

Television and the Labor Market: Evidence from Natural Experiments in West and East Germany



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Abstract

Television is a major spare-time activity with the potential to lower economic activity but also to manipulate behavior by changing preferences and social norms through role models. We study two natural experiments which provide variation in access to television broadcasts. We find that both commercial TV in West Germany and socialist TV in East Germany increase the female labor supply. This employment premium has limited monetary consequences for females, but it can explain a substantial portion of the reduction in the labor supply gap over two decades. As the most likely mechanism, we isolate role models on TV.

The Economic Problem

- Watching TV is one of the most common leisure activities in Germany (144 min./day in 1988 and 223 min./day in 2016)

- During the same period, female labor force participation increased sharply

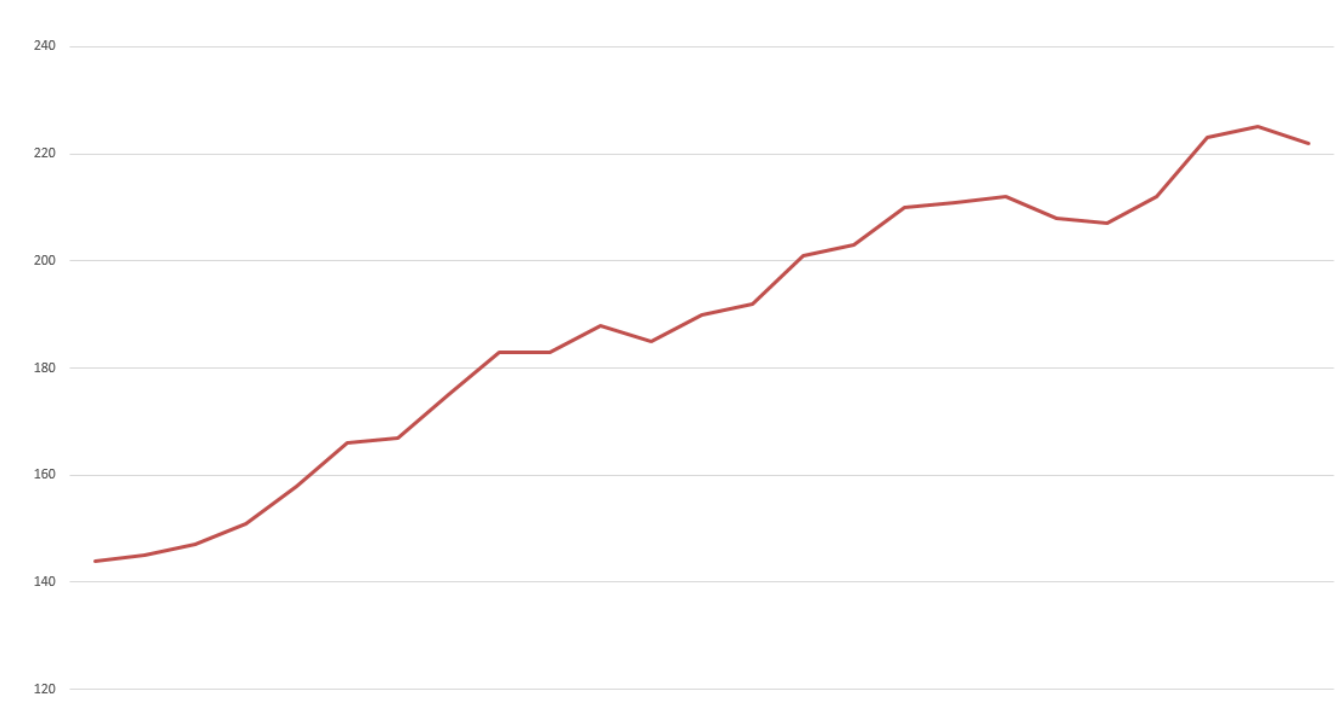


Figure 1. Average TV Consumption in Germany

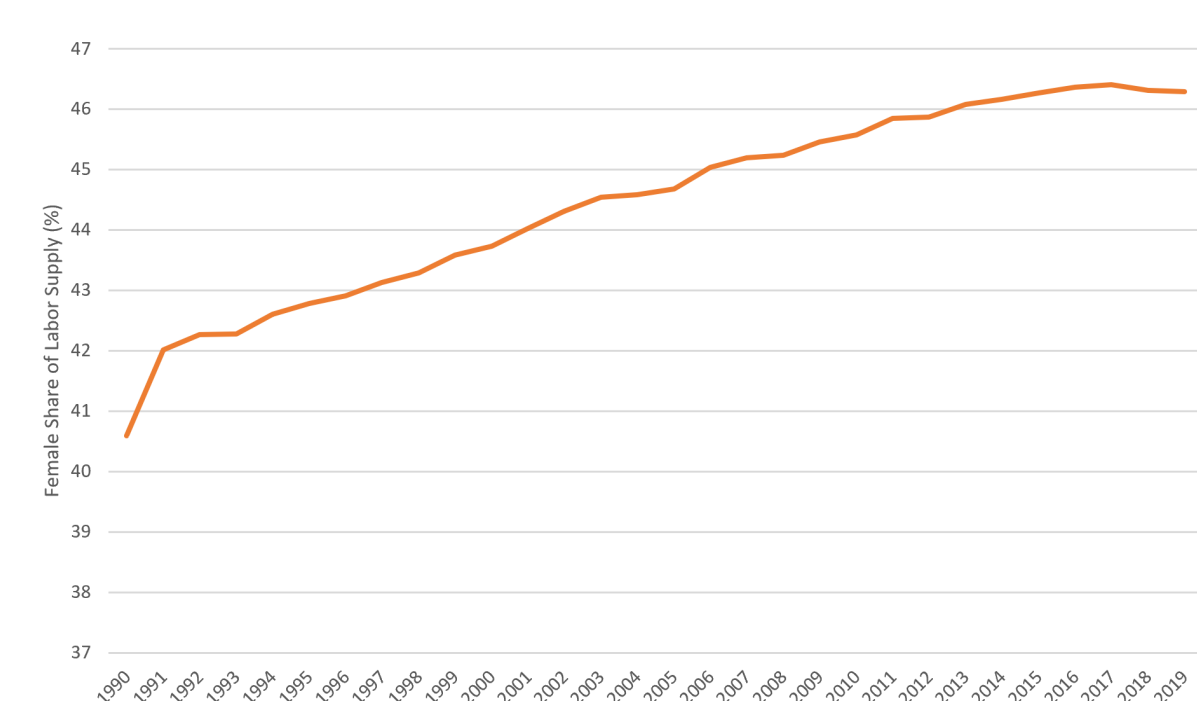


Figure 2. Share of female labor supply in Germany

- TV can alter consumer preferences (Bursztyjn and Cantoni 2016; Baker and George 2010) and gender-specific behavior such as fertility choices (La Ferrara et al. 2012), divorces (Chong and La Ferrara 2009), and female autonomy (Jensen and Oster 2009)

- Scant evidence for TV impacts on the labor market

- Our **research questions**:

1. Are TV and labor substitutes or complements?

↓ Available time, health

↑ Consumption and partner preferences, rest, *social norms*

2. What role does gender play?

Mechanism: *Role models on TV* may matter

West Experiment

Background

- Public TV towers were built in the 1960s

- In 1988, previously banned commercial TV was allowed to be aired on left-over frequencies of public TV towers (Fig. 3)

- Public TV: conservative image of women with focus on male-breadwinner

- Commercial TV: more modern image of women



Public TV

Commercial TV

Data

German Socioeconomic Panel (GSOEP)

- Large-scale representative panel of the German population

- Individual-level data on labor market outcomes (1985-1993) merged with signal calculation on the county level from official records

Official records on TV stations

- Tower information: location, height, radiation pattern

- Commercial TV signal calculated based on Irregular Terrain Model

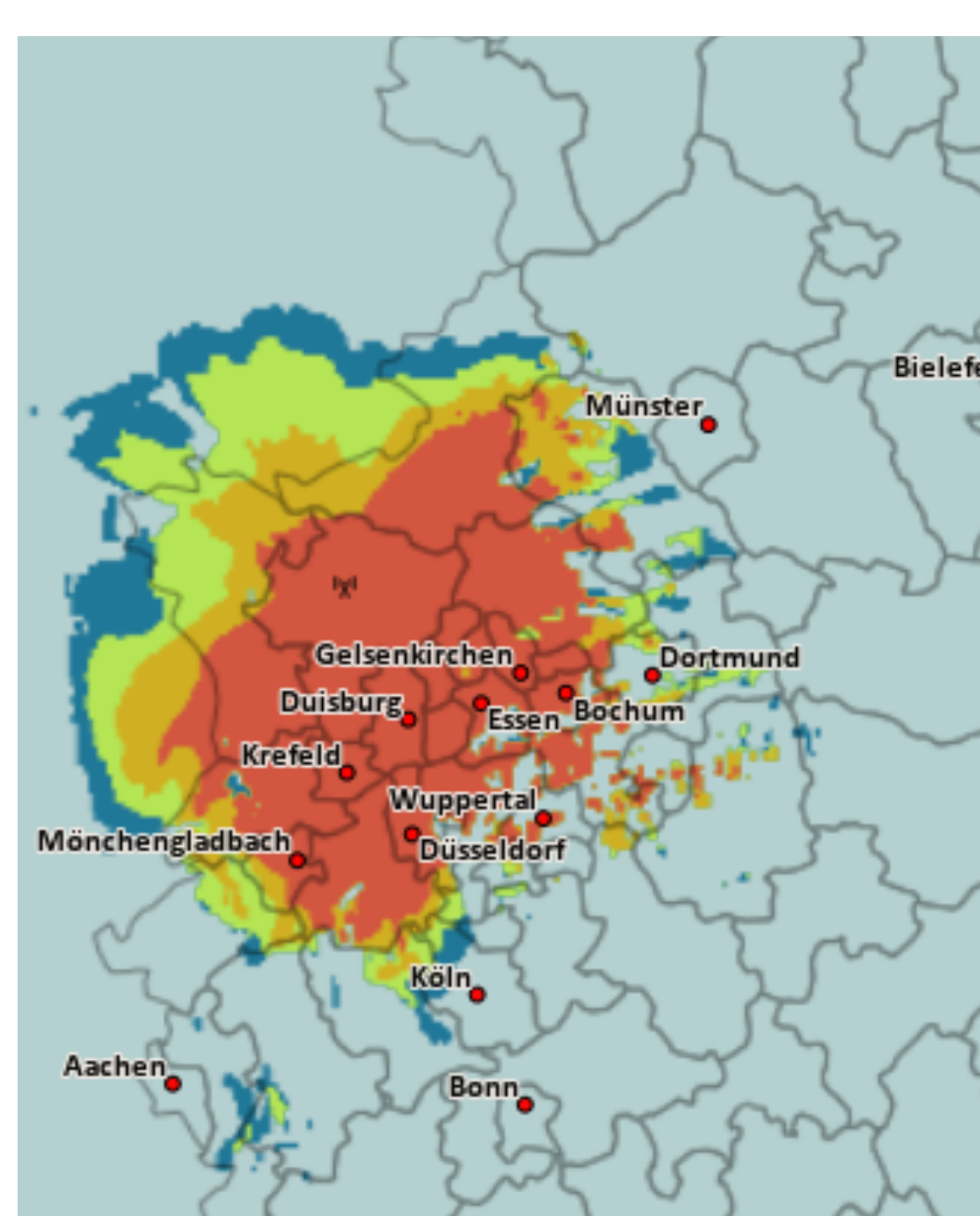


Figure 3. Commercial TV Signals in West Germany (1989)

Identification and Estimation

Variation: Individuals who live in one county receiving a change in the commercial channel signal vs. those that do not.

$$Y_{it} = \beta_1 CTV_{it} + \beta_2 X_{it} + \alpha_i + \alpha_t + \varepsilon_{it}$$

- Y_{it} labor market outcome

- CTV_{it} binary for commercial TV reception

- X_{it} vector of covariates

- α_i individual fixed effects

- α_t time fixed effects

East Experiment

Background

- Before 1990, Western public TV frequencies aired across to Eastern Germany, but they could not reach a region called Valley of the Innocent, which only received Eastern socialist TV (Fig. 4)

- Western public TV: conservative depictions of women

- Eastern Socialist TV: focus on equality between men and women and the integration of women into the labor force



Socialist TV

Data

- GSOEP (1990-2009)

- Signal simulation from Crabtree et al. (2015)

Identification and Estimation

Variation: Individuals who live in East Germany with access to Western public TV vs. those who received only socialist TV.

$$Y_{it} = \beta_1 STV_i + \beta_2 X_{it} + \alpha_t + \varepsilon_{it}$$

- Y_{it} labor market outcome

- STV_i binary for Socialist TV only

- X_{it} vector of covariates

- α_t time fixed effects

Figure 4. Western Public TV Signals in East Germany

Results

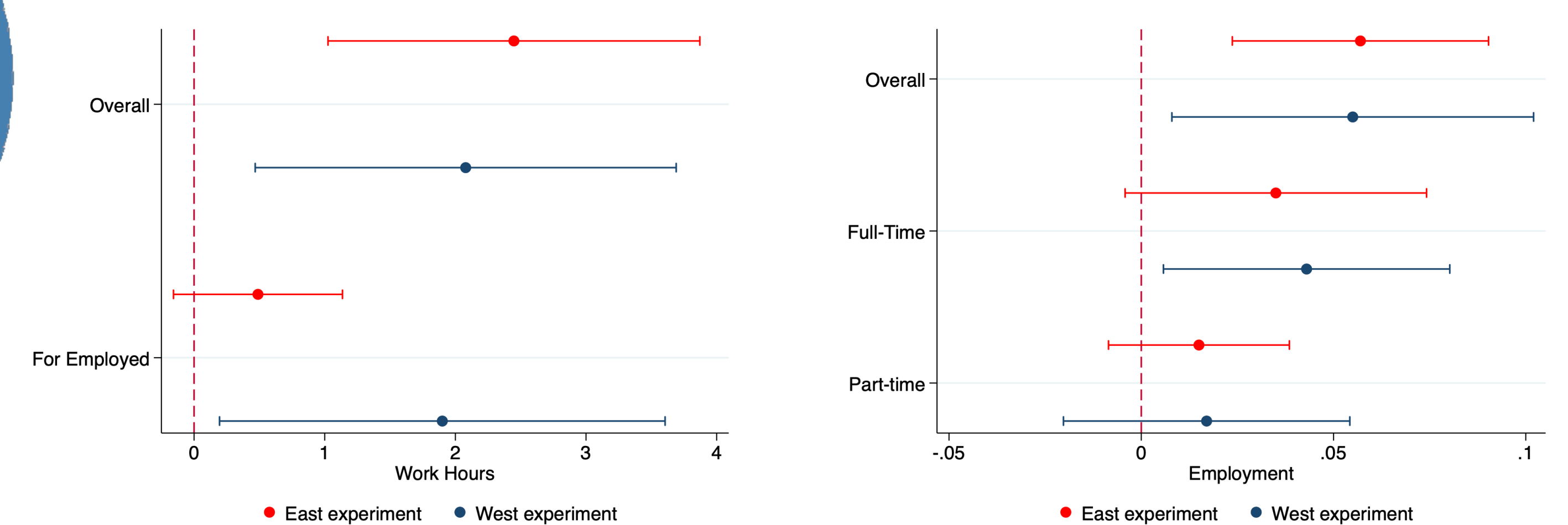


Figure 5. Treatment effects for female labor supply

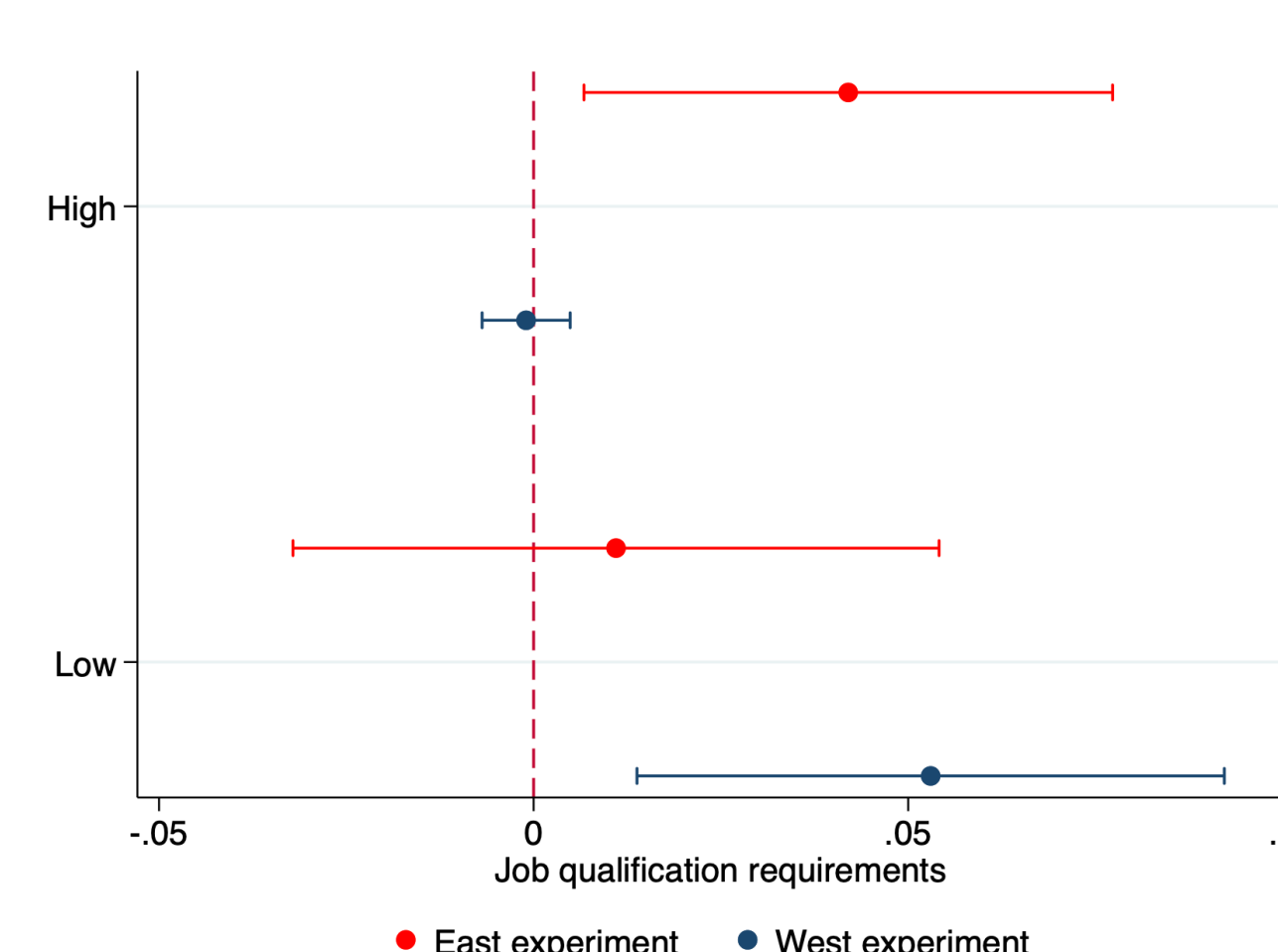


Figure 6. TV and job qualification requirements

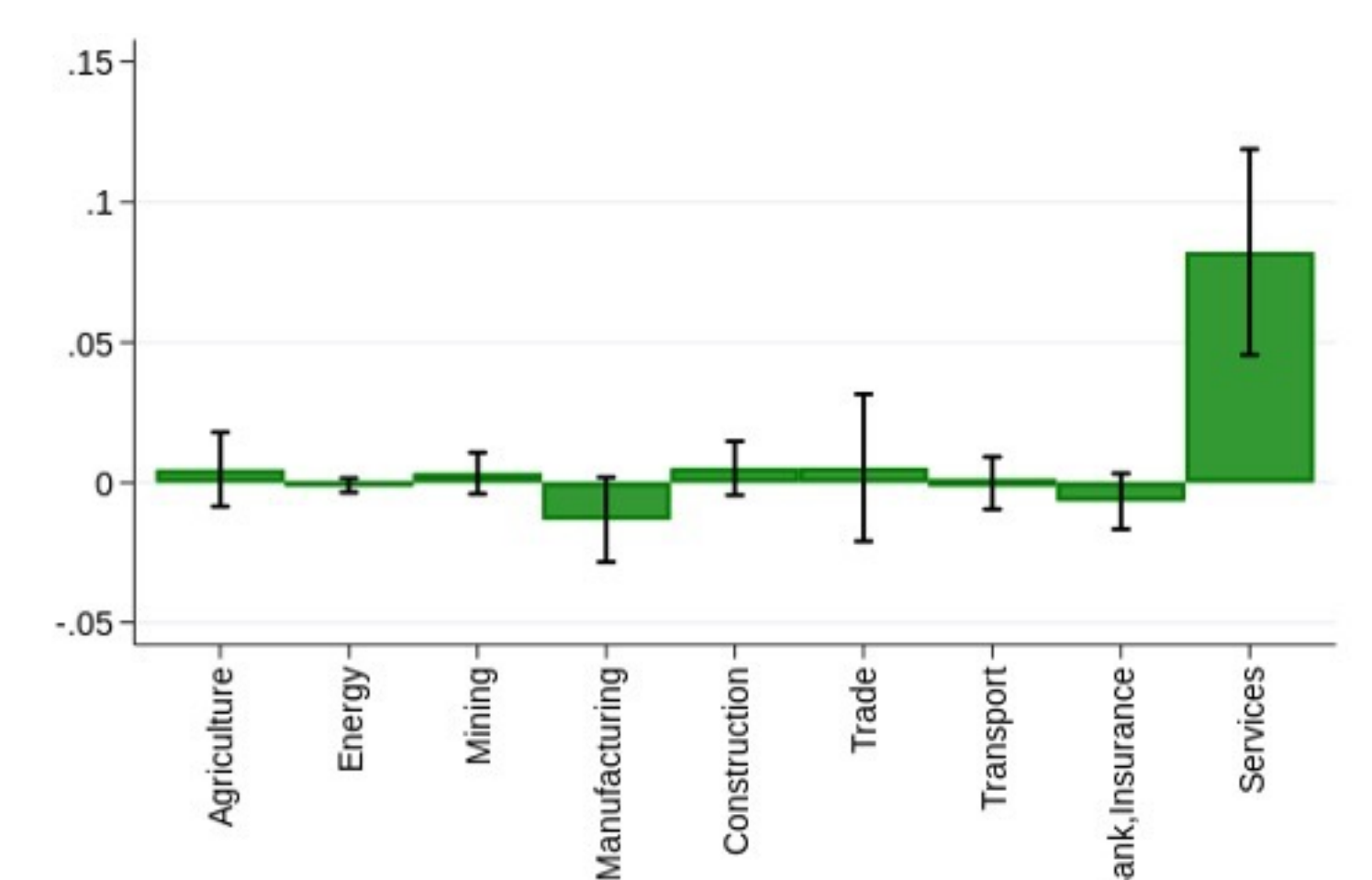


Figure 7. Socialist TV and occupational choices of females

Further results

- Commercial TV increases how meaningful work is among female respondents
→ consistent with **role models** on TV

- Females living in areas with only Socialist TV reception hold more **egalitarian attitudes** towards roles for women in the family and the labor market.

- Our findings in both experiments point to limited TV effects on income levels.

Conclusion

Key findings

- Western commercial and eastern socialist TV both increase the female labor supply in Germany (TV and labor supply are complements in these settings)

- TV can explain **one third** of the drop in the gender labor supply gap

- The effects are consistent with **role models on TV**

Broader Implication

- More women joining the labor force

- Women end up in social jobs that are not high-paying jobs,

→ the labor supply gap dropped over decades,

→ while the gender wage gap barely changed