

Assortative Mating, Intergenerational Mobility of Women and Inequality

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- The rise in assortative mating is related to household income inequality
 - **Standard approach:**
Defining assortative mating by labor force characteristics of couples (e.g. wage, education)
 - **Intergenerational approach:**
To account for the social status of individuals we compare today's degree of assortative mating with the mating pattern of **partner's fathers**
- ⇒ Influence of assortativeness on inequality can be neglected but inequality is influenced by a change in **women's labor market characteristics**

Assortative Mating - Contribution

We are contributing to the recent discussion of assortative mating by combining three strings of literature:

- ➊ Assortative mating and intergenerational transmission:
 - Ermisch et al (2006), Charles et al (2013)
- ➋ Assortative mating and inequality
 - Fernández et al (2005), Frémeaux & Lefranc (2017)
- ➌ Assortative Mating and female labor supply
 - Greenwood et al (2014), Pestel (2017)

⇒ First, we will analyze assortative mating and **account for intergenerational transmission**

⇒ Secondly, we derive the **different factors influencing inequality** by using a reweighting approach

Different methods to measure assortative mating:

- 1 Share of couples with same level of education
- 2 Regression approach including husband's education and year dummies with interaction terms (Greenwood et al (2014)) :

$$E_{py}^w = \alpha + \beta E_{py}^m + \sum_{t \in T} \gamma_t \times E_{py}^h \times Y_{py} + \sum_{t \in T} \theta_y \times Y_{ty} + \varepsilon_{py}$$

with E: years of education, w: women, h: men, y: year, p: couple,

β : Degree of assortative mating base year,

γ : Yearly change in assortative mating

Inequality analysis: Reweighting

- We use a reweighting approach introduced by DiNardo, Fortin et al. (1996) and Biewen (2001) to analyze the counterfactual distribution of household income if a certain variable or a set of variables remains stable:

$$f_t(I) = \int_z dF(I, z \mid t_{I,z} = t; \delta_t) \equiv f(I; t_I = t, t_z = t, \delta_t)$$

- This leads us to the reweighting function to calculate the counterfactual distribution:

$$\psi_z(z) \equiv \frac{dF(z \mid t_z = 2013)}{dF(z \mid t_z = 1984)}$$

- Variables: Assortative Mating, Intergenerational Transmission, Education, Hours worked
- **Caution:** Path dependent

United States

- Data: Panel Studies of Income Dynamics (PSID) for the years 1976 - 2015
- \approx 1500 - 2000 couples per year

Germany

- Data: German Socio-Economic Panel (SOEP v32) for the years 1984 - 2013 (West Germany)
- \approx 800 - 2000 couples per year

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Restrictions:

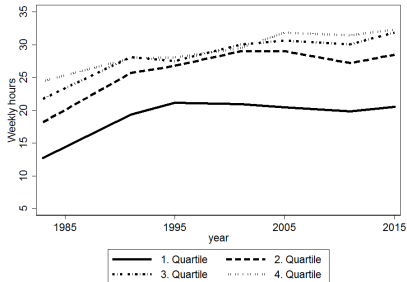
- Married and non married couples living in one household
- Women & men - Age 30-59
- Excluded if still in school or training

Variables:

- Mating variable: Education in years
- Aggregated income: Gross income of both individuals
- Household sample weights

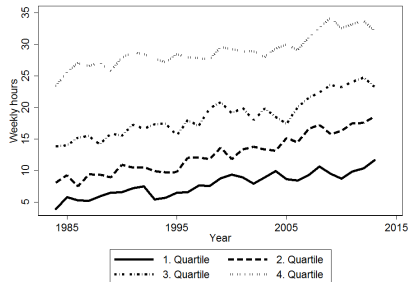
Female Labor Force Participation

US



Source: Authors' calculations based on PSID

Germany

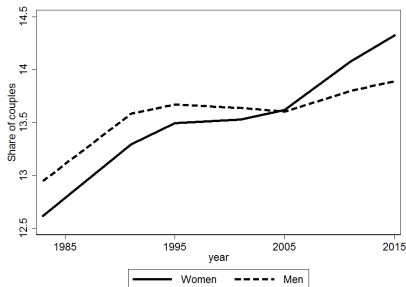


Source: Authors' calculations based on SOEPv.32

Position on household income distribution is highly influenced by women's labor market participation

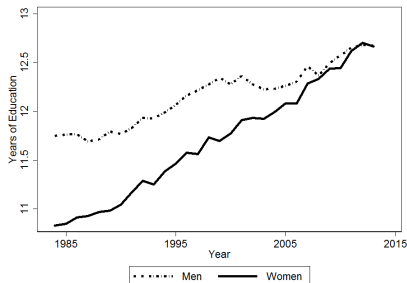
Average education

US



Source: Authors' calculations based on PSID

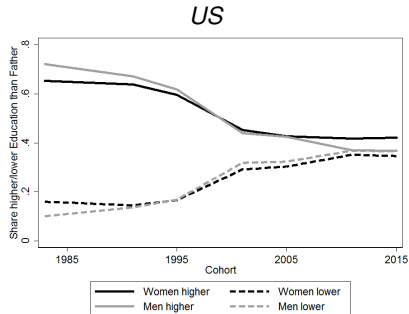
Germany



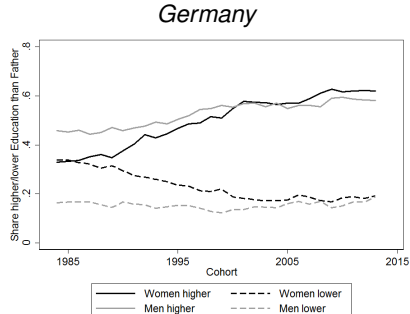
Source: Authors' calculations based on SOEPv.32

Steep increase in education, especially for women

Intergenerational mobility



Source: Authors' calculations based on PSID



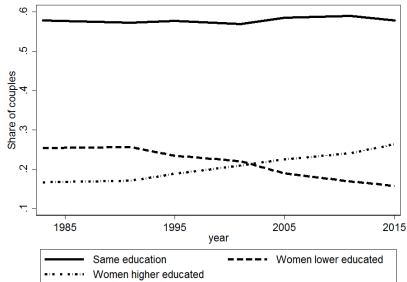
Source: Authors' calculations based on SOEPv.32

Different patterns of upward and downward mobility over time in US and Germany

Assortative Mating

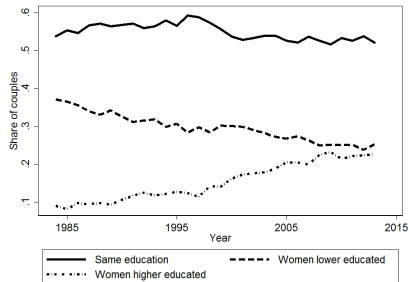
Share of couples with the same or lower/higher level of education

US



Source: Authors' calculations based on PSID

Germany

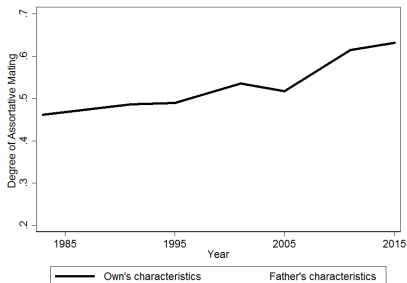


Source: Authors' calculations based on SOEPv.32

Assortative Mating

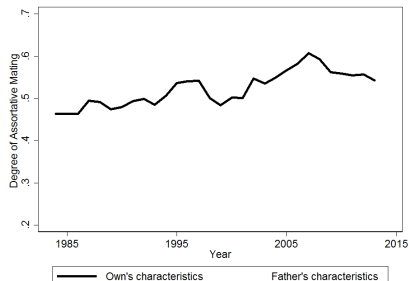
Degree of assortative mating $\beta + \gamma_t$

US



Source: Authors' calculations based on PSID

Germany



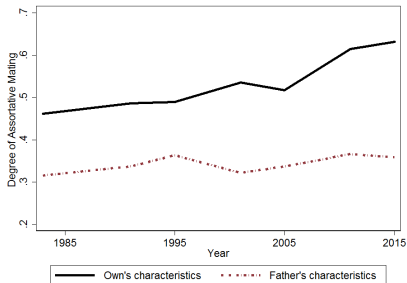
Source: Authors' calculations based on SOEPv.32

→ Increase in educational homogamy

Assortative Mating

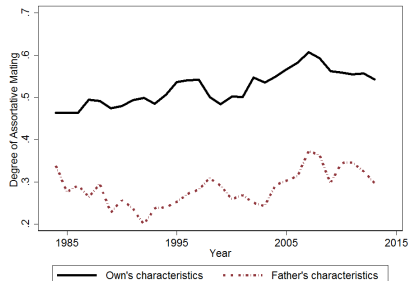
Degree of assortative mating $\beta + \gamma_t$

US



Source: Authors' calculations based on PSID

Germany

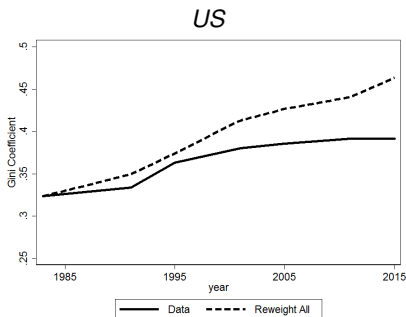


Source: Authors' calculations based on SOEPv.32

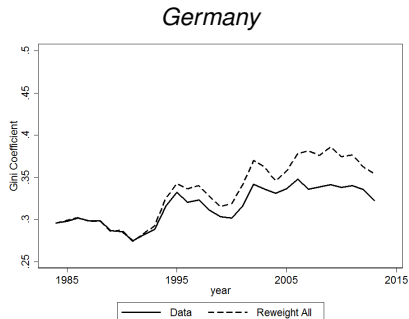
- Increase in educational homogamy
- No change in social composition of couples

Inequality and female characteristics

Counterfactual Gini holding distribution of education, intergenerational transmission, labor force participation and assortative mating **constant**:



Source: Authors' calculations based on PSID

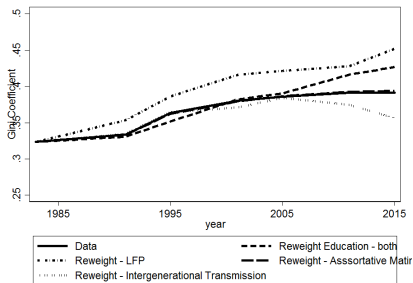


Source: Authors' calculations based on SOEPv.32

Inequality and female characteristics

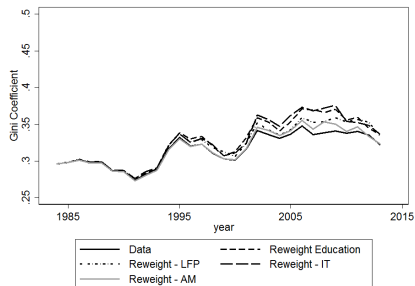
Counterfactual Gini holding distribution of education, intergenerational transmission, labor force participation and assortative mating **constant**:

US



Source: Authors' calculations based on PSID

Germany

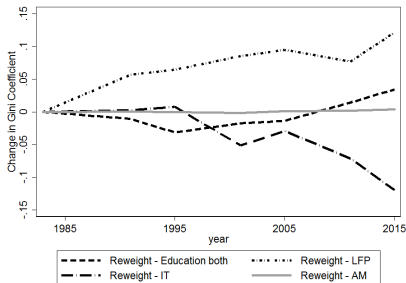


Source: Authors' calculations based on SOEPv.32

Inequality and female characteristics

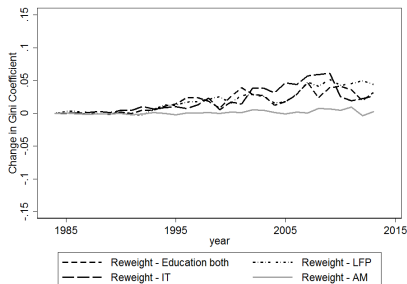
Average effects of changing characteristics

US



Source: Authors' calculations based on PSID

Germany



Source: Authors' calculations based on SOEPv.32

→ Keeping women's labor market characteristics constant, leads to more inequality in couples' income

Assortative Mating:

- We show an increase in educational homogamy of couples both for the US and Germany
- **But:** Looking only at the degree of educational homogamy of this generation, the effect of assortative mating on social mobility and inequality would be overestimated
- Taking the social background of both partners into account we do not see a change in the mating structure
- Increase is driven by rise of female education but does not show a change in socioeconomic mating patterns

Inequality:

- Increase in assortative mating does not lead to an increase in inequality
 - Varying findings on the influence of education:
 - Negative effect in US
 - Positive effect in Germany
 - For both countries: Women's increase in working hours decrease inequality
- ⇒ Flexibility of women's working hours equalize couples' income

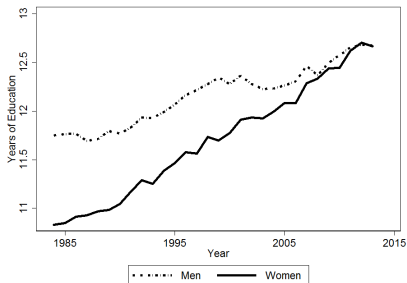
Thank you for your attention!

miriam.wetter@fu-berlin.de

- **years of education= years of schooling + years of occupational training**
- **schooling**
- no degree = 7 years
- lower school degree = 9 years
- intermediary school = 10 years
- degree for a professional coll. = 12 years
- high school degree = 13 years
- other = 10 years
- **additional occupational training (includes universities)**
- apprenticeship = 1.5 years
- technical schools (incl. health) = 2 years
- civil servants apprenticeship = 1.5 years
- higher technical college = 3 years
- university degree = 5 years

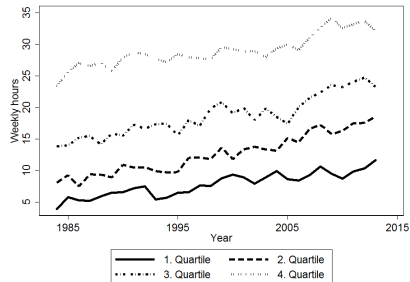
Women's labor market characteristics - Germany

Average years of education



Source: Authors' calculations based on SOEPv.32

Average hours worked

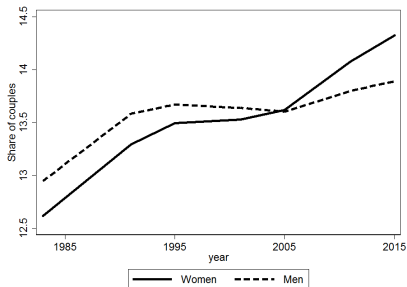


Source: Authors' calculations based on SOEPv.32

Position on household income distribution is highly influenced by women's labor market participation

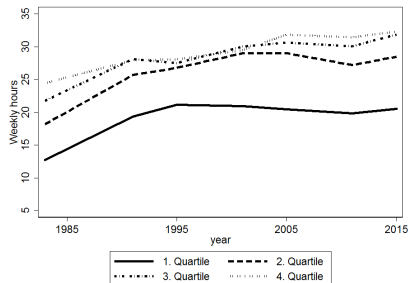
Women's labor market characteristics -US

Average Education



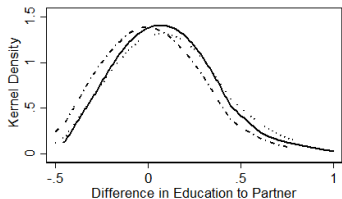
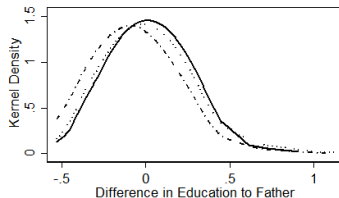
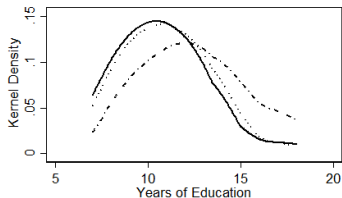
Source: Authors' calculations based on PSID

Hours worked



Source: Authors' calculations based on PSID

Reweighting



— 1984
- - - 2013
... 2013 reweight to 1984

Source: Authors' calculations based on SOEPv.32

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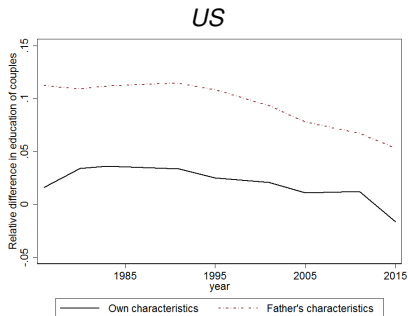


Berlin

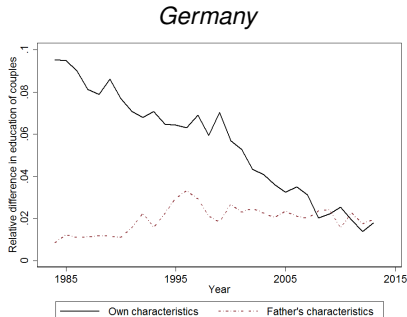
AM- relative difference education

Relative difference of the couples education level:

$$\delta_{py} = \frac{E_{py}^m - E_{py}^w}{E_{py}^w}$$

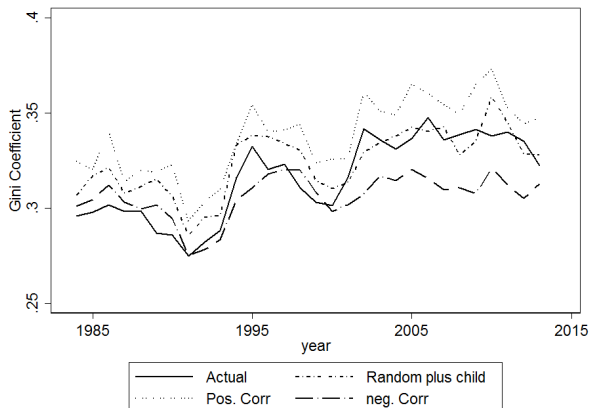


Source: Authors' calculations based on PSID



Source: Authors' calculations based on SOEPv.32

Assortative Mating and Inequality



Source: Authors' calculations based on SOEPv.32

→ Only little influence of assortative mating on couples' income inequality