Preparing Kids for Capitalism: The Effect of German Reunification on the Intergenerational Transmission of Preferences

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What Determines Economic Preferences?

Economic preferences (risk aversion, patience, work ethic, …) help determine choices, outcomes, and economic inequality.

Economic preferences vary widely within and across populations (Falk et al. 2018).

How are economic preferences formed?

Preference Transmission from Parents to Children

Economic preferences are highly correlated between parents and children (e.g., Dohmen et al. 2012).

Parent-child correlations could be explained by alternative channels, such as:

- **Genetic Transmission.**
- **Community Transmission:** Socialization by local institutions (e.g., schools or churches) or through role models in local community (e.g., Bisin and Verdier 2001).
- **Altruistic Socialization:** Socialization by parents in response to economic conditions (e.g., Doepke and Zilibotti 2008, 2018, 2019).

How can these channels be distinguished?

East-West Differences in Socialization

West

East

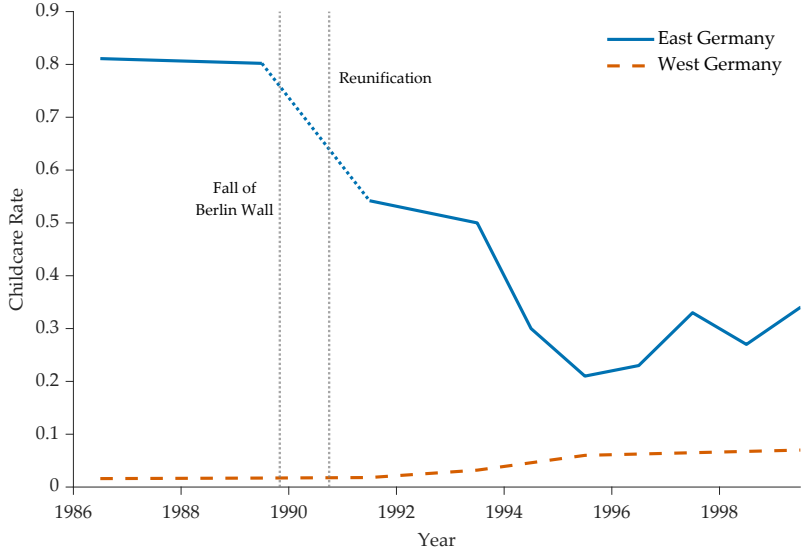
What did Reunification Do?

Little change for families from the West.

In the East:

- Switch from universal state-run childcare and all-day schooling to Western model of family care and part-day schooling.
- Switch from full-time female employment to Western model of homemaking or part-time work for mothers.
- Switch from socialism to free-market economy.
- Switch from totalitarian control to liberal democracy.

State Childcare in East and West



The Experiment of German Reunification

German reunification in 1990 can speak to transmission channels:

- **Genetic Transmission:** Should be unaffected by reunification.
- **Community Transmission:** Should be affected by change in childcare arrangements and state indoctrination.
- **Altruistic Socialization:** Should change through exposure to new economic environment with different returns to specific preferences.

What We Do

- Build model of preference formation that incorporates genetic, passive, and active transmission channels.
- Characterize implication of each channel for how reunification should change parent-child correlations in preferences.
- Compare predictions to GSOEP data on intergenerational correlation in preferences.

What We Find

Clear support for both community transmission and active socialization channels.

Importance of transmission channels varies across preference dimensions, suggestive of variation in returns across preference traits.

Implies important role for institutions and economic conditions in accounting for variation in preferences across groups and countries.

(Results are specific to economic preferences; e.g., political preferences are different.)

(Some) Related Literature

- Economic models of intergenerational transmission of preferences:
  - Genetic transmission: Galor & Moav (2002), Galor & Michalopoulos (2012)
  - Cultural transmission: Bisin & Verdier (2001), Francois & Zabojnik (2005), Michau (2013), Klasing (2014), Klasing & Milionis (2014), Varvarigos (2019).
  - Altruistic socialization: Doepke & Zilibotti (2008, 2017, 2019).
- Empirical studies documenting intergenerational transmission of preferences:
  - Genetic transmission: Nicolaou et al. (2008), Lindquist, Sol & van Praag (2015).
  - Correlation between migrant's attitudes and attitudes in their home countries: Fernandez & Fogli (2009), Alesina & Giuliano (2010), Algan & Cahuc (2010).
  - Correlation between parents and children: Zumbuehl, Dohmen & Pfaff (2021), Dohmen et al. (2013).

Outline of Model of Preference Transmission

One parent and one child.

Parent has genotype $G \in \{0, 1\}$ phenotype $P \in \{0, 1\}$.

Formation of child's geno- and phenotypes in three stages:

1. Genetic transmission.
2. State indoctrination.
3. Parental socialization.

Genetic Transmission

Child inherits parent's genotype with probability $p_{\text{GT}} > 0.5$.

Child's initial phenotype $P_{C,1}$ matches genotype with probability $p_{\text{GE}} > 0.5$.

State Indoctrination

State prefers phenotype $P_C = 0$.

- t_{ST}: Time child spends under state control.
- p_{ST}: Probability per unit of time that indoctrination is successful.

Child has phenotype $P_{C,ST}$ after state-indoctrination stage.

Parental Socialization

Parent can choose which phenotype $P_{P,T}$ to attempt to transmit.

Parent's value function:

$$V(P, G, X, \gamma) = \max_{P_{\mathrm{PS}} \in \{0,1\}} E\left\{-\gamma |P - P_C| + zV_C(P_C, X)\right\}$$

Success probability of socialization given by $t_{\mathrm{PS}} p_{\mathrm{PS}}$, with:

$$t_{\mathrm{PS}} = f(t_{\mathrm{ST}}).$$

Population heterogeneous in γ with distribution function $F(\gamma)$.

Aggregate economic conditions X determine return to different phenotypes P_C for child's utility $V_C(P_C, X)$.

Results: Genetic Channel

If transmission is entirely due to genetic transmission ($p_{ST} = p_{PS} = 0$):

- **There will be a positive correlation between the phenotypes of parent and child.**
- **A regression of the child's on the parent's phenotype will be independent of time and the political regime.**

Results: State Indoctrination Channel

If in addition to the genetic channel the state indoctrination channel is active ($p_{ST} > 0$) but the parental socialization channel is not ($p_{PS} = 0$):

- **There will be a positive correlation between the phenotypes of parent and child.**
- **The regression coefficient of the child's on the parent's phenotype will be lower when state indoctrination t_{ST} is higher.**

Results: Parental Socialization Channel

If in addition to the genetic channel the parental socialization channel is active ($p_{PS} > 0$):

- **There will be a positive correlation between the phenotypes of parent and child.**
- **The regression coefficient of the child's on the parent's phenotype will be lower when changes in aggregate conditions X raise the incentive to endow the child with a particular phenotype.**

Extensions

Allow for multiple traits:

$$V(\mathbf{P}, \mathbf{G}, X, \gamma) = \max_{\mathbf{P}_{PS}(\mathbf{P}_{C,ST})} E\left\{-\gamma \sum_{n=1}^{N} |P^n - P_C^n| + zV_C(\mathbf{P}_C, X)\right\}$$

Dynastic model:

$$V(\mathbf{P}, \mathbf{G}, X, \gamma) = \max_{\mathbf{P}_{PS}(\mathbf{P}_{C,ST})} E\left\{U(\mathbf{P}, X) - \gamma \sum_{n=1}^{N} |P^n - P_C^n| + zV(\mathbf{P}_C, \mathbf{G}_C, X, \gamma)\right\}$$

Theoretical results carry over.

Additional findings on multi-generation impacts.

Application to Transmission of Risk Tolerance and Trust

Two binary traits, risk tolerance P^1 and trust P^2.

Children face occupational choice:

- Worker with fixed wage W.
- Entrepreneurs earn X with probability χ, zero otherwise.

Child's utility:

$$V_C(\mathbf{P}_C, X) = (1 + \nu P_C^2)\left(P_C^1 \max\{\chi X, W\} + (1 - P_C^1)(\log(W) + \bar{u})\right).$$

State aims to transmit risk aversion and low trust.

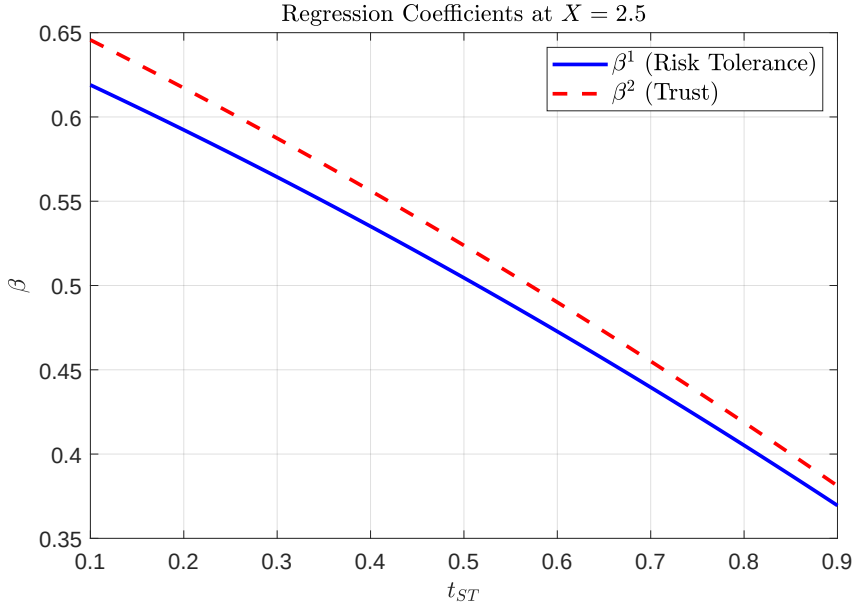
Application to Transmission of Risk Tolerance and Trust

Computed example with parameters $\bar{u} = 1$, $z = 0.5$, $W = 1$, $\chi = 0.5$, and $\nu = 0.1$, $p_{ST} = p_{PS} = 0.5$, $p_{GT} = p_{GE} = 0.9$, $t_{PS} = f(t_{ST}) = 0.75 - 0.5t_{ST}$, $\gamma \sim U[0, 1]$.

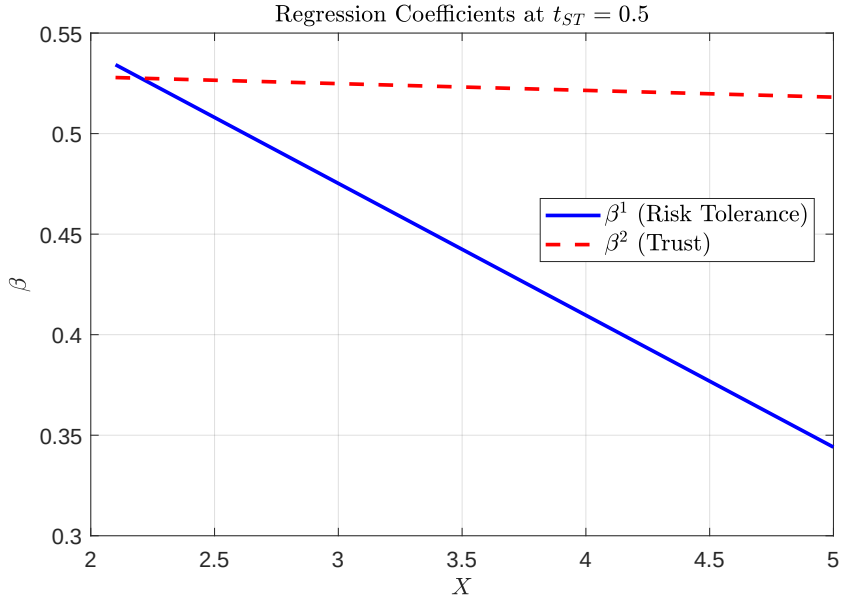
Initial distribution of parental geno- and phenotypes:

$$S^1 = S^2 = \begin{bmatrix} 0.45 & 0.05 \\ 0.05 & 0.45 \end{bmatrix}.$$

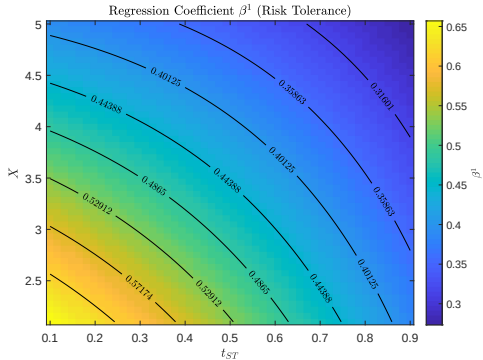
Parent-Child Correlation Decreasing in State Indoctrination

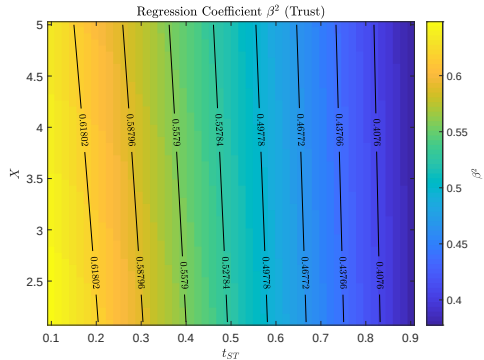


Impact of a Rise in Return to Entrepreneurship

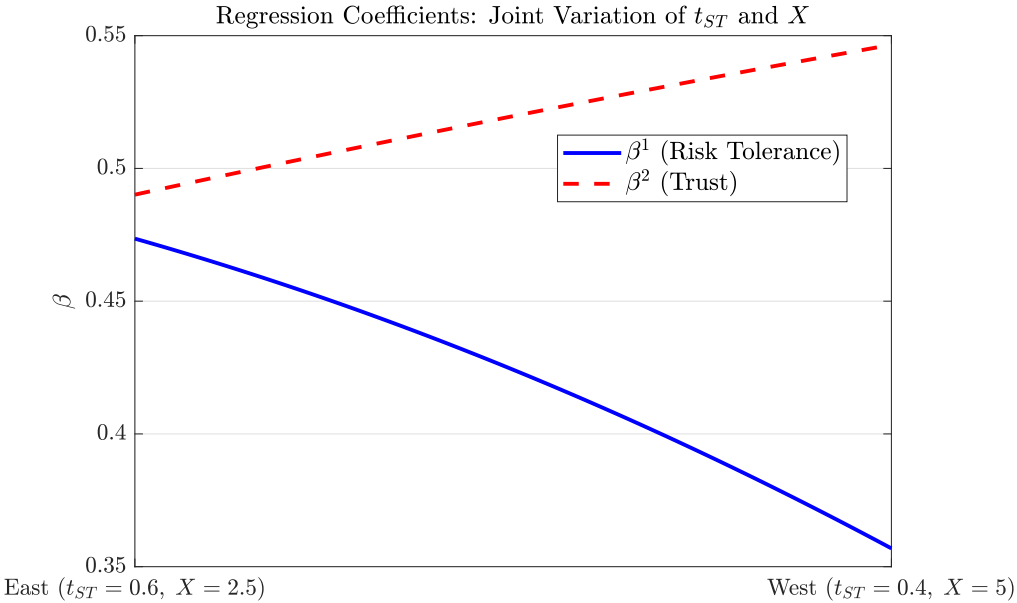


Full Mapping of Environment into Transmission





Impact of Transition from “East” to “West”



Learning from Reunification

The impact of reunification depends on the strength of the three transmission channels:

- **If only genes matter, reunification should have no impact on transmission.**
- **If parents have little influence or always aim to transmit their own traits, parent-child correlations should increase for all traits after reunification.**
- **If parents have impact and are altruistic, parent-child correlations should decrease for traits that have a high return in the new environment.**

Data

German Socio-Economic Panel (SOEP):

- Household panel conducted annually since 1984 (East Germany since 1991).
- Follows all household members even after they move out. This allows us to construct a sample of parents and their adult children.
- The annual personal survey contains a number of questions pertaining to preferences and attitudes.
- The survey asks people where they lived in 1989. This allows us to identify the geographic origin (East, West) of the family.

Preference and Location Measures

- Risk attitudes are measured based on a question asking how willing people are to take risks in general:

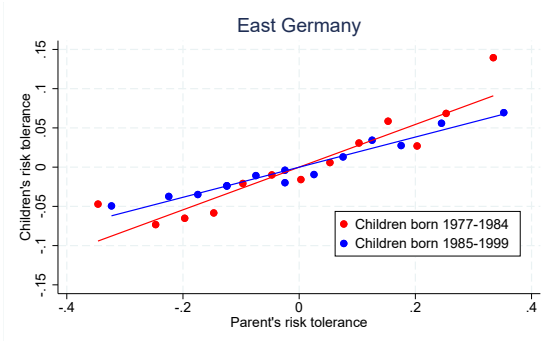
  0 (not willing at all), 0.1, 0.2, ..., 1 (very willing).

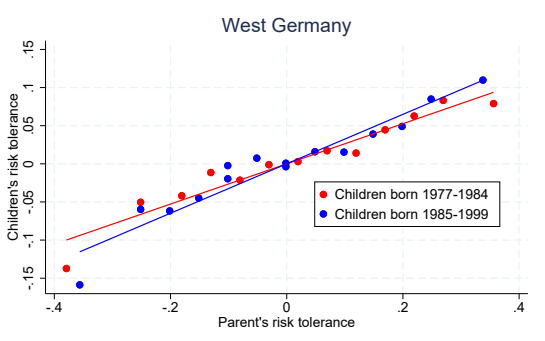
- We require that the risk attitudes of the child and both parents are observed in the same wave.
- Definition of origin of a family:
  - Children born before 1990: Child and both parents lived in the region in 1989.
  - Children born in/after 1990: Both parents lived in the region in 1989.
- We control for individual and parental characteristics and state-year fixed effects.

Sample Characteristics

	East	West
Respondents (families)	1,454	4,408
% Observations	6,256	16,615
% female	48.5	48.2
% with tertiary education	13.9	12.0
% employed	62.0	59.6
% married	9.8	8.3
% living without parents	43.0	29.7
% born 1977-84	40.6	30.3
% born 1985-91	45.8	41.6
% born 1992-99	13.6	28.0

Risk Attitudes in East and West





Risk Attitudes: Changing Parental Transmission around Reunification

	Risk attitudes of children born 1977-1999		
Parental attitudes	0.262***	0.286***	
Parental attitudes x East		-0.099***	
Parental attitudes, pre-1985			0.252***
Parental attitudes, post-1985			0.302***
Parental attitudes x East, pre-1985			-0.020
Parental attitudes x East, post-1985			-0.143***
East		0.058***	
pre 1985 x East			0.028
post 1985 x East			0.076***

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Summary of Findings for Risk Preferences

Stable transmission of risk attitudes in the West throughout.

In the East, around unification:

- Drop in parent-child correlation in risk tolerance.
- Effect concentrated in cohorts who were 0 to 4 years old at the fall of the Berlin wall or born after the fall of the wall.

Robustness Checks

Results are robust to:

- Including additional control variables.
- Including family fixed effects in a sample of siblings.
- Excluding Berlin.
- Using a broader measure of risk attitudes that covers multiple domains.
- Using only the first observation for each family.

Patterns are similar for East German families who migrated to the West and those who stayed in the East: It is not about exposure to West Germans.

Evidence on the mechanism

	Risk attitudes of children born 1977-1999					
Specification	P's edu low	P's edu high	P's in-volve-ment low	P's in-volve-ment high	P unem-ployed	P not unem-ployed
Parents, pre 1985	0.23***	0.29***	0.14	0.28***	0.19	0.23***
Parents, post 1985	0.33***	0.27***	0.21***	0.38***	0.25***	0.37***
Parents x East, pre 1985	0.05	-0.10	0.19	-0.06	-0.06	-0.07
Parents x East, post 1985	-0.08	-0.19***	-0.05	-0.23***	-0.06	-0.29***

Robustness Checks

	Risk attitudes of children born 1977-1999				
Specification	Cohort FEs	Family FEs	Excl. Berlin	Altern. DV	First obs.
Parents, pre 1985	0.25***	0.14***	0.25***	0.39***	0.33***
Parents, post 1985	0.30***	0.24***	0.30***	0.45***	0.29***
Parents x East, pre 1985	-0.02	0.004	-0.02	-0.08	-0.07
Parents x East, post 1985	-0.14***	-0.11***	-0.13***	-0.14**	-0.07*

Results for Other Attitudes

	Trust	Patience	Neg. reciprocity	Pos. reciprocity
Parents, pre 85	0.35***	0.22***	0.29***	0.22***
Parents, post 85	0.35***	0.16***	0.38***	0.28***
Parents x East, pre 85	-0.11**	-0.23***	0.09	-0.06
Parents x East, post 85	0.01	-0.01	-0.09	0.11**

What Do the Results Mean?

General correlation between parents and children consistent with role for genetic transmission.

Changes in transmission around reunification inconsistent with genetic transmission being the only channel.

What Do the Results Mean?

Support for both government-indoctrination and active socialization channel:

- Increase in parent-child correlation for trust and patience supports government indoctrination channel.
- **Results for risk preferences consistent with altruistic socialization channel**.
  (i.e., parents instill more risk tolerant attitudes in their children in response to the changed economic environment).

Conclusion

German reunification allows us to examine the implications of alternative channels of intergenerational preference transmission.

Empirical support for both community transmission and altruistic socialization channels.

Suggests research program of mapping institutions and economic conditions into variation in preferences across social groups and countries.