

PPE Interdisciplinary Research Seminar on
LIMITS TO MARKETS

**Social Constraints and Discrimination in
Labour Markets**

Zaki Wahhaj

Social Constraints in Labour Markets

- **Discrimination:**
 - ... on the basis of race, gender, etc. What, in theory, drives discrimination on the labour market? What is the available evidence? What are the implications for policy?
- **Cultural Constraints:**
 - ... on female labour force participation. How, in theory, do these factors affect labour supply? What is the available evidence? What are the policy implications?

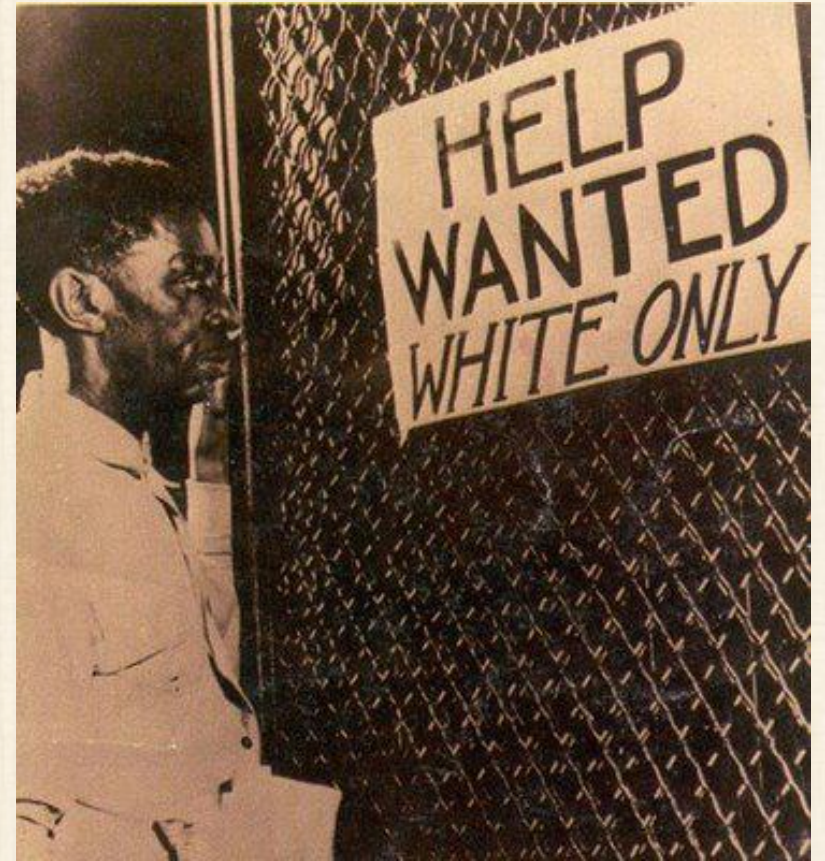
Labour Market Discrimination

“[In the United States] Before any legal steps were taken to address economic discrimination, it existed in perfectly open form, with no need for subtle economic analysis.

“... help-wanted advertisements stated racial preferences plainly ... it was simply well-known that most good jobs were not available to blacks.

“... such a widespread set of values is likely to change only slowly ... there is likely to be a large residue of discriminatory values ... even after ... 30 years since the passage of the passage of the Civil Rights Act.”

– Arrow (1998)



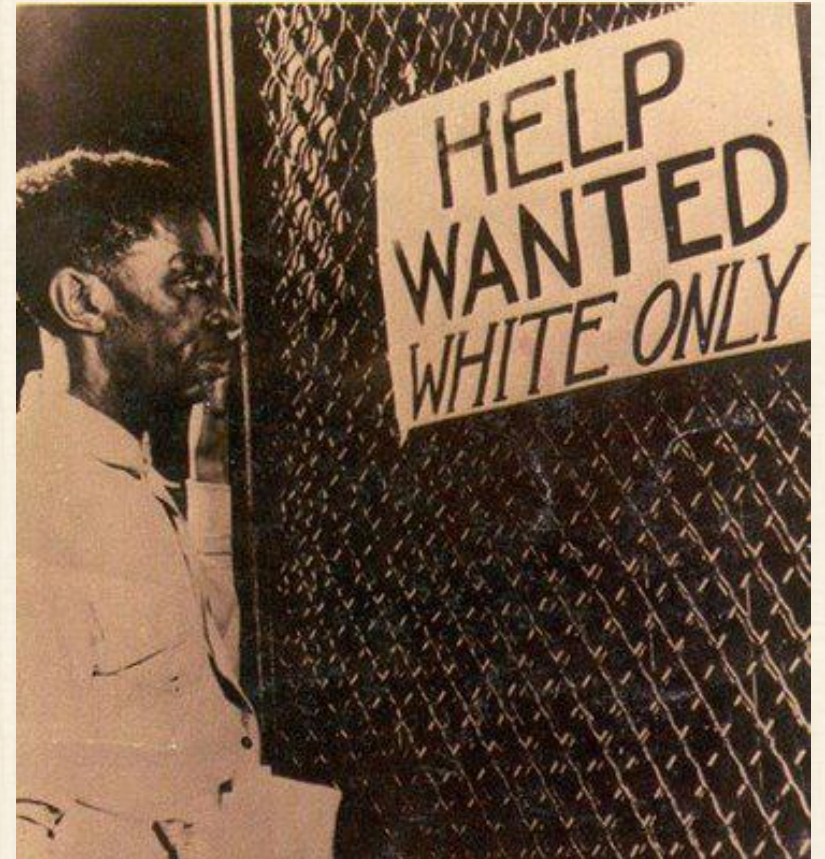
Labour Market Discrimination

“[In the United States] Before any legal steps were taken to address economic discrimination, it existed in perfectly open form, with no need for subtle economic analysis.

“... help-wanted advertisements stated racial preferences plainly ... it was simply well-known that most good jobs were not available to blacks.

“... such a widespread set of values is likely to change only slowly ... there is likely to be a large residue of discriminatory values ... even after ... 30 years since the passage of the passage of the Civil Rights Act.”

– Arrow (1998)



Racial Preferences

- The simplest approach to formally represent these 'values' in an economic model is to incorporate them into individual preferences.
- For example,

$$\begin{aligned}(X_1, Y_1) &> (X_2, Y_2) \\(X_1, Y_1, \text{White}) &> (X_1, Y_1, \text{Black}) \\(X_2, Y_2, \text{White}) &> (X_2, Y_2, \text{Black})\end{aligned}$$

where (X_1, Y_1) is a bundle of goods being produced, consumed, etc.

Discrimination in the Market Equilibrium

- Can there be **discrimination** on the labour market because of **racial preferences** among employers?
- Note: By 'presence of discrimination', we don't mean that *some* employers discriminate on the basis of gender, race, etc. (tautologically true, given our assumptions).
- Is there some aspect of the **labour market** (equilibrium) that **manifests** this **discrimination**? E.g. Do women get paid less than men? Are there some positions that go only to white workers and not to black workers?

Economics of Discrimination (Becker 1957)

- Standard Economic Approach: **Firms** make hiring decisions (and choose other production inputs) to **maximise profits**.
- **Racial preferences**: Firm owner incurs a '**disutility cost**' from hiring workers with certain racial characteristics (e.g. Black vs White), independently of productivity.
- If the market is **dominated by racist** firm owners:
 - Black must **accept a lower wage** to 'compensate' the firm for the 'disutility cost'.
 - => **Wage Differential** between (e.g.) White and Black Workers.
- But with sufficient # of non-racist firm owners:
 - willing to offer Black workers a higher wage than the racist firm owners.
 - If Black and White workers equally productive, non-racist firms obliged offer same wage (for given training, experience, etc.) due to competition.
 - => Segregation of workers by race across firms but no racial differences in wages.

Economics of Discrimination (Becker 1957)

- Standard Economic Approach: **Firms** make hiring decisions (and choose other production inputs) to **maximise profits**.
- **Racial preferences**: Firm owner incurs a '**disutility cost**' from hiring workers with certain racial characteristics (e.g. Black vs White), independently of productivity.
- If the market is **dominated by racist** firm owners:
 - Black must **accept a lower wage** to 'compensate' the firm for the 'disutility cost'.
 - => **Wage Differential** between (e.g.) White and Black Workers.
- But with sufficient # of **non-racist firm** owners:
 - willing to **offer** Black workers a **higher wage** than the racist firm owners.
 - If Black and White workers equally productive, non-racist firms obliged **offer same wage** (for given training, experience, etc.) due to competition.
 - => **Segregation** of workers by race across firms but **no racial differences in wages**.

Economics of Discrimination (cont'd.)

- If Black workers are a **small minority**: Labour market equilibrium with **racial segregation across firms** and no racial difference in wages.
- If Black workers are a **large part of the labour force**:
 - **Racist firms** effectively have a higher cost associated with hiring certain types of workers
 - Akin to having a **worse production technology** than non-racist firms.
 - Just like firms with poor technology, racist firms **cannot survive** market competition.
- Becker (Nobel Lecture, 1993):
 - “... helps explain why apartheid and other blatant forms of Afrikaner discrimination [in South Africa, where blacks are some five times as numerous as whites] were never fully effective and eventually broke down.”
 - But “employees and customers ... are far more important sources of discrimination than employers.”

Employee References

Ghatak and Wahhaj (2018):

- Even a small number of racist firms can lead to wage differential between Black and White workers if effort on the job is not well observed.
 - Employer observes **output** but not **effort** (**imperfectly correlated** with output)
 - At end of employment contract, employer writes reference based on output
 - **Good reference => improves next job prospect**
 - So prospect of good reference drives employees to exert effort.

Employee References (cont'd.)

- Let us suppose some employers have **racial preferences** => would not hire a Black worker even if he/she had a good reference.
- So a good reference is worth *less* to a Black worker than to a White worker.
- So a Black worker exerts *less* effort on the job.
- Knowing this, even **non-racist firms prefer** White workers to Black workers.
- This further **weakens incentives** of Black workers to exert effort on the job, etc.
=> Racial Discrimination by all employers
although only a small fraction have racial preferences.

Hailing a Taxi in New York

Example by Loury (1992):

- **Taxi-drivers** in certain areas of New York may be **reluctant to stop** for **black men** in the middle of the night.
- If this is commonly known, then **black men** who need to get somewhere would **not try to hail a taxi** in the middle of the night.
- Then the only black men who do may have other **(e.g. criminal) motives**.
- Then, the **prejudice** which caused taxi-drivers to be wary of black men in the middle of the night turns out to be **self-fulfilling**.
- It is difficult to remove the **prejudice** because it is **statistically correct**.

Statistical Discrimination

Arrow (1998):

- *“Suppose blacks and whites do in fact differ in productivity, at least on the average.*
- *“This is in turn due to some cause, perhaps quality of education, perhaps cultural differences; but the cause is not itself observable [in specific individuals].*
- *“Then the experience of employers over time will cause them to use the observable characteristic, **race, as a surrogate for the unobservable characteristics** which in fact cause the productivity differences.”*

A Model of Statistical Discrimination

Coate & Loury 1993:

- An employer has to allocate workers to **two types of task**, A and B. He prefers to assign **skilled workers** to task A and **unskilled workers** to task B.
- To determine the skill level of workers, he gives them a **test**.
- Only skilled workers pass the test and only unskilled workers fail it, but with **some probability**, both types of workers may have an **ambiguous result**.

Coate and Loury (cont'd.)

- Workers who pass the test will be assigned to task A.
- Workers who fail the test will be assigned to task B.
- But what about workers who have an ambiguous result?
- If the employer has a **prejudice that white workers are more likely to be skilled** than black workers, then he will assign white workers with ambiguous results to task A but black workers with ambiguous results to task B.
- If everyone is aware of this prejudice, then black workers have less **incentive to invest** in acquiring skills than white workers.
- Thus, the employer's prejudice becomes **self-fulfilling**.

Affirmative Action

- Suppose the government **requires** that employers hire the **same proportion of black and white workers** in each type of task.
- Since the employer believes that black workers have a lower skill level, he may **lower the threshold** for hiring black workers into task A to ensure he meets the target.
- In particular, he may begin to hire a portion of black workers who *fail* the test into task A (depends on parameter values).

Affirmative Action (cont'd.)

- Once again, this **weakens the incentive of black workers** to acquire the skill because they have a chance of being hired for task A even without it.
- Thus, the skill level of black workers remain low, and the employer's prejudice is again self-fulfilling.
- Thus affirmative action does not get rid of discrimination.

Evidence on Labour Market Discrimination

- Can we empirically detect labour market discrimination and the identify the drivers?
- The figure shows a large wage differentials across Black and White men in the US in the 1970s, and sharp declines during the 1990s.

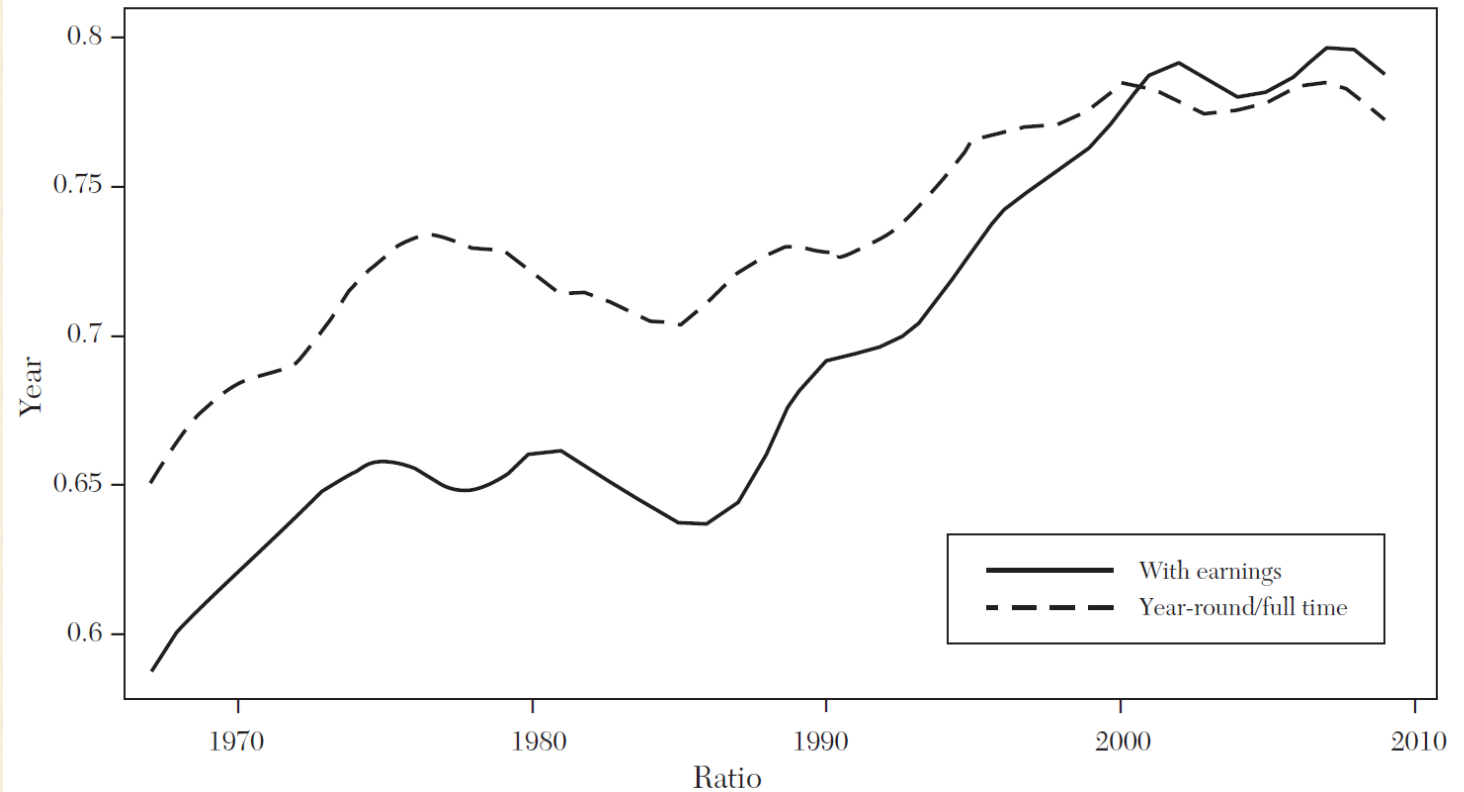


Figure 1. Ratio of Median Earnings: Black Men/White Men, 1967–2009

Racial Attitudes

- Also, steady decline in overtly expressed racial attitudes in the United States since the 1950s.

Lang and Lehmann 2012

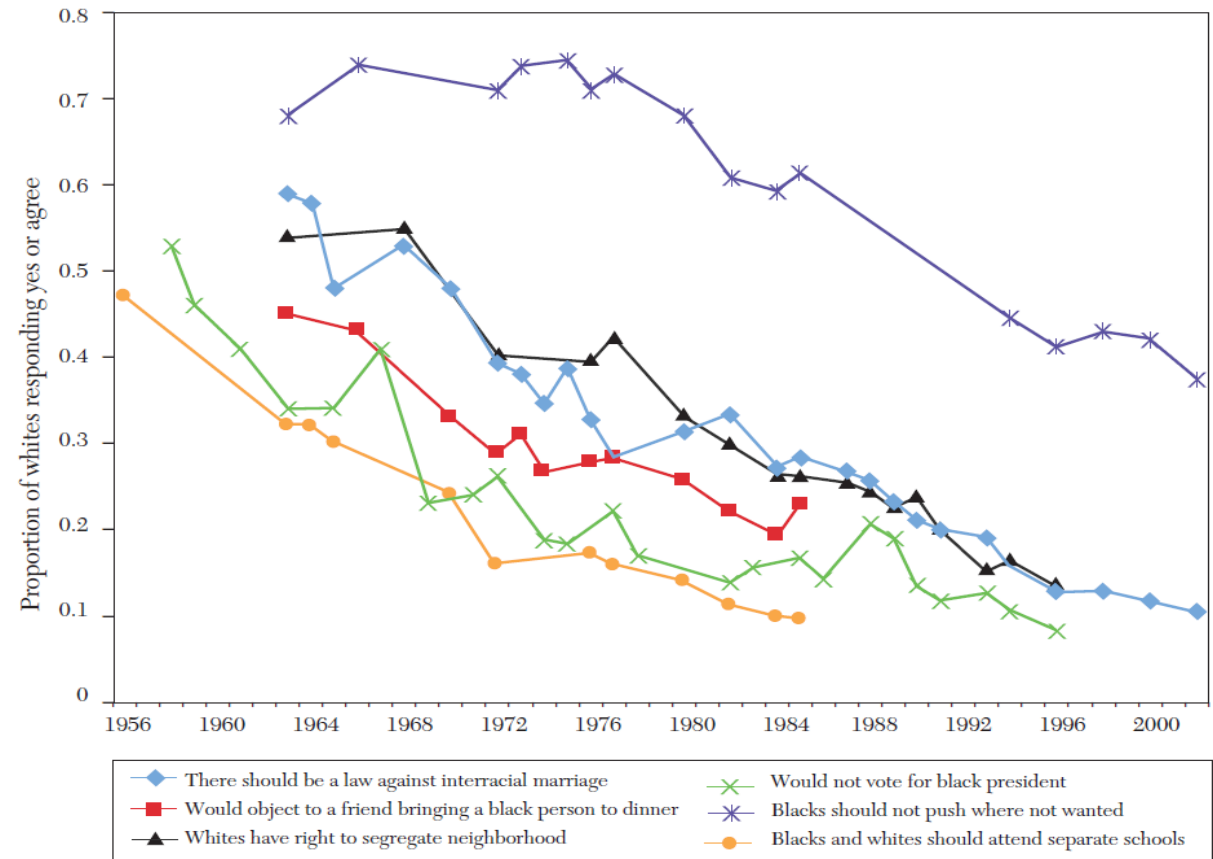
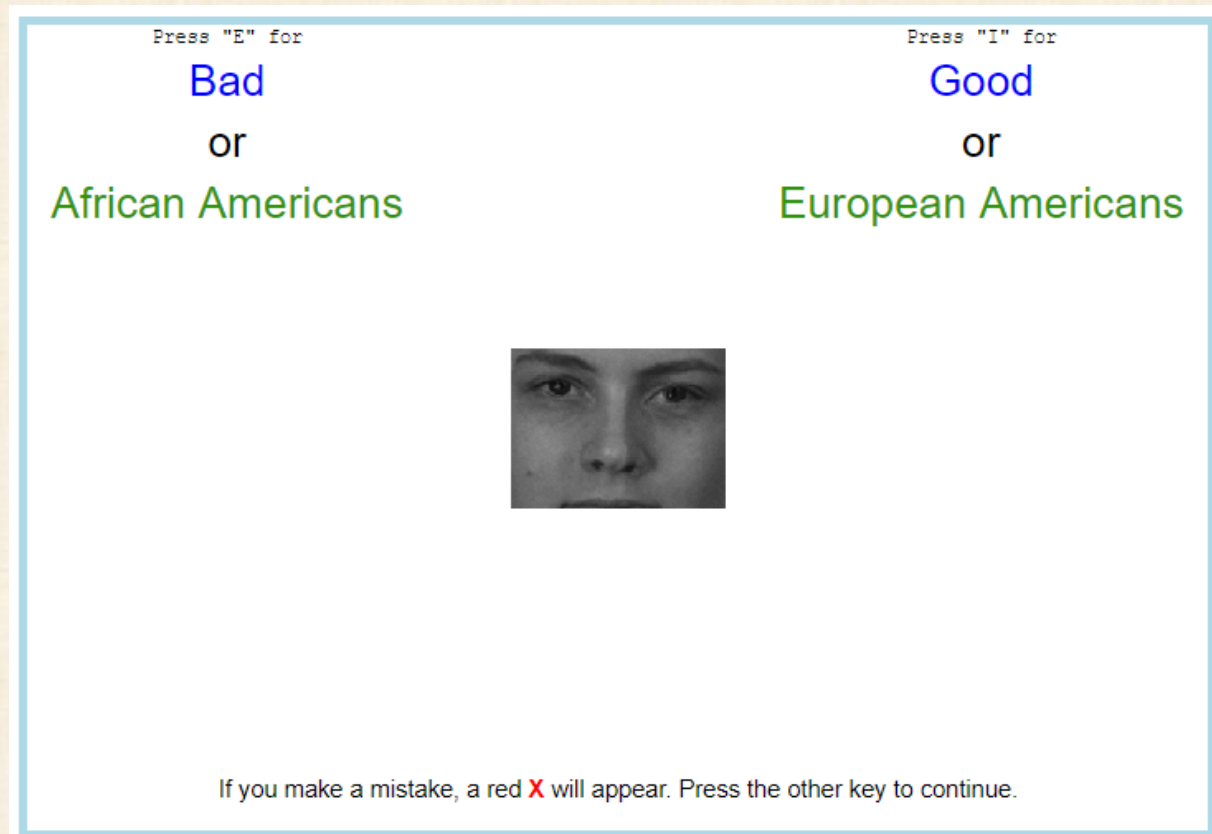


Figure 3. Trends in Prejudice Measures, 1956–2003.

Implicit Association Tests on Racial Bias

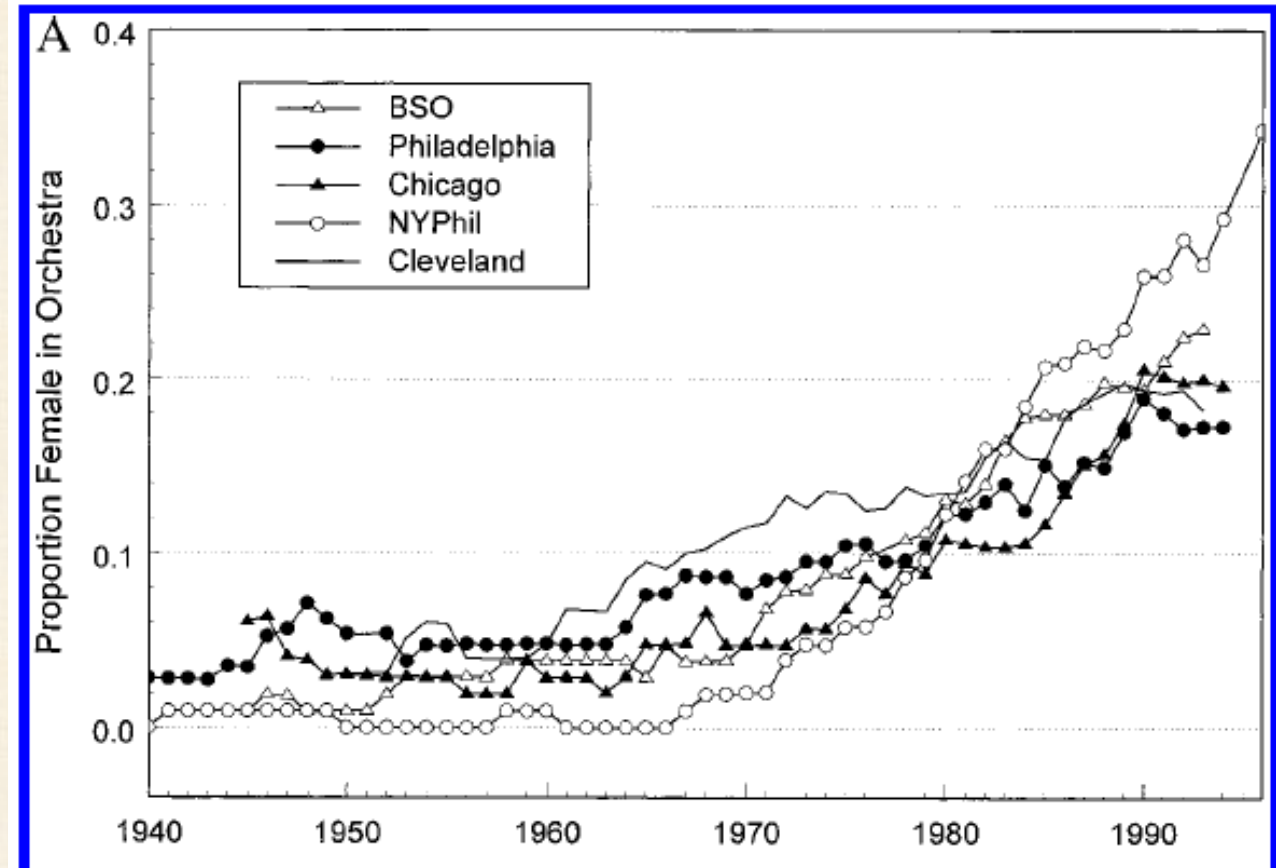
- **Survey** responses may be **influenced** by the impression that respondents want to make.
- Implicit Association Tests believed to be more useful in detecting **unconscious bias**.
- Implicit racist attitudes more **strongly correlated** with actual **discriminatory behaviour** in hiring than explicit expressions of prejudice.
- Taste-Based or Statistical Discrimination?



Discrimination in the Hiring of Musicians by Orchestras

Goldin and Rouse (2000)

- All 5 major US orchestras experienced a **sharp rise** in the proportion of **female musicians** from the 1970s onwards.
- Can these patterns be explained by the increased hiring of female musicians following the introduction of **blind auditions**?



Goldin and Rouse (cont'd.)

- Blind auditions introduced in different orchestras at different points in time (random?)
- The researchers find that blind auditions “increases the probability a woman will be advanced and hired”.



Goldin and Rouse (cont'd.)

Interpretation?

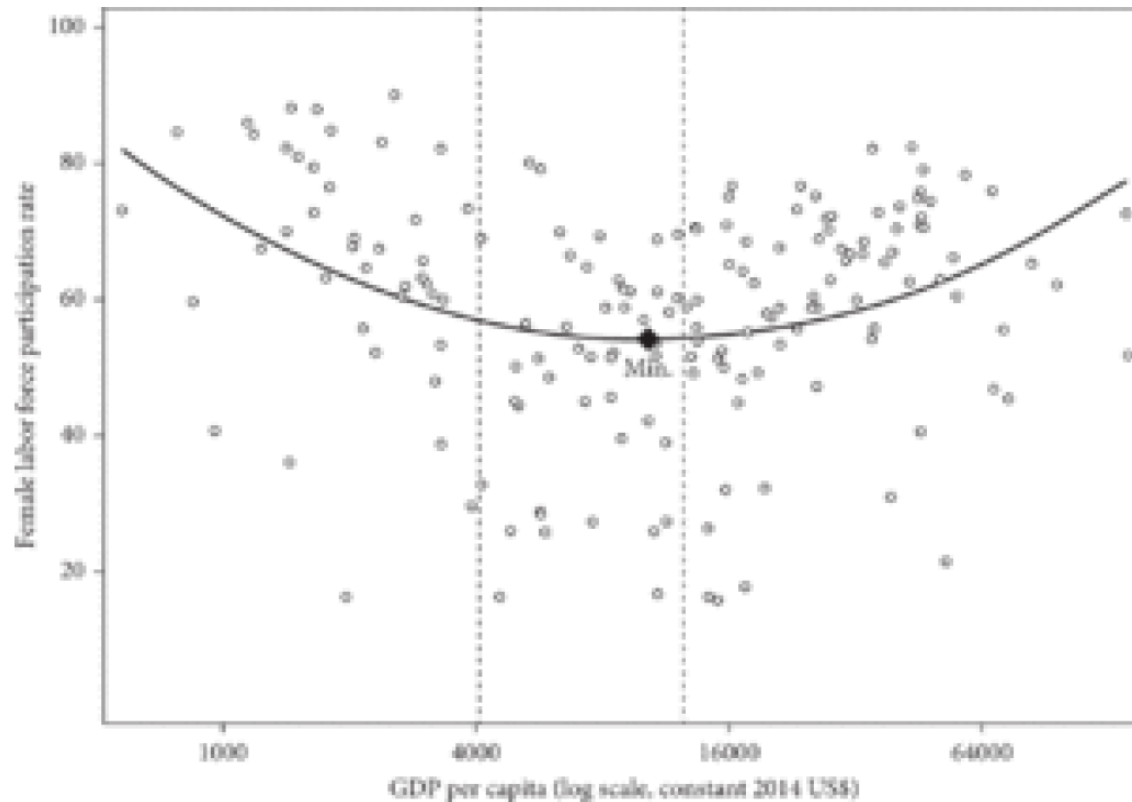
- If the jury was making inferences about the ability of the musician on the basis of gender, and female musicians were disadvantaged in this process, then the use of a screen would remove statistical discrimination and, therefore, increase the hiring of female musicians?
- Taste-Based Discrimination?

Culture, Social Norms and Female Labour Force Participation

Large variations in perceptions of appropriate gender roles across individuals and countries around the world; e.g.

- proportion of respondents to the World Values Survey question who agree with the statement “When jobs are scarce, men should have more right to a job than women” varies from 3.6% in Iceland to 99.6% in Egypt (figures quoted by Alesina, Giuliano and Nunn 2013)

Economic Development and Female Labour Force Participation



- A U-shaped relationship between female labour force participation and GDP per capita across countries.
- Why such variation in attitudes towards female work across countries and why a U-shaped relationship with economic development?

Boserup (1970)

Boserup documented the changing economic role of women through the process of development. She highlighted important differences between two types of traditional agriculture with implications for gender roles:

- shifting cultivation: labour intensive, handheld tools (hoe or digging stick)
- plough cultivation: capital intensive (plough, ox), requires significant upper body strength, grip strength, bursts of power

“When plough agriculture is practised, men have an advantage in farming relative to women.”

Boserup (cont'd.)

Boserup documented a **social stigma** associated with the employment of women in **blue collar jobs** across different countries. But not for white collar jobs.

- At early stages of development, mostly blue-collar jobs outside of agriculture.
- Men (and not women) take on these jobs
 - Increase in earnings => income effect => women reduce labour force participation
- At later stages of development, white collar jobs become available.
 - No social stigma against white collar jobs => renewed increase in female labour force participation
- But why a stigma against blue collar jobs and not against white collar jobs for women?

“On The Origins of Gender Roles” Alesina, Giuliano and Nunn (2013)

“Societies characterized by plough agriculture ... developed the belief that the natural place for women is within the home.

“These cultural beliefs tend to persist even if the economy moves out of agriculture ...”

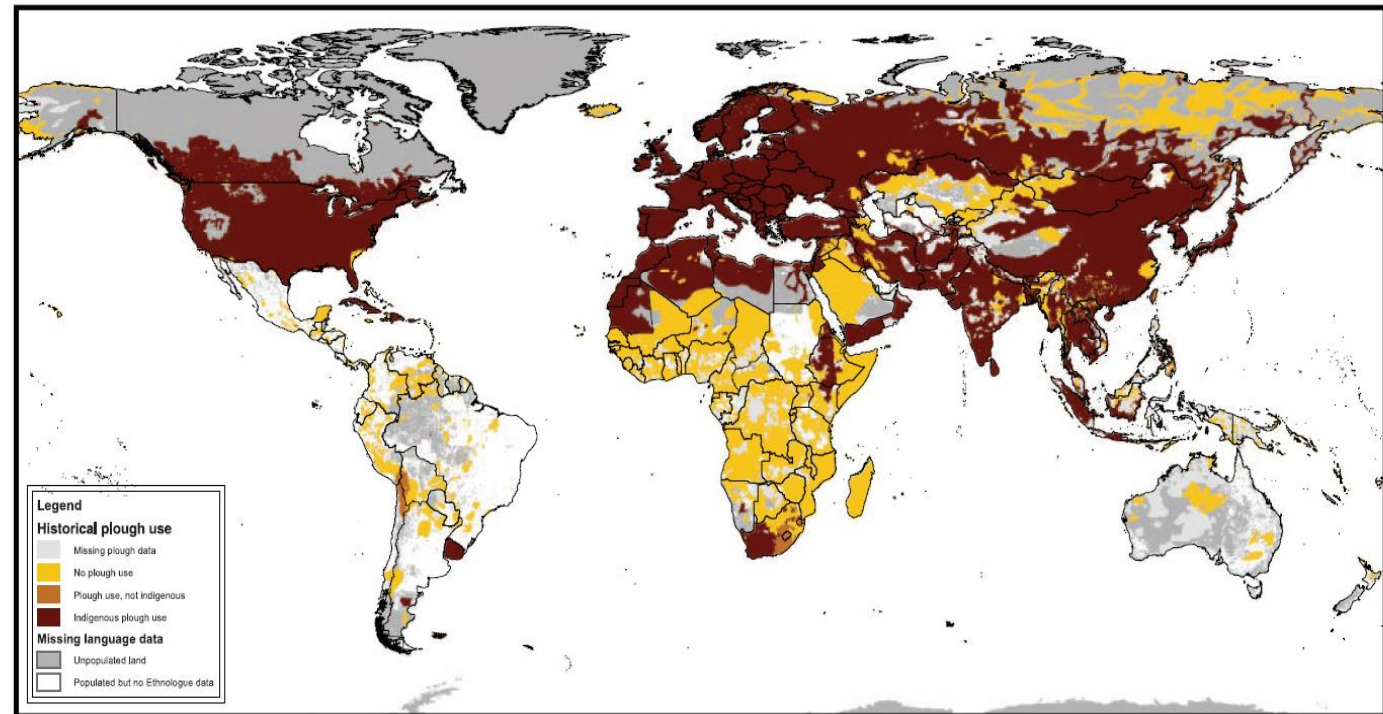


FIGURE II

Traditional Plough Use among the Ethnic/Language Groups Globally

Alesina, Giuliano and Nunn (cont'd.)

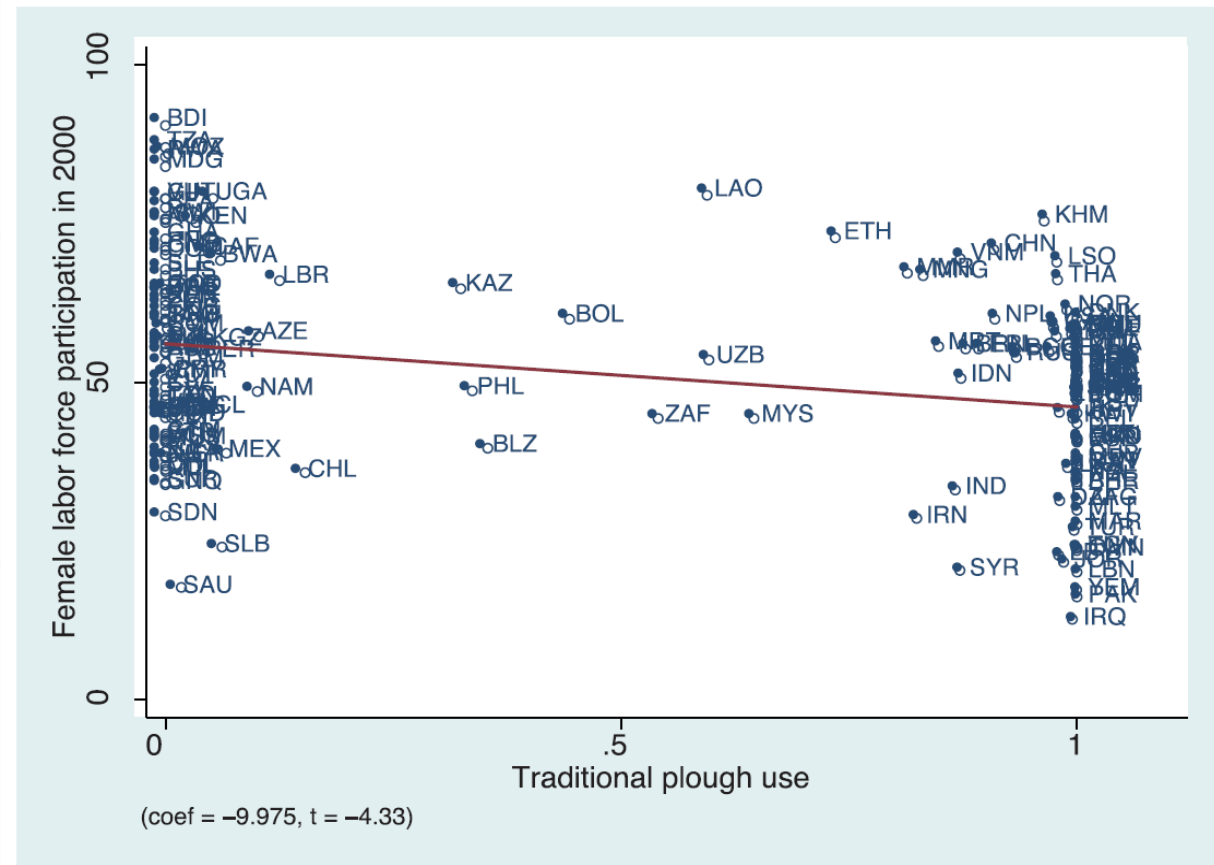
Data: ethnographic data on the use of the plough during the pre-industrial period, contemporary attitudes towards gender roles, measures of female participation in activities outside of the home.

Method: Linear Regression at country level of gender-related outcomes on traditional use of plough among ancestors, controlling for density, political institutions, agricultural suitability, presence of tropical climate, current GDP per capita.

Provisional Findings: Traditional plough use is positively correlated with attitudes reflecting gender inequality and negatively correlated with female labour force participation, female firm ownership and female participation in politics.

“Origins of Gender Roles” cont’d.

- For example, the figure shows a negative relationship between female labour force participation and plough use.
- Reverse Causality? Could it be that “societies with attitudes favouring gender inequality were more likely to adopt the plough historically?”



“Origins of Gender Roles” cont’d.

Alternative Approach: Use data on the children of immigrants living in the United States or Europe (all have been exposed to the same institutions and markets)

Finding: Women originating from countries/cultures that traditionally used the plough in agriculture express attitudes that are more gender unequal and participate less in the workforce.

Interpretation: What conclusions can we draw from these findings?

- Persistent effects of culture across generations affect market outcomes, even when the environment which gave rise to the original culture has disappeared.

Female Migration and Employment

- Early stages of economic development often characterised by large-scale **rural-urban migration** and shift from agriculture to manufacturing employment.
- Traditional gender norms may limit the scope for female *independent* migration and, thus, limit access to urban jobs.
- But **marriage** is known to be an important means of **female long-distance migration** in patrilocal societies (Rosenzweig and Stark 1989).

Female Migration and Employment (cont'd.)

Amirapu, Asadullah and Wahhaj (2018):

- Do **social constraints** on **female mobility** prevent female economic migration and their participation in the urban labour market?
- The construction of a **major bridge in Bangladesh** connecting an economically deprived region and the industrial belt as a natural experiment.
- If there are no social constraints, the construction of the bridge should increase female economic migration. In the presence of social constraints, the bridge may increase **marriage-related migration** by women.

Female Long Distance Migration

In Bangladesh, the majority of women experience exactly one migration episode in their lives, typically at the time of marriage.

Table: Migration among Women Aged 20-39 years

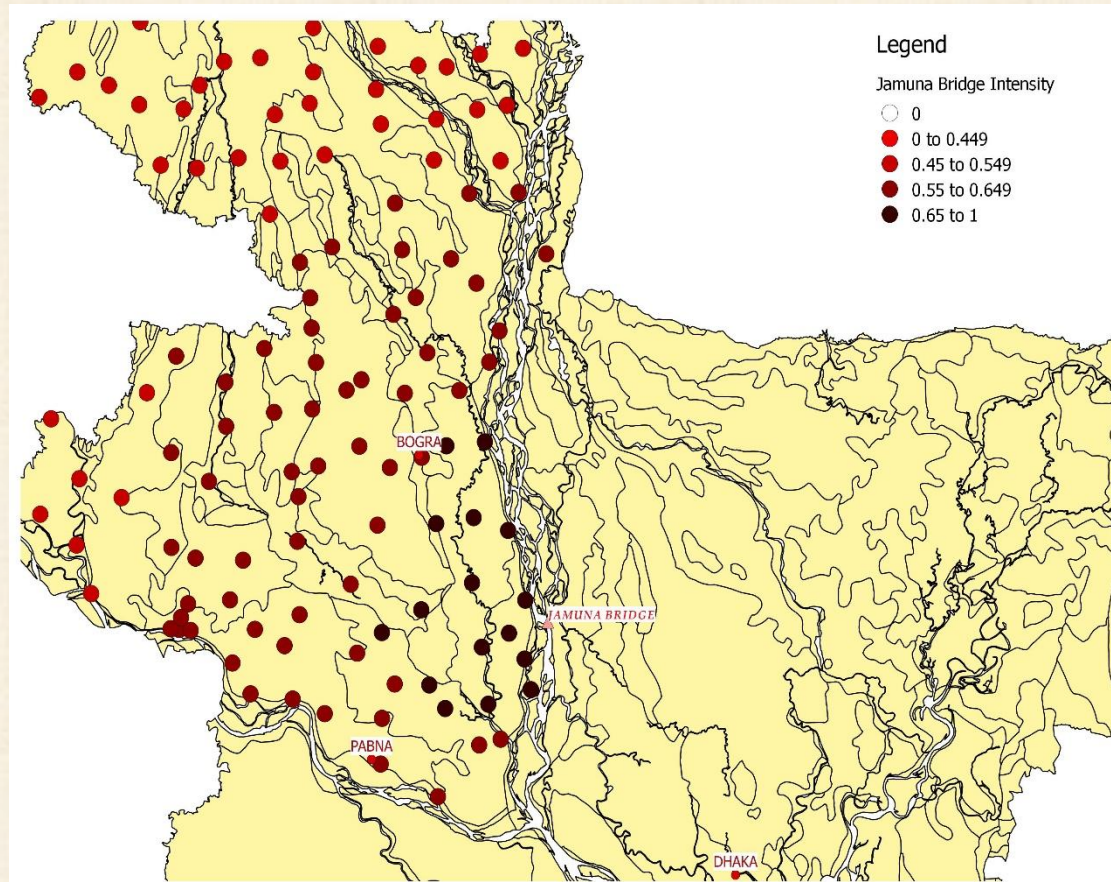
# of Episodes	<u>Married Women</u>		<u>Unmarried Women</u>	
	Economic Migration (%)	Family-related Migration (%)	Economic Migration (%)	Family-related Migration (%)
0	88.58	16.98	74.40	88.80
1	9.75	78.30	23.47	9.87
2	1.46	3.93	2.13	1.33
3	0.19	0.65	0	0
4	0.02	0.15	0	0
# Obs	5,885	5,885	375	375

Source: 2014 WiLCAS

Note: A 'migration episode' means moving, at least, out of the village/ward for a period of 6 months or more.

Female Migration and Employment (cont'd.)

- The bridge construction had **no effect on female economic migration** towards the major industrial belt.
- But it increased *marriage*-related migration (marriage with migrating men) from the economically deprived region ... as well as **increased employment in manufacturing** by these women.
- Interpretation: Social constraints on female long-distance migration but not blue-collar jobs per se.



Fernandez, Fogli and Olivetti (2003) “Mothers and Sons”

Question What factors are responsible for the profound transformation of in the role of women in the family and workplace in industrialised countries during the 20th century?

Hypothesis “A significant determinant of the steady increase in women’s involvement in the formal labour market was the increasing number of men who grew up ... [in a family where] ... their mother worked”.

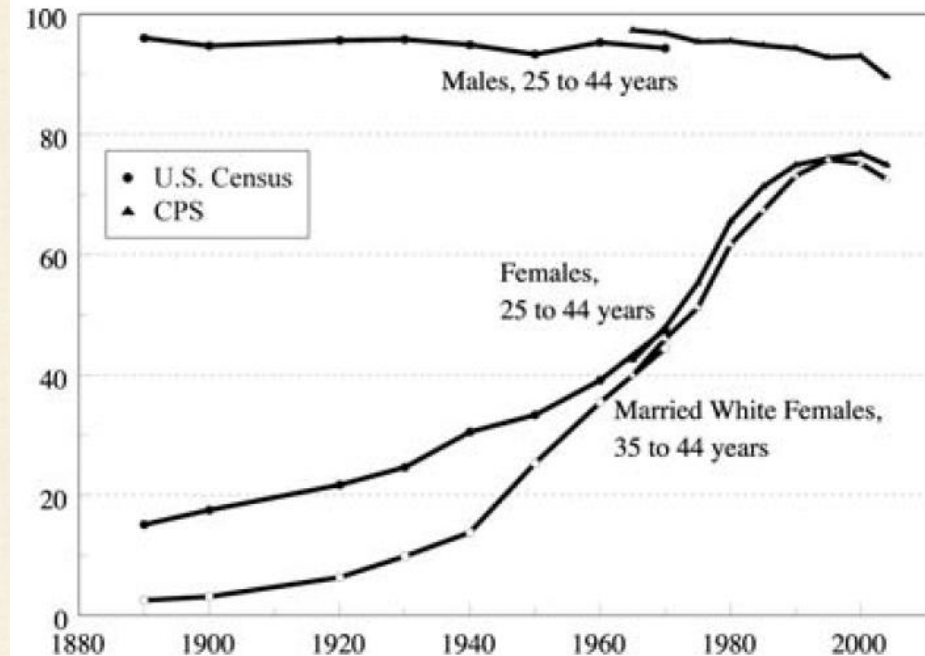


FIGURE 1. LABOR FORCE PARTICIPATION RATES FOR FEMALES AND MALES BY AGE AND MARITAL STATUS: 1890 TO 2004

Source: Goldin 2006

“Mothers and Sons” (cont’d.)

Hypothesis (cont’d.) “Growing up with a working mother ... either influenced a man’s preferences for a working wife or directly made him a better partner for a working wife.”

Method Use the increased female labour supply in the United States during World War 2 (when large numbers of men were conscripted into the armed forces) as a natural experiment.

- Variation across US states on married women’s labour supply during the war produced variation in the number of men raised by working mothers.
- Investigate effect of this variation on the labour supply of women born in 1930-1935 (who experienced no direct effect from the war).

“Mothers and Sons” (cont’d.)

Findings

- The mobilisation rate of men across states during the war had a strong positive effect on the labour supply of women during the war.
- Married women in the next generation (too young to be affected directly by the war) are more likely to be in work if their state of residence had a high mobilisation rate during the war.

Interpretation

- Although there are persistent effects of culture, attitudes can change over time through exposure to new types of role models.