

Institutions, Parental Selection, and Locus of Control

Forthcoming, Applied Economics Letters

Kristin J. Kleinjans * and Andrew Gill

California State University, Fullerton

October 2017

Abstract

Locus of control, that is, people's perception of how much influence they have over their lives, is an important predictor for economic outcomes – earnings, health, and education, to name a few.

This paper uses difference-in-differences analysis to investigate the importance of the institutional environment for the development of locus of control, using the fall of the Berlin Wall as exogenous shock to the educational system in East Germany. Using data from the German Socioeconomic Panel (SOEP), we find that women showed less external locus of control following the fall of the Berlin Wall but less clear results for men.

Keywords: Locus of control, socialism, gender, the Fall of the Berlin Wall, SOEP

JEL-Codes: D91, I21, P360

* Corresponding author.

1. Introduction

Our beliefs about how much control we have over our lives matter. People with an external locus of control, who believe that external forces such as fate, luck, or other people determine their lives, have worse outcomes: less education, lower earnings, lower life satisfaction, and worse health (Cobb-Clark and Schurer 2013). People who lived in East Germany before the fall of the Berlin Wall had more external locus of control than those living in West Germany (Friehe et al. 2015), as living in the German Democratic Republic (GDR) exposed them to the communist doctrine that social conditions determine individual lives and to a state that controlled many aspects of daily life (Alesina and Fuchs-Schuendeln 2007). How long does the influence of such doctrines last? To address this question, we investigate whether the fall of the Berlin Wall changed the locus of control of those born right afterwards. We provide suggestive evidence about the importance of childcare institutions for the formation of locus of control, which may partially explain why being educated in the GDR affects labor market outcomes (Fuchs-Schuendeln and Masella 2016).

Education in the GDR emphasized knowledge transmission, and discouraged and even penalized independent thinking (Fuchs-Schuendeln and Masella 2016). This mindset was reinforced by de-facto mandatory participation in socialist youth organizations, whose objective was to raise “class-conscious socialists” (Friehe et al. 2015). This process began early: toddlers were expected to be in day care starting at age one. Day care was rigidly regimented; its goal was to prepare children for the labor force and not to support their individual needs (Ahnert and Lamb 2001). Day care was almost free, and high female labor force participation coupled with strong pressure on parents to place their children in day care resulted in high participation rates with over 80% of children between age one and three and almost all children over age three in

preschool (compared to 2% and about one third in West Germany) (Galaktionow 2014; Klammer et al. 2000).

Immediately after the fall of the Berlin Wall, the socialist content of education was abolished and the curricula changed to reflect Western values, such as individual initiative and creativity (Fuchs-Schuendeln and Masella 2016). The day care system faced stark and immediate changes. Within a year, fertility rates in East Germany dropped by 40% (Chevalier and Marie, 2017). Unemployment rose sharply; at its highest point in 1993, 20% of East German women were officially unemployed, reducing the need for day care.¹ The pressure to enroll children in day care disappeared and many day care centers closed. As a result, East German children born in or after 1989 were much less likely to attend day care: By 1990 only 71% of one-year olds in East Germany were in any type of outside care, a number that fell to 25% by 1994.² The type of care changed as well, resulting in improved children's outcomes, such as more secure infant-care provider attachments (Ahnert and Lamb 2001).

We explore the question of whether this abrupt change in the day-care system affected locus of control in adulthood by investigating whether children born in East Germany just before the fall of the Berlin Wall have a different locus of control than those born right afterwards, hypothesizing that young children to be especially susceptible to institutional changes.

¹ Bundeszentrale fuer Politische Bildung, June 3, 2013, <http://www.bpb.de/nachschlagen/zahlen-und-fakten/soziale-situation-in-deutschland/162491/ausgewaehlte-arbeitslosenquoten-ii>, accessed 8/20/2017.

² Own calculations based on data from the 1990 and 1994 Familiensurvey of the Deutsches Jugendinstitut.

Using difference-in-difference analyses, we confirm previous results that compared to West Germans, East Germans have a more external locus of control. We find that this difference disappears for cohorts born right after the fall of the Berlin Wall, especially for women but possibly also for men, suggesting that external locus of control might be transmitted through the institutional environment and especially through early education.

Table 1 about here.

II. Data and Variables

We use data from the German Socioeconomic Panel (SOEP), an annual nationally representative survey of German households that began in 1984. Households from the former GDR were added in 1990. We use individuals born between 1982 and 1993. Whereas the wall fell at the end of 1989, we use all of 1989 as our cutoff for exposure to socialist education since most children in East Germany started day care around age 1. Respondents answered six Likert-scale questions (from 1 “agree not at all” to 7 “agree absolutely”) assessing their external locus of control in 2005 and 2010 (Table 1). We use age-standardized mean answers to these questions in the first year respondents answered those. Our sample consists of 1,562 observations of women and 1,530 of men.

III. Empirical Methods

To assess whether locus of control differs for East Germans born right before and after the fall of the Berlin Wall we use a difference-in-difference approach, comparing, as first difference, individuals born in or after 1989 to those born earlier, and as second difference, comparing this difference to the difference among West Germans. This latter difference helps to control for

common macro shocks as well as for cohort trends in locus of control. We estimate the parameters of following equation by least squares:

$$Locus_{it} = \beta_0 + \beta_1 East_i + \beta_2 B1989-1992_i + \beta_3 East_i * B1989-1992_i + \alpha X_{it} + \mu_{it} \quad (1)$$

where *Locus* is the external locus of control; *B1989-1992* is a dummy equal to one for those born in or after 1989, *East* is a dummy equal to one if the mother lived in East Germany in 1989, and **X** is a vector of control variables (dummies for birth year, migration background, and survey year). The regressions are estimated separately by gender. Our identification relies on the common trends assumption between East and West Germany. We tested this by restricting the sample to those born before 1989 and including a dummy for being born between 1986 and 1988 and its interaction with *East* and found it to be not statistically significant, supporting our identification strategy.

Table 2 about here

Our coefficient of interest is the interaction term between *B1989-1992* and *East*. If the early-child institutional environment affects the locus of control, we would expect to find differences between cohorts born before 1989 and those born afterwards. While it is likely that the fall of the Berlin Wall resulted in other changes that affected East German's locus of control, we deem it unlikely that those changes differentially affected those born immediately before and immediately after the fall of the Wall. One plausible exception are changes in parental selection, which we discuss in Section 5.

IV. Results

Our results are shown in Table 2. Confirming previous findings, we find that East Germans born before 1989 have a more external locus of control than West Germans. Our difference-in-differences estimates differ by gender, showing that later-born women have a less external locus of control than those born earlier, with a coefficient of -0.27, which is about twice as big as the aforementioned difference between East and West Germany. For men, the effect is smaller and not statistically significant. Overall, both East German women and men born in 1989 or later do not have a statistically different locus of control from West Germans, with coefficients (standard errors) of $0.1567 - 0.2658 = -0.1092$ (0.1149) and $0.1353 - 0.1604 = -0.2514$ (0.1205). These results are robust to adding a further dummy (and interaction with *East*) for those born between 1986 and 1988. These are not statistically significant, with the latter being -0.0627 (0.1389) for women. We interpret this as support for our hypothesis that it is for those born in or after 1989 for which the significant differences in locus of control emerge.

Our results are robust to different (or no) age standardization and to using factor analysis to derive the locus of control measure, though in the latter case the results become slightly less statistically significant.

V. Parental Selection

Chevalier and Marie (2017) show that East German women who had children right after the fall of the Berlin Wall were strongly negatively selected: They had less education, worse parenting skills, and were less likely to be married than mothers who had children in the years prior. It is likely that negative selection increases external locus of control given previous findings on the effects of socioeconomic status and social environment on locus of control (e.g., Anger 2012).

This would lead us to underestimate the effects of the fall of the Berlin Wall on the locus of control of East Germans. To assess this, we include proxies for maternal selection in our regressions: whether the individual grew up with a single mother, fought a lot with the mother at age 15, and mother's education. These variables have the expected effects (negative selection leads to a more external locus of control). Our main coefficients of interest do not change.

VI. Discussion

The importance of locus of control for a variety of economic outcomes makes it important to understand what influences its formation. We assess the effect of the fall of the Berlin Wall on locus of control of East Germans, using data from the SOEP for Germans born 1982 -1992.

Difference-in-difference analyses confirm previous results that compared to West Germans, East Germans have a more external locus of control. However, this difference disappears for cohorts born right after the fall of the Berlin Wall, especially for women but possibly also for men. Since one big difference between those cohorts was the change in child-care institutions, these findings suggest that locus of control might be transmitted through the institutional environment and especially through early childhood education.

Acknowledgments

Kleinjans would like to thank Marco Caliendo at the University of Potsdam and Carsten Schroeder at the DIW for hosting her during the 2015-2016 academic year and the staff at the DIW for help with the SOEP data.

References

- Ahnert, L., and M. W. Lamb. 2001. "The East German child care system: Associations with caretaking and caretaking beliefs, and children's early attachment and adjustment." *American Behavioral Scientist* 44 (11): 1843-1863.
- Alesina, A., and N. Fuchs-Schuendeln. 2007. "Good-bye Lenin (or not?): The effect of communism on people's preferences." *American Economic Review* 97 (4): 1507-1528.
- Anger, S. 2012. "The intergenerational transmission of cognitive and non-cognitive skills during adolescence and young adulthood." *SOEPpapers on Multidisciplinary Panel Data Research* No. 473, DIW Berlin.
- Chevalier, A., and O. Marie. 2017. "Economic uncertainty, parental selection, and children's educational outcomes." *Journal of Political Economy* 125 (2): 393-430.
- Cobb-Clark, D. A., and S. Schurer. 2013. "Two economists' musings on the stability of locus of control." *The Economic Journal* 123: F358-F400.
- Fuchs-Schuendeln, N., and P. Masella. 2016. "Long-lasting effects of socialist education." *Review of Economics and Statistics* 98 (3): 428-41.
- Friehe, T., M. Pannenberg, and M. Wedow. 2015. "Let bygones be bygones? Socialist regimes and personalities in Germany." *SOEPpapers on Multidisciplinary Panel Data Research* No. 776, DIW Berlin.
- Galaktionow, B. 2014. "Vom Schreckensbild zum Zukunftsmodell." *Sueddeutsche Zeitung*, November 14.

Klammer, U., C. Klenner, C. Ochs, P. Radke, and A. Ziegler. 2000. *WSI-FrauenDatenReport*. Hans-Boeckler-Stiftung, Duesseldorf.

TABLES

Table 1. Survey Questions assessing External Locus of Control.

-
- 1 Compared to other people, I have not achieved what I deserve.
 - 2 What a person achieves in life is above all a question of fate or luck.
 - 3 I frequently have the experience that other people have a controlling influence over my life.
 - 4 If I run up against difficulties in life, I often doubt my own abilities.
 - 5 The opportunities that I have in life are determined by the social conditions.
 - 6 I have little control over the things that happen in my life.
-

Table 2. Difference-in-Difference Estimates of Locus of Control.

	(1)	(2)
	Women	Men
East	0.1567*** (0.0607)	0.1353** (0.0674)
B1989-1992	0.2370 (0.1514)	0.4347*** (0.1427)
East * B1989-1992	-0.2658** (0.1291)	-0.1604 (0.1375)
R2	0.0097	0.0203
Observations	1,562	1,530

Notes: Robust standard errors are shown in parentheses. Not shown: birth year and survey year dummies, dummy for indirect migration background, constant. ** $p < 0.05$, *** $p < 0.01$.