Assortative Mating and Wealth Inequalities Between and Within Households

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Motivation

- Since World War II, wealth inequality has increased in many societies[1]
- Also considerable within-household wealth inequality[2]
- Potential sociological explanation: assortative mating[3]

- How is assortative mating related to wealth inequalities in Germany and in the US?

[1] Piketty 2014.

[2] Grabka, Marcus, and Sierminska 2015.

[3] Blossfeld and Timm 2003.

Previous research

- Strong association ($r = 0.40$) in parental wealth between spouses in the US[1]
- Association ($r = 0.25$) in inherited wealth in France[2]
- Association in wealth between spouses in Ethiopia[3]
- To date no studies on
  - Assortative mating by individuals' wealth in (post-) industrialized societies
  - Assortative mating and wealth inequality

[1] Charles, Hurst, and Killewald 2013.

[2] Fremeaux 2014.

[3] Fafchamps and Quisumbing 2005.

Partner selection

- Theoretical model of the partner market[1]
- Assortative mating results from two processes
  - Competition
  - Matching
- Increase in assortative mating in recent decades[2]

[1] Becker 1973.

[2] Grave and Schmidt 2012; Schwartz 2010.

Assortative mating and (income) inequality

- Resources may concentrate in households due to assortative mating
- Extensive literature on increasing educational matching and income inequality mostly rejects relationship[1]
- However, studies on income correlation between partners show a positive association with between-household income inequality[2]

[1] Breen and Andersen 2012; Spitzenpfeil and Andreß 2014.

[2] Mastekaasa and Birkelund 2011; Schwartz 2010.

Within-household inequality

- Does it matter which partner owns wealth (earns income) within household?
- Unitary model of the household contested[1]
- Positive assortative mating will lead to less within-household inequality
- Persistent, systematic gender differences may still lead to heterogamous couples[2]

[1] Bennett 2013; Lersch 2017.

[2] Kalmijn 1998.

Contextual conditions

Dimension	Germany	US
Property regime[1]	separation	mostly separation
Wealth inequality[2]	medium to high	high
Gender inequality[3]	high	low
(Educational) homogamy[4]	medium to high	high

[1] Deere and Doss 2006.

[2] OECD 2017.

[3] Aisenbrey and Fasang 2017.

[4] Blossfeld and Timm 2003.

Empirical approach

Comparative approach for Germany and the US:

1. Estimation of the association in partners' wealth
2. Simulation of counterfactual wealth distributions to analyze the effect of assortative mating on between-household wealth inequality
3. Simulation of counterfactual wealth distributions to analyze the effect on within-household wealth inequality

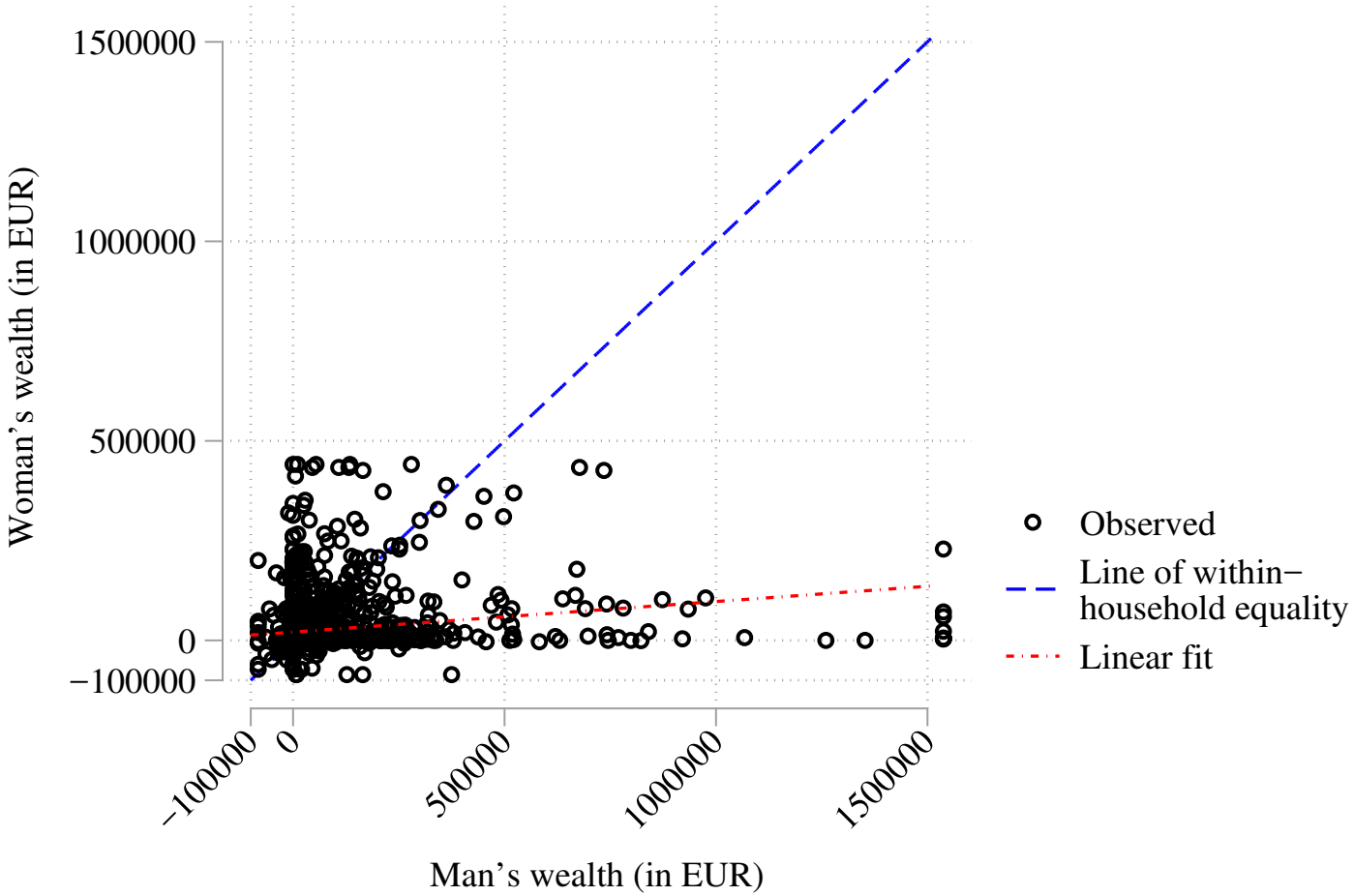
Data

- Germany:
  - Socio-economic Panel Study v32.1, for wealth v29
  - Mainly waves 2002, 2007, 2012
  - New partnerships (coresidence within previous two years)
  - Sample size: 1,659 couples
- US:
  - Survey of Income and Program Participation 2008 (-2013)
  - Mainly waves 4, 7, 10 (2009, 2010, 2011)
  - New partnerships (coresidence within previous year)
  - Sample size: 2,541 couples
- Sample is rather young

Measurement: wealth

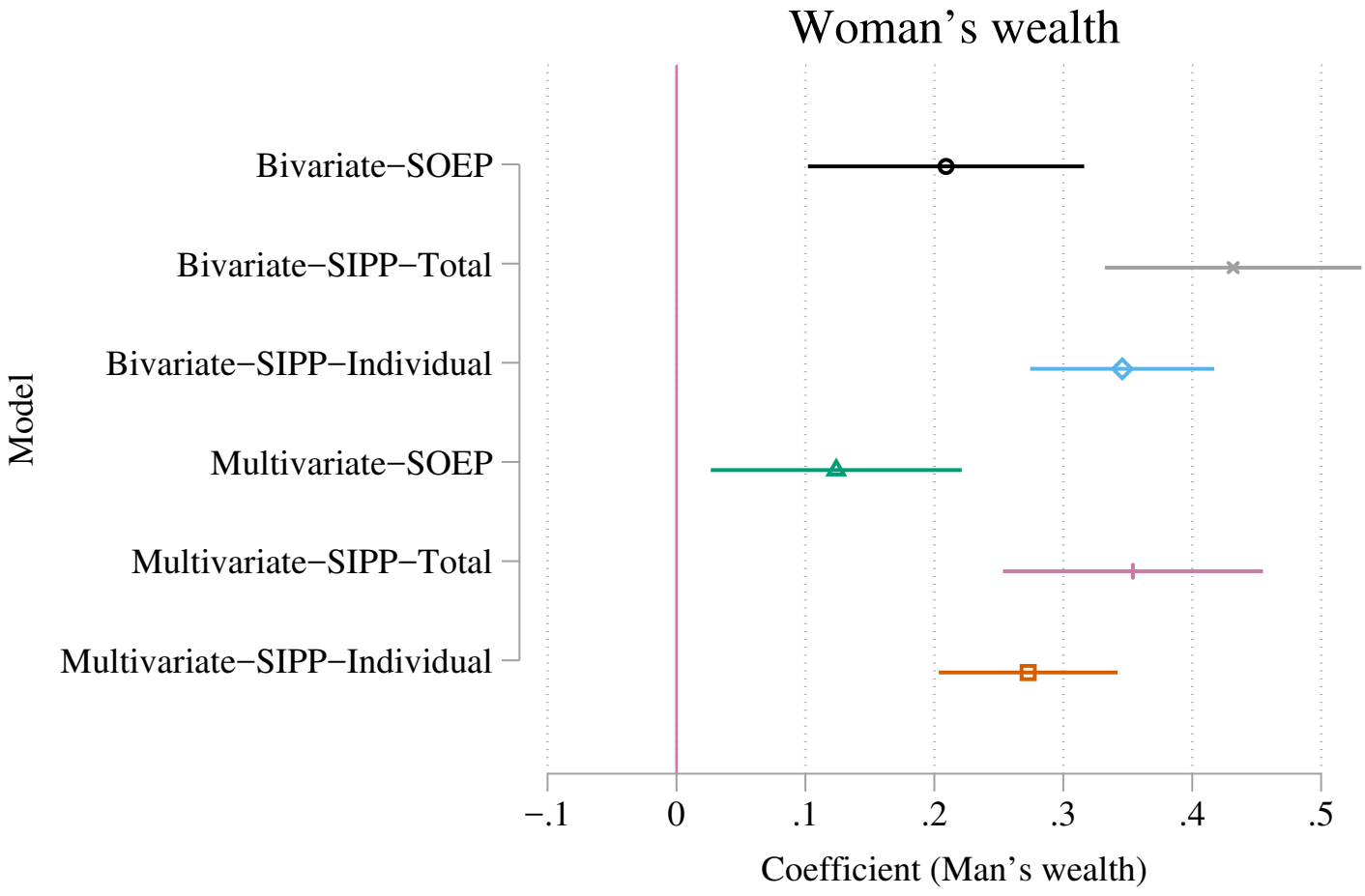
- Dependent variable: net wealth
  - Plus: real estate, financial assets, savings, insurances, business assets, (valuable assets, vehicles)
  - Minus: debts and loans
  - Bottom- and top-coded at the 0.5 and 99.5 percentiles
- SOEP measures all wealth components at the individual level
- In SIPP, wealth in real estate, business assets and vehicles can only be distributed equally among owners
  - Total wealth
  - Only wealth recorded at individual level

Observed distribution in Germany



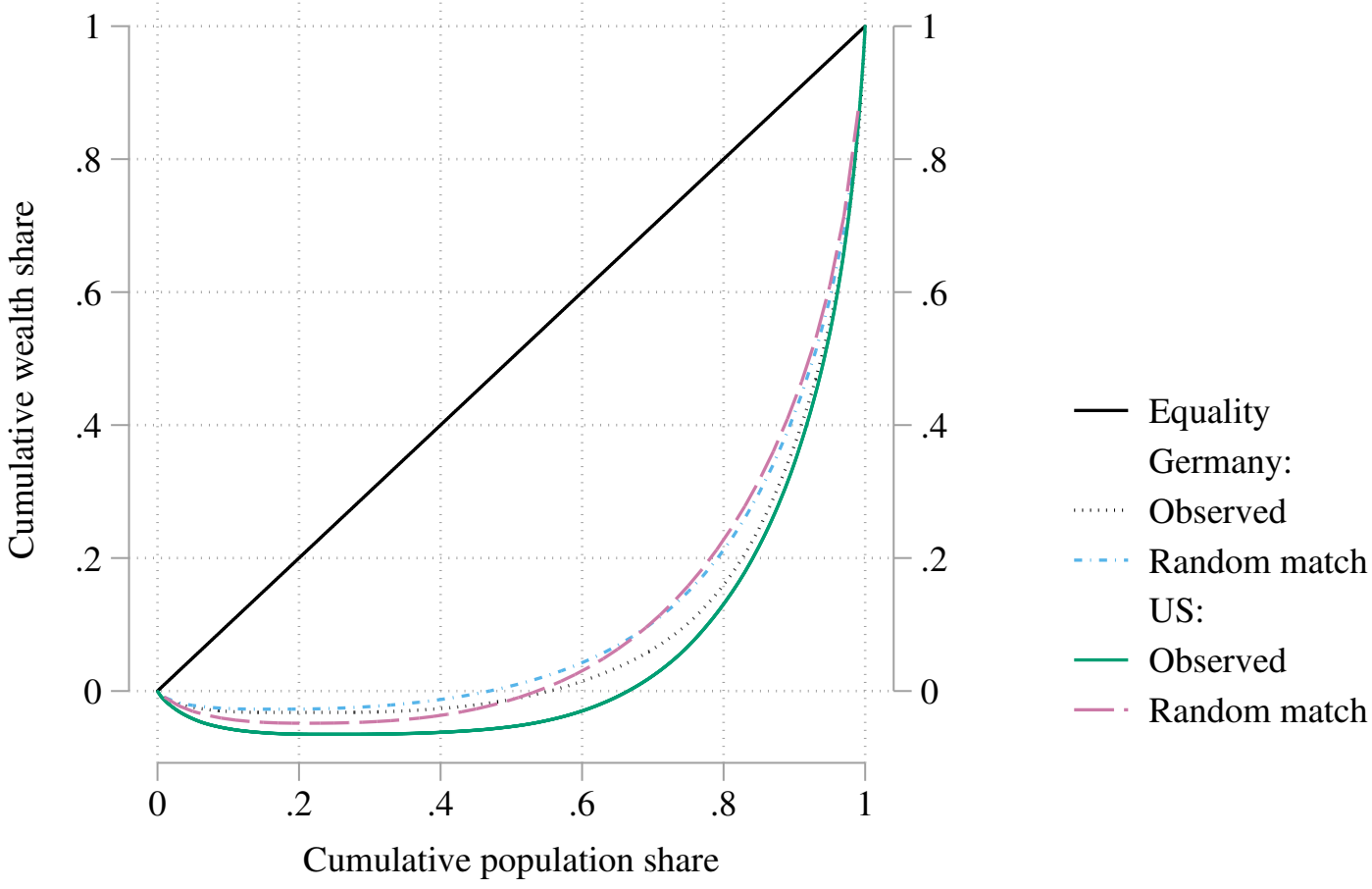
Data: SOEP v32.1 (wealth data v29)

Multivariate results for matching



Data: SOEP v32.1 (wealth data v29); SIPP 2008
Note: OLS regression model for woman's wealth; standardized variables; multivariate models include age, education, income and year; lines indicate 95%-confidence interval

Counterfactual wealth distributions between households



Data: SOEP v32.1 (wealth data v29)

Between-household inequality

Distribution	Gini	Flocking index[1]
Germany		
Observed	0.83	–
Random match	0.79	0.39
Conditional random match	0.81	0.24
US		
Observed	0.89	–
Random match	0.80	0.63
Conditional random match	0.83	0.55

Data: SOEP v32.1 (wealth data v29); SIPP 2008

[1] Aslaksen, Wennemo, and Aaberge (2005)

Within-household inequality

Distribution	Inequality within	GE(2) between	Share within
Germany			
Observed	2.04	2.64	0.43
Random match	2.38	2.31	0.50
Conditional match	2.18	2.50	0.46
US			
Observed	1.16	2.69	0.30
Random match	1.94	1.92	0.50
Conditional match	1.75	2.11	0.45

Data: SOEP v32.1 (wealth data v29); SIPP 2008

Limitations

- Only newly formed partnerships
- No trend analysis
- Limited individual wealth measure for US
- Unobserved dimensions in assortative mating

Conclusion

- Considerable positive assortative mating in individual wealth
  - Substantially more between-household inequality
  - Substantially less within-household inequality
- In the US, inequality mostly between households
  - Less gender inequality in wealth and more homogamy in the US
- Large within-household inequality in Germany

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Thank you!

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http://www.iss-wiso.uni-koeln.de/mywealth

Formulas

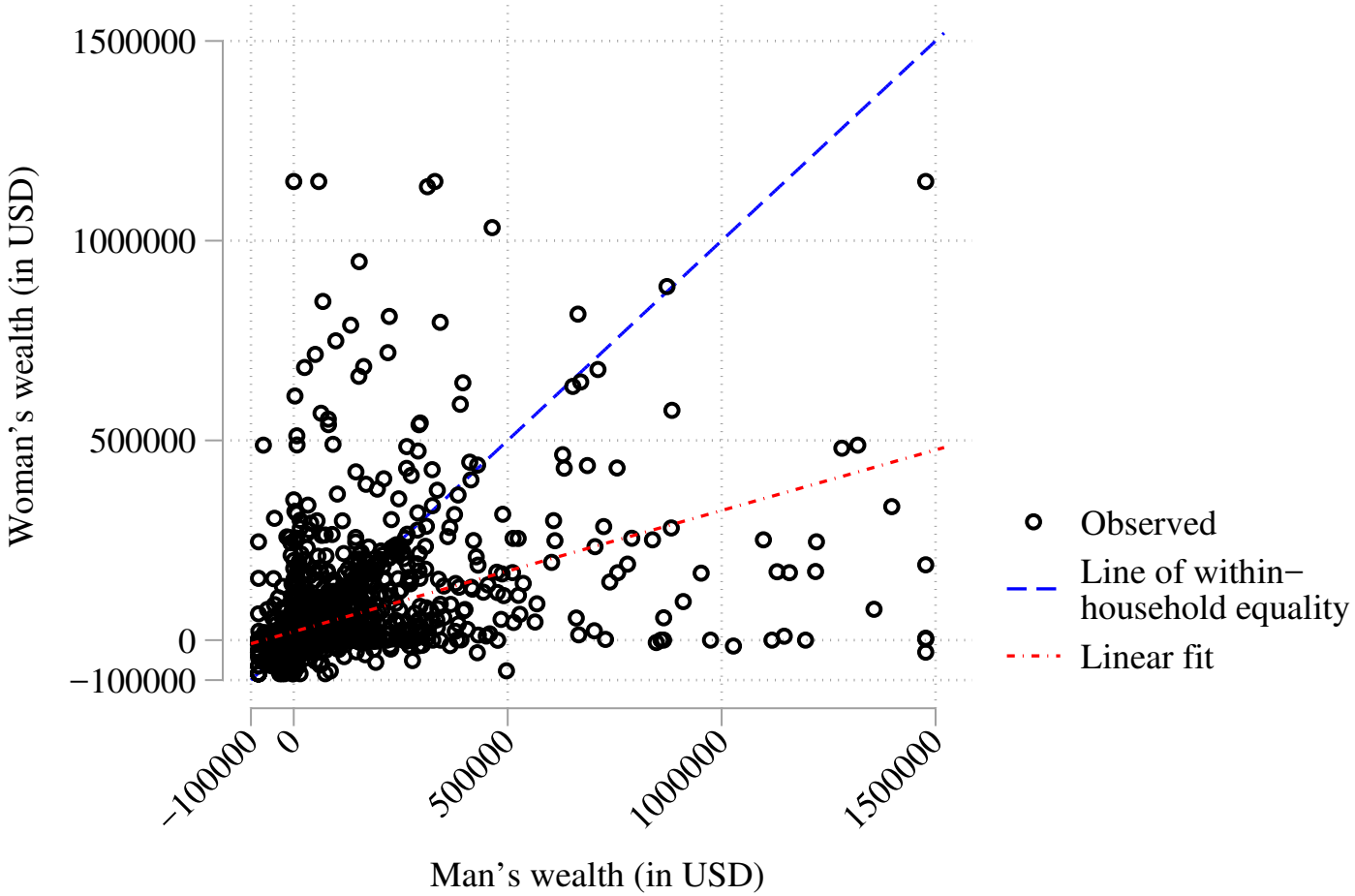
$$G = \frac{1}{2n^2\mu} \sum_{j=1}^{n} \sum_{i=1}^{n} |y_j - y_i|$$

$$v(G) = \frac{G - G_r}{G_{max} - G_r} \text{ if } G > G_r$$
$$v(G) = \frac{G - G_r}{G_r - G_{min}} \text{ if } G < G_r$$

$$GE(2) = \frac{1}{2} CV^2 = \frac{1}{2} \left(\frac{\sigma}{\mu}\right)^2$$

$$GE(2) = GE(2)_o + GE(2)_b =$$
$$\sum_{j=1}^{n} g_j^2 s_j^{-1} GE(2)_j + \frac{1}{2} \left[\sum_{j=1}^{n} s_j \left(\frac{\sigma_j}{\mu}\right)^2 - 1 \right]$$

Observed distribution in the US



Data: SIPP 2008

Descriptive statistics for the distribution in Germany

	Women	Men	Households	Individuals
	Point estimate [95% confidence interval]			
Gini	0.93	0.89	0.83	0.91
	[0.89;0.97]	[0.86;0.91]	[0.81;0.85]	[0.89;0.93]
GE(2)	3.35	3.95	2.53	4.48
	[2.82;3.89]	[3.33;4.58]	[2.18;2.89]	[3.82;5.15]
Median	3306.71	5876.22	15439.53	4349.90
	[2501.45; 4111.97]	[4148.12; 7604.31]	[11179.56; 19699.51]	[3151.09; 5548.71]

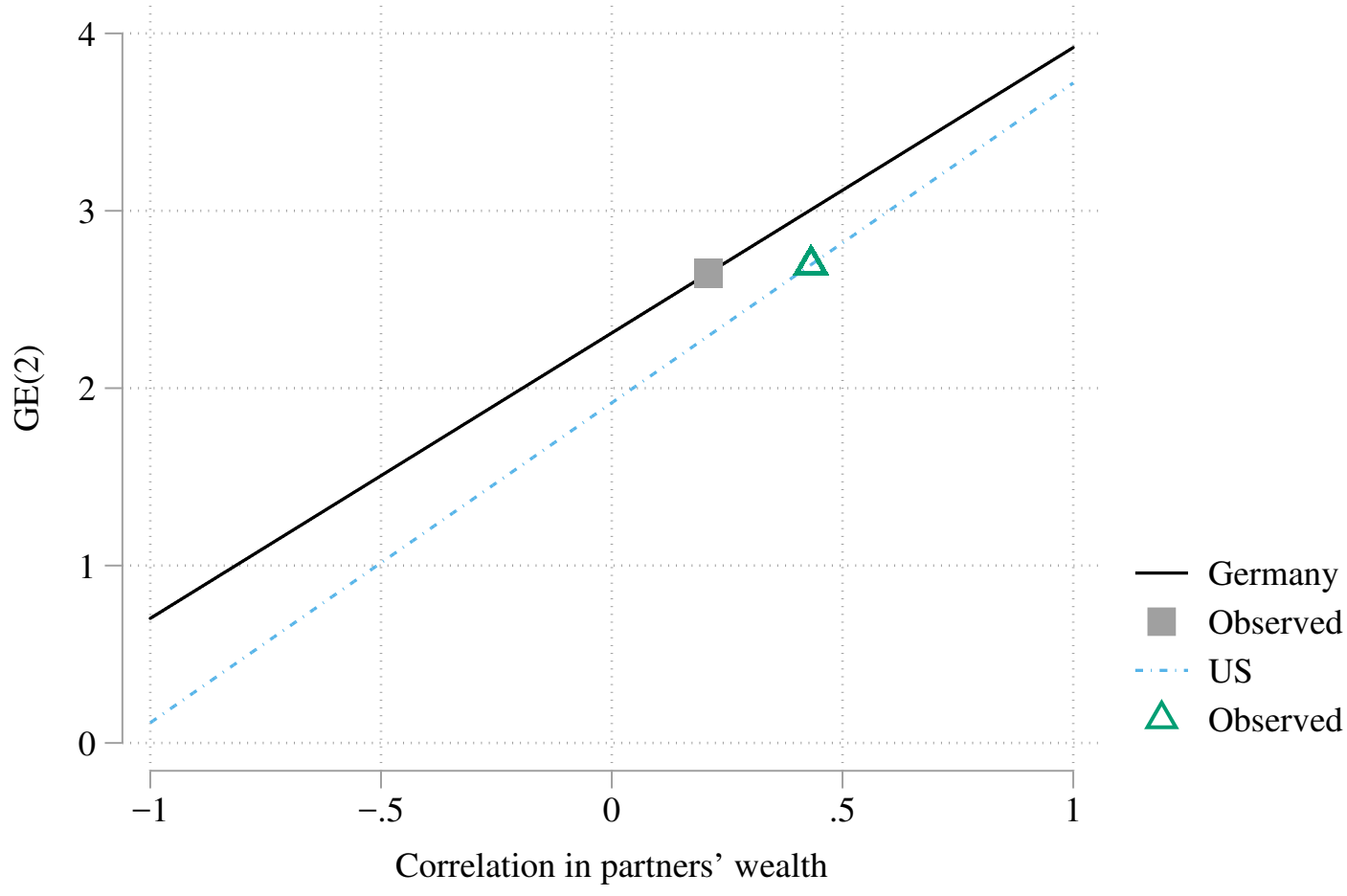
Data: SOEP v32.1 (wealth data v29)

Descriptive statistics for the distribution in the US

	Women	Men	Households	Individuals
	Point estimate [95% confidence interval]			
Gini	0.99	0.92	0.89	0.95
	[0.96;1.02]	[0.90;0.95]	[0.87;0.92]	[0.93;0.97]
GE(2)	4.00	3.54	2.69	3.85
	[3.47;4.53]	[3.14;3.94]	[2.41;2.98]	[3.50;4.21]
Median	3354.67	6470.00	13684.96	4857.07
	[2445.64;	[5485.11;	[10878.27;	[3996.74;
	4263.71]	7454.89]	16491.65]	5717.41]

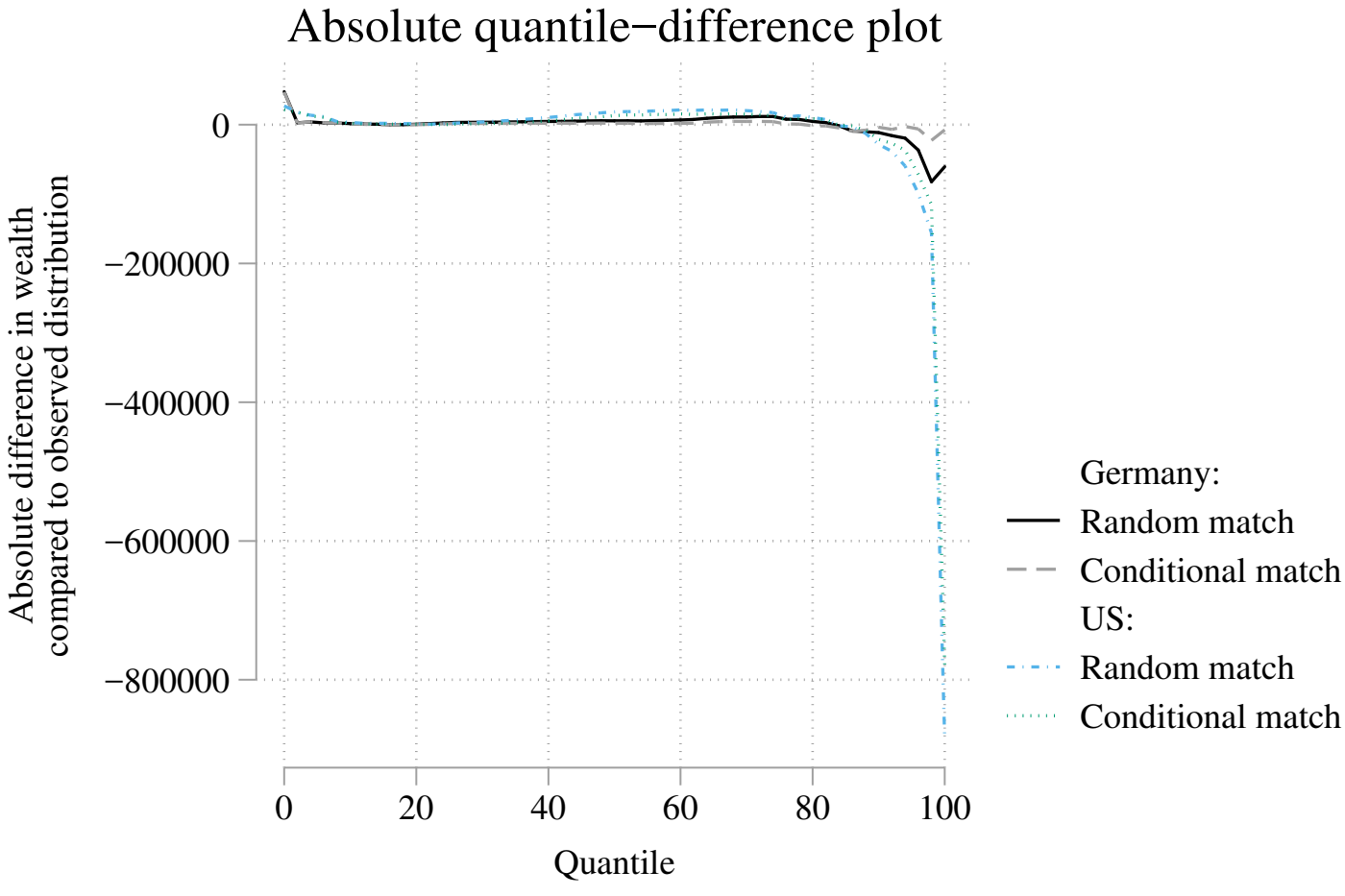
Data: SIPP 2008

Association between partners' wealth and inequality in Germany



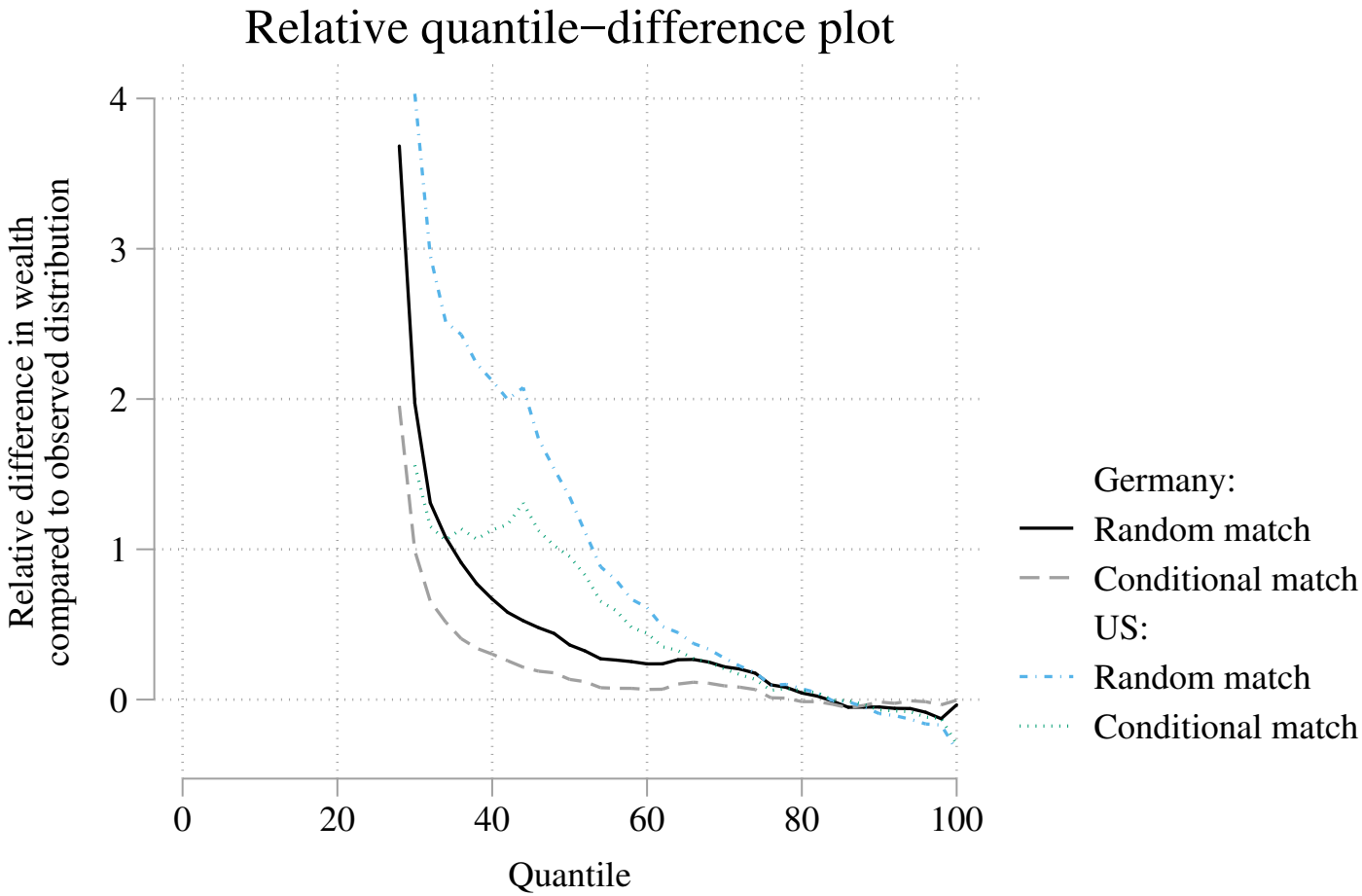
Data: SOEP v32.1 (wealth data v29)

Comparison of distributions (absolute)



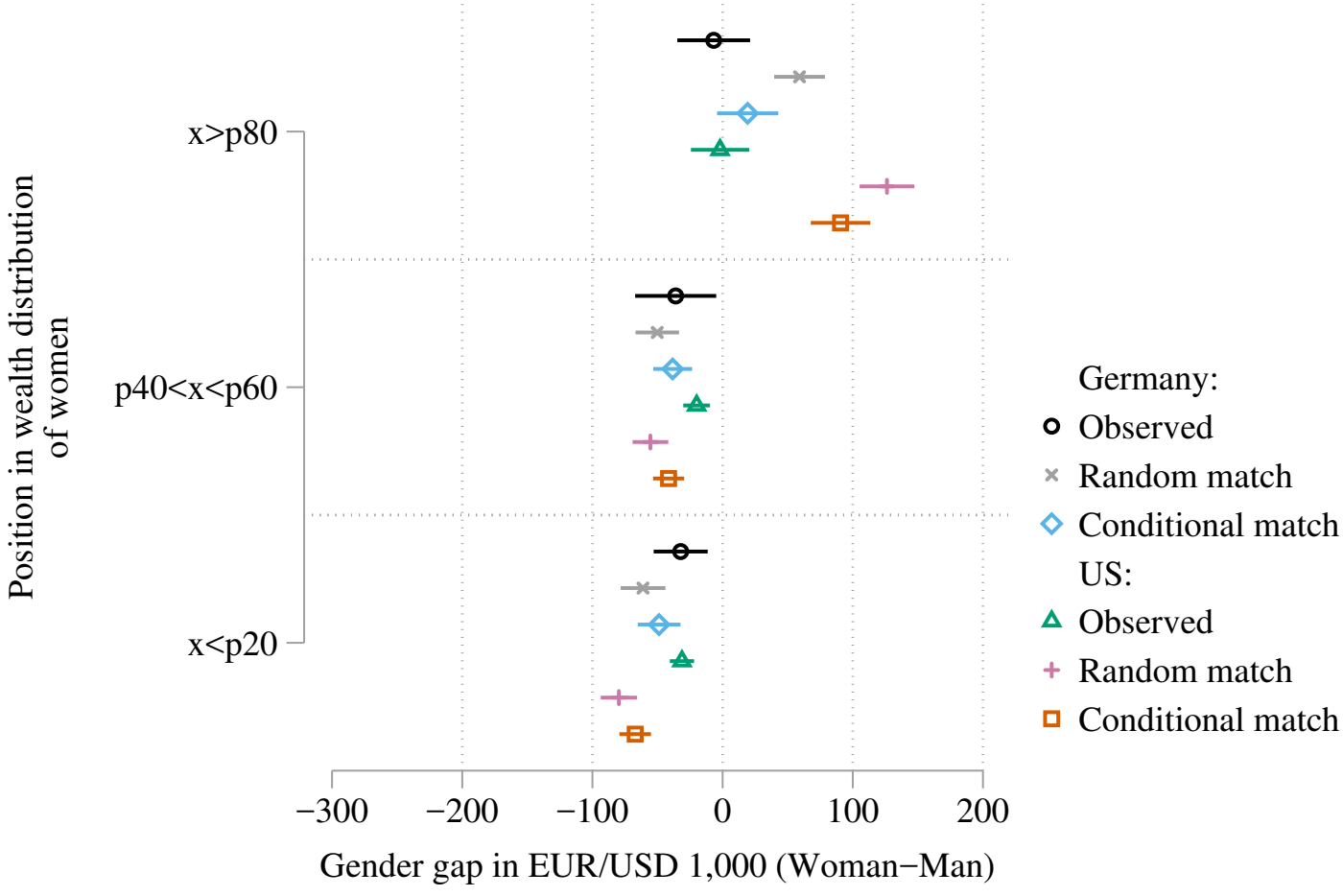
Data: SOEP v32.1 (wealth data v29); SIPP 2008

Comparison of distributions (relative)



Data: SOEP v32.1 (wealth data v29); SIPP 2008

Absolute within-household differences



Data: SOEP v32.1 (wealth data v29); SIPP 2008