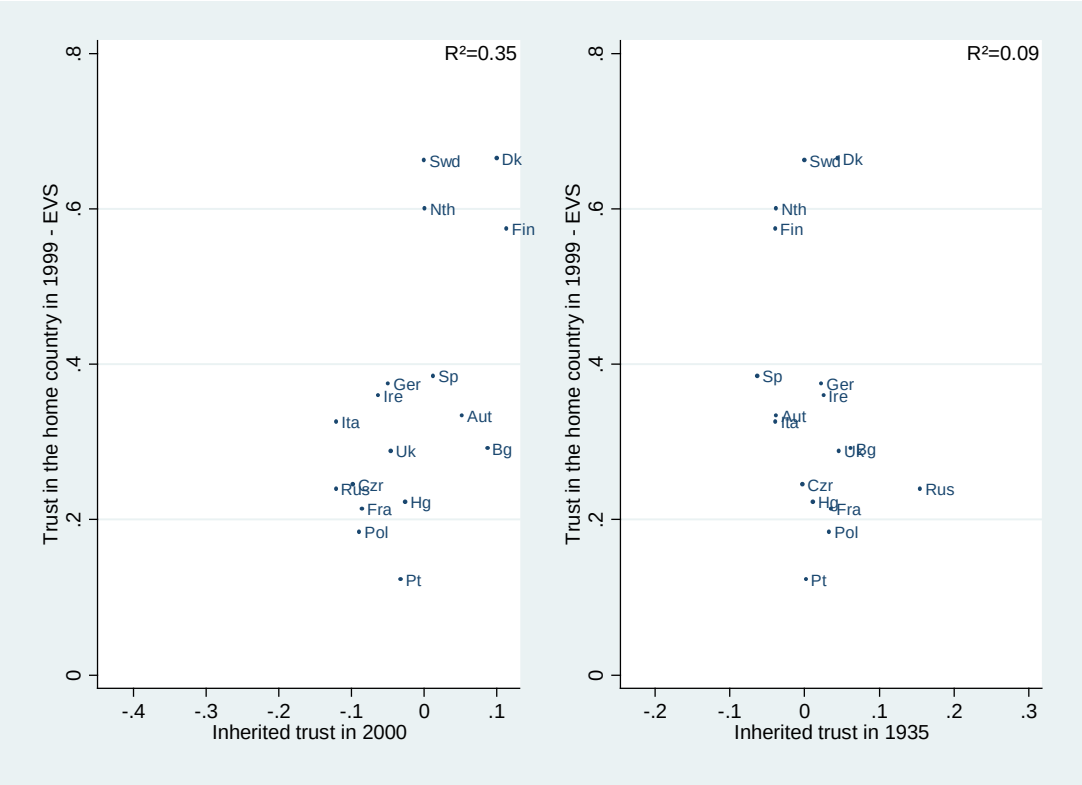

Figure 3: Correlation between trust in the home country and inherited trust of descendants of US immigrants. The data is taken from the European Values Survey of 1999/2000.

Another issue that (in our view) needs clarification is the fact that there seem to be systematic differences between US immigrants and people in the home country with respect to trust levels. AC do not account for these differences, while Uslaner (2008) reports results supporting the conclusion that immigrants were indeed more highly trusting than the average population in the home country. We expect to find this problem for a couple of countries: Uslaner and Stolle (2007) show that the trust level of Belgium is in fact just a weighted average of the French and the Dutch level. In Belgium, it all depends upon where immigrants come from, as the Flemish (Dutch) are highly trusting, the Walloons report low levels of trust. Analogously, the population of Switzerland consists of Swiss with an Italian, German or French speaking background and trust levels might accordingly be a weighted average of the trust levels in those three countries. This means that it really depends on where the immigrants come from.

A similar reasoning applies to Russia and the Eastern European countries, where the Jewish population is highly trusting. If immigrants are mainly from the Jewish population this would skew the picture AC give in their paper. This might also be an explanation for the unusually high trust level of Hungarian Americans. In addition, it is known that people who belong to a more hierarchical religion such as Catholicism are on average less trusting compared to Protestants (Uslaner 2002). This finding might play a role in countries with two different main religions, or where both denominations have a comparable share of the population, such as in Germany or Switzerland. In sum, the level of trust also depends on where the immigrants come from.

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