

Women, War & Work: Female Labour in Bavaria during the First World War



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1. Historical Background

Female labour force participation expanded rapidly in the early-20th century.

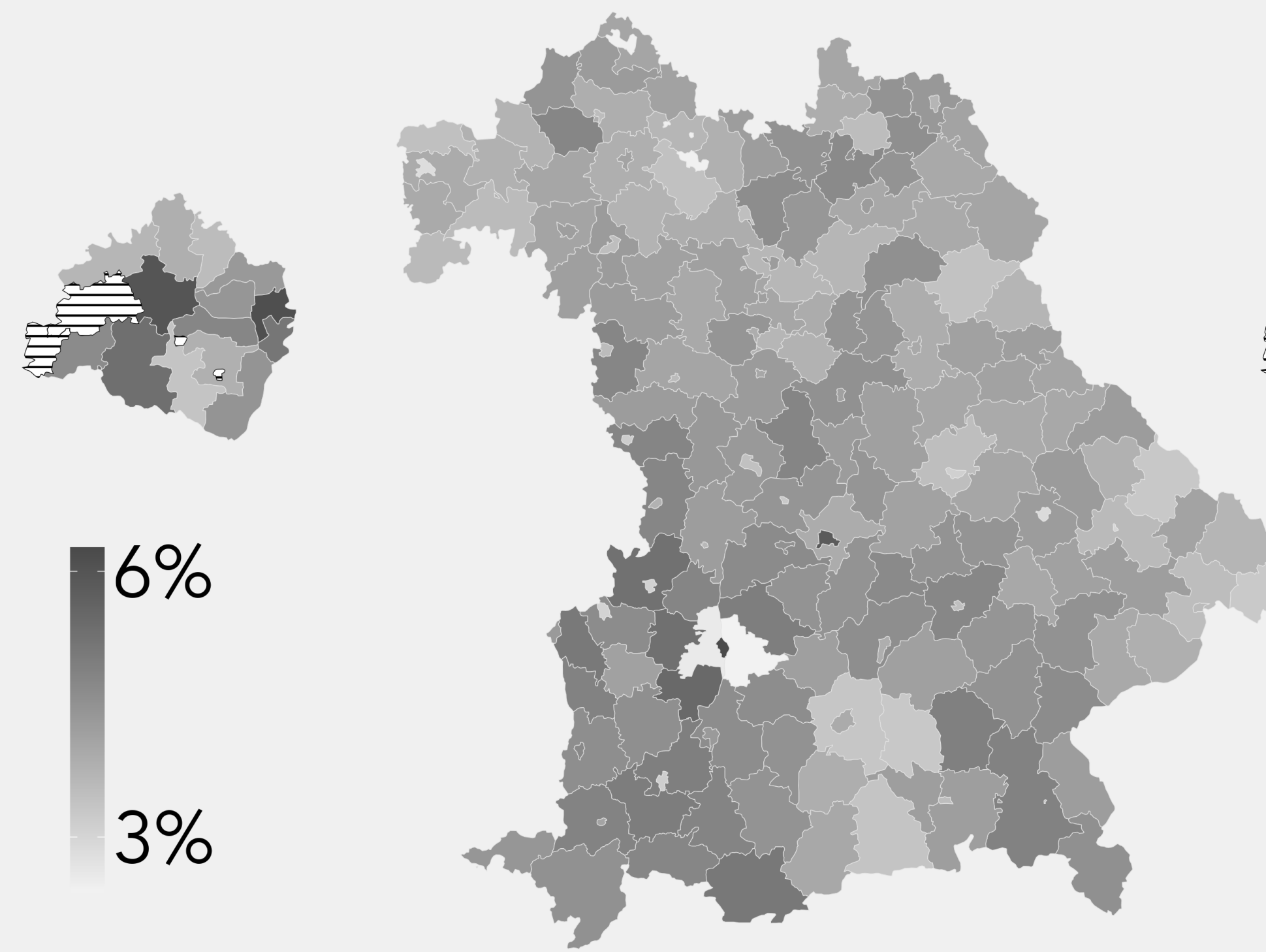
What is the impact of wars?

“Missing Men” during the First World War: Over 1 million mobilised in Bavaria and 137,000 casualties

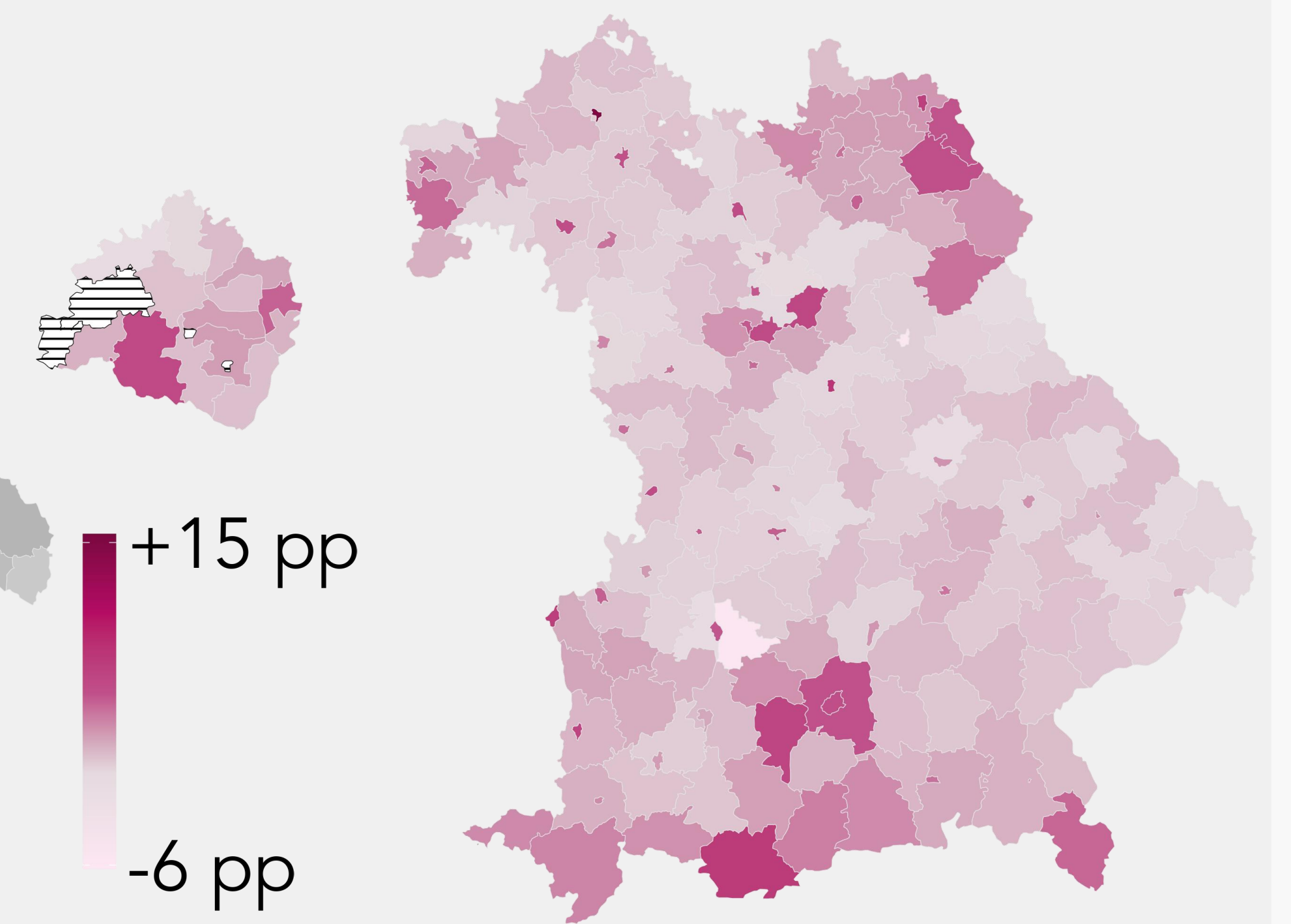
The German state actively incorporated women into the war economy (“home front”)

- Shift from agriculture and domestic service into industrial production
- Temporary substitution or structural change?

Military Death Rate (MDR) 1914-1918



Change in Female Labour Force Participation (FLFP) 1907-1925



Research Question: How did local variation in military death rates (MDR) affect female labour force participation (FLFP) in Bavaria?

2. Data & Methodology

County-level data: Occupation Census (1907, 1925) and Population Census (1910, 1925)

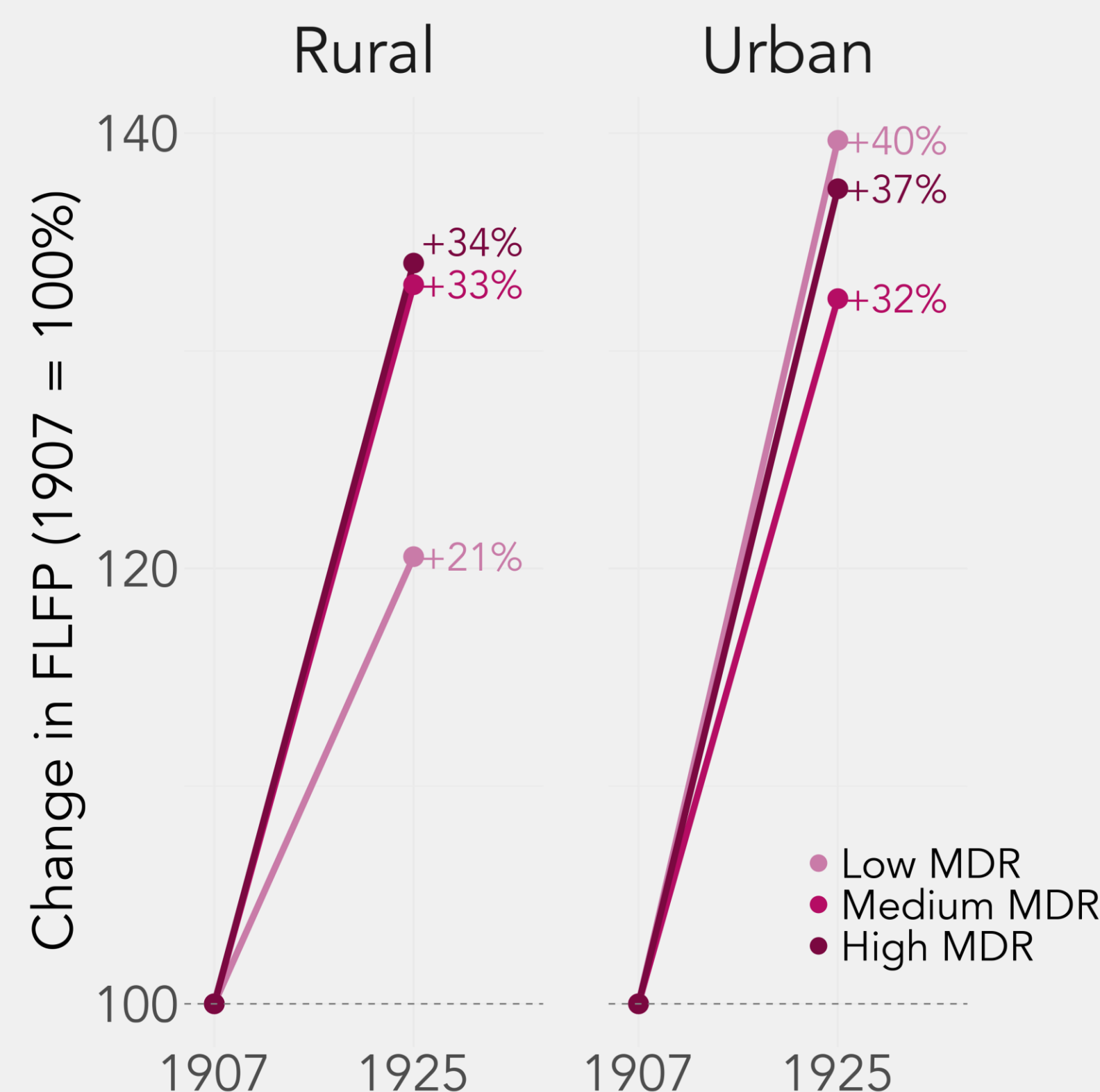
- Occupation data: Excluding agriculture
- 204 counties

Firm-level data: “Women in the Bavarian War Industry 1917”

- 724 Bavarian firms, information on more than 89,000 women on their working conditions and demographics
- Aggregated to county-level (N=93)

Methodology: OLS regressions of Δ FLFP on county-level military mortality rates, including controls

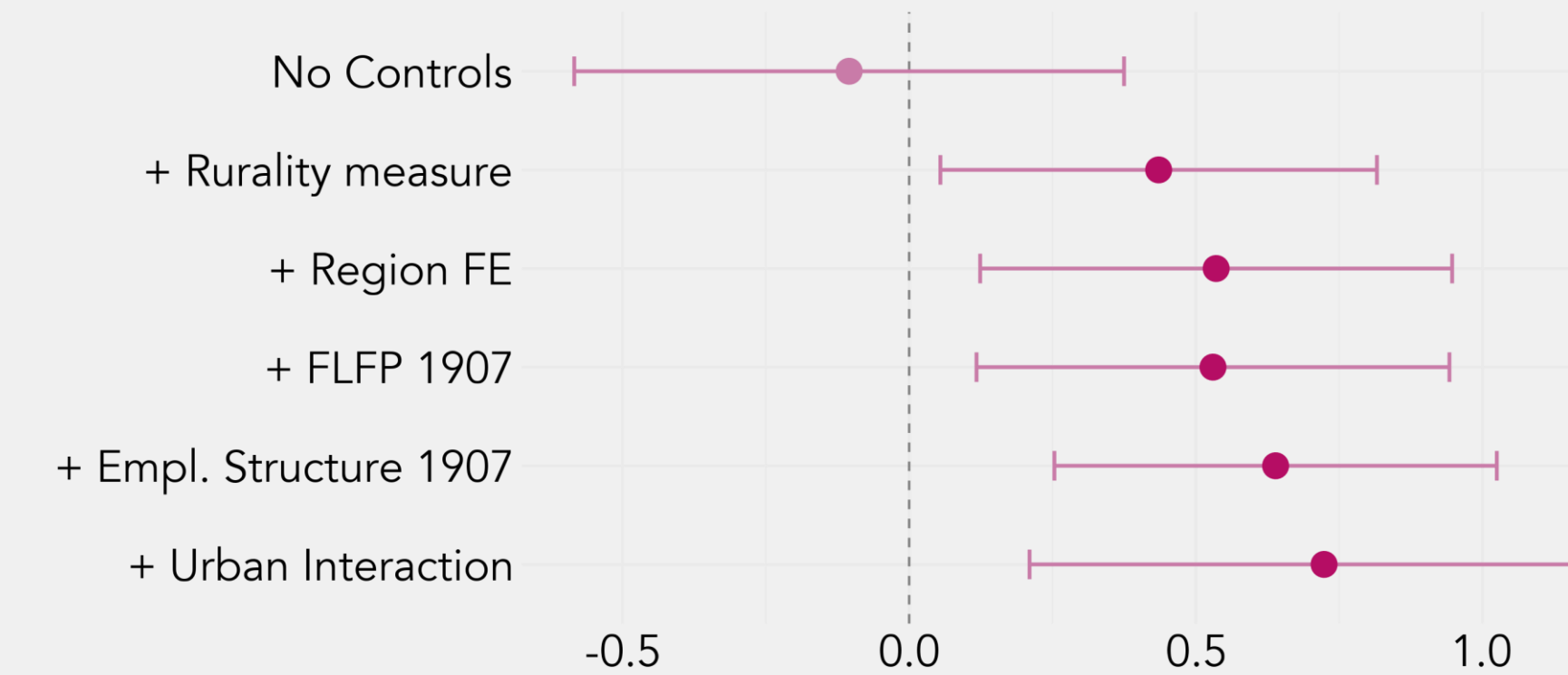
3. Main Results



Rural: FLFP increases more in counties with high MDR, despite similar starting levels (3.0–3.5% FLFP in 1907).

OLS-Coefficients of Δ FLFP on MDR

95% confidence intervals

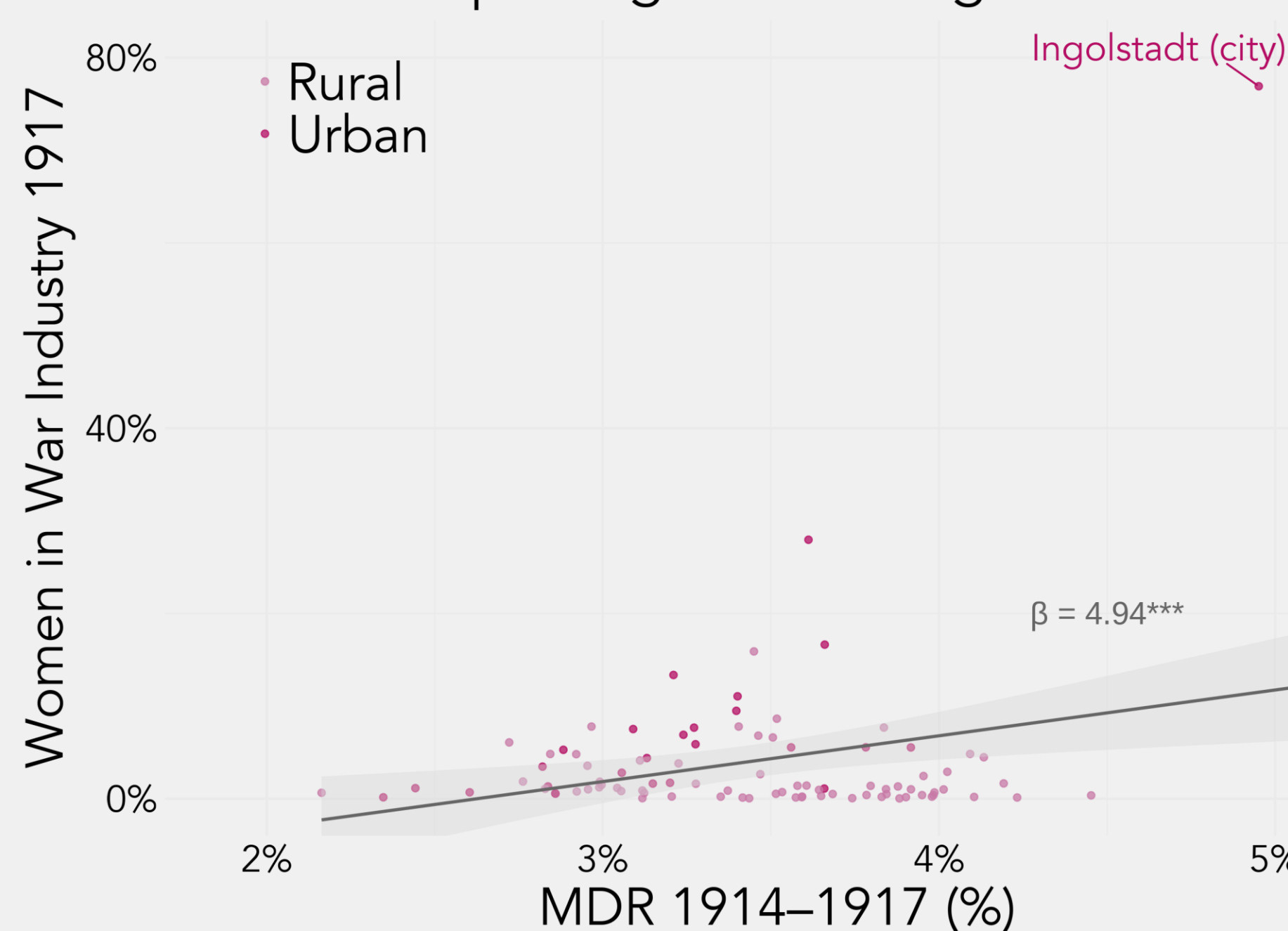


FLFP 1907 and MDR: Pre-war relationship?

	Dependent variable: FLFP 1907		
MDR	-1.156** (0.402)	0.112 (0.286)	0.061 (0.204)
Urban Dummy	0.064*** (0.004)		
Rurality measure 1907	-0.198*** (0.008)		
Observations	204	204	204
R ²	0.039	0.557	0.768

4. Potential Mechanisms

Replacing the Missing Men?



Labour market tightness

Counties with more missing men, particularly urban and industrial ones, employed more women in the war industry.

Financial necessity (loss of the breadwinner)

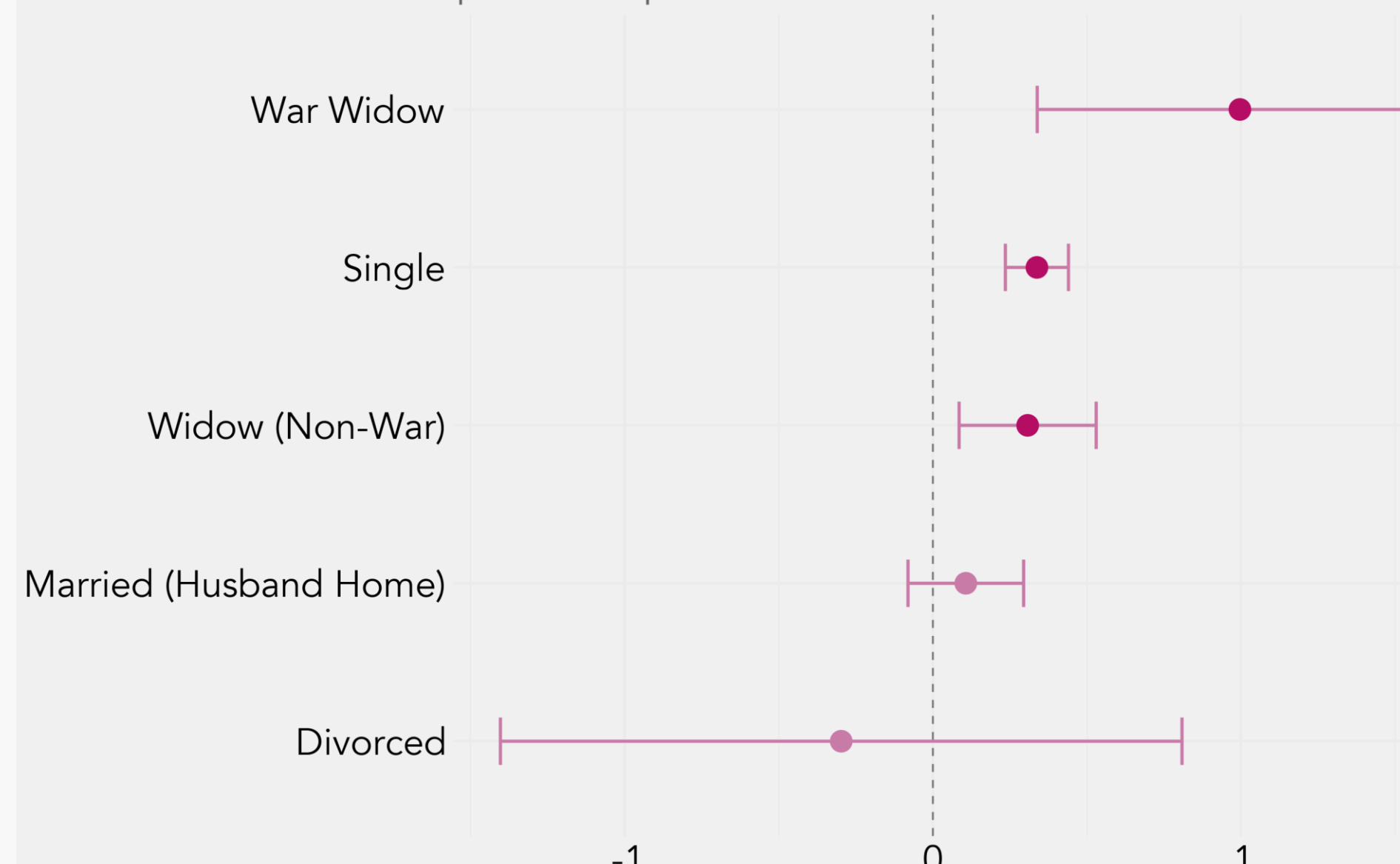
Firms with more war widows had a higher share of first-time labour market entrants.

Marriage market disruptions

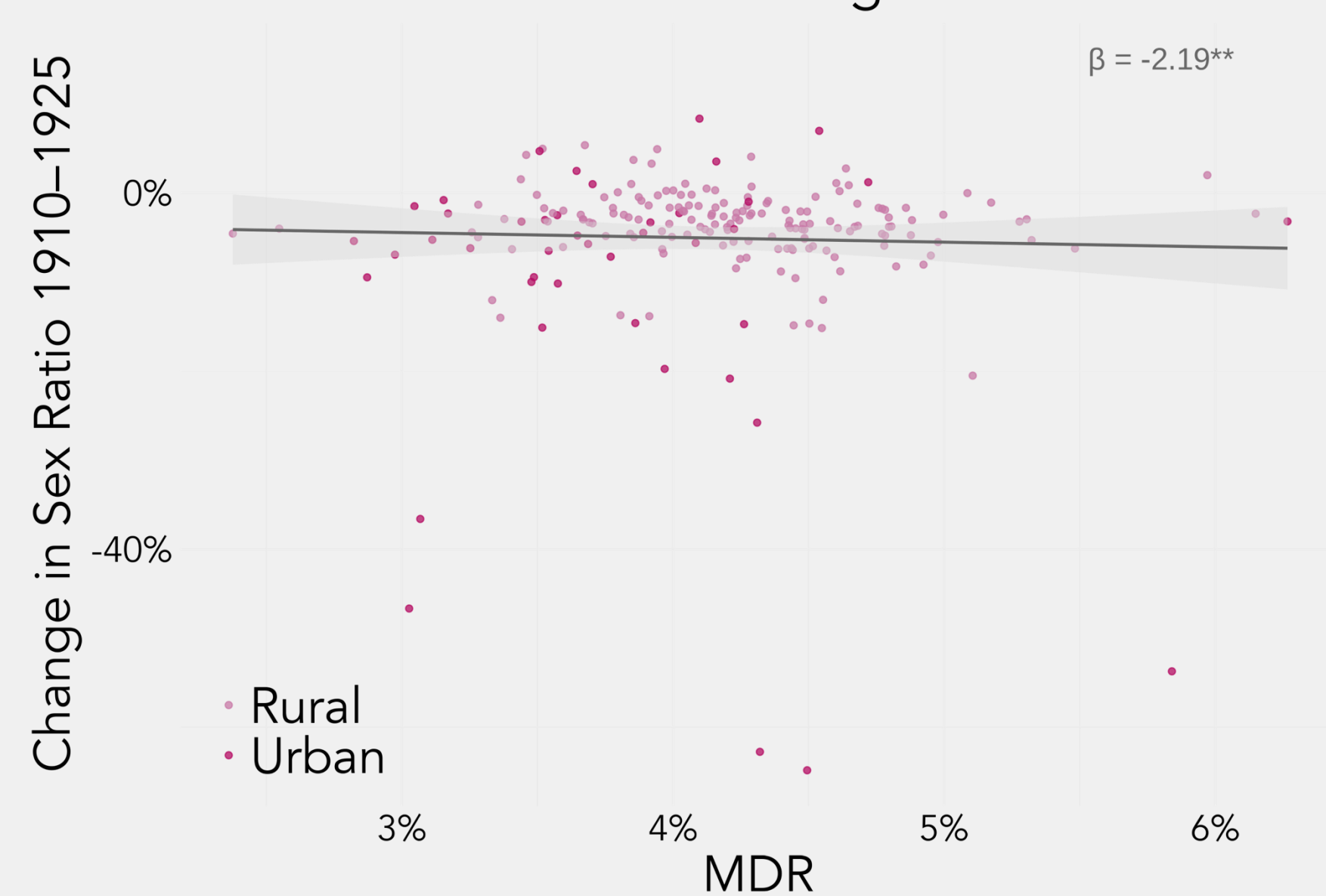
Higher male mortality shifted local sex ratios, potentially reduced marriage prospects, and increased the need for long-term female economic self-sufficiency.

War Widows Entered the Workforce for the First Time

Effect on share with no prior occupation | Ref: War Wives | 95% CI



Skewed Sex-Ratio: Marriage Market Effects?



5. Outlook

Expand temporal and regional coverage:

- Extend to Weimar Germany
- Add long-run dimension: 1882-1933 occupational censuses and wartime counts (1916, 1917)

Disentangle labour market mechanisms:

- Separate mobilisation (absent men) from casualties (permanent losses)
- Compare female labour with alternative substitutes: prisoners of war, non-draftable men and mechanisation
- Investigate sectoral heterogeneity in female labour responses

Demographic adjustments:

- Incorporate marriage market dynamics (sex ratios, marriage frequency and age at marriage)
- Expand control set: pre-war structure, age composition, religion, draft exemptions