GENDER AND PAY IN MODERN RUSSIA:
A DISTRIBUTIONAL ANALYSIS

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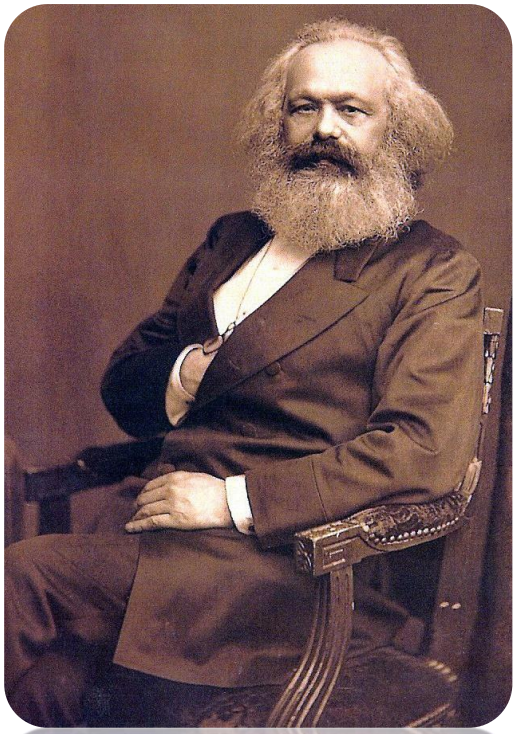
Social progress can be exactly measured by the social position of the fair sex (its plain ones included).

Karl Marx, 12 December 1868

OUTLINE

1. Background: What's interesting about Russia?
2. What's happened to the pay gap in transition?
3. The rank regression approach
4. What explains the observed changes in the pay gap? Some preliminary results
5. Future directions – any suggestions?



1. CONTRADICTIONS: RUSSIA AND GENDER

- Some figures from the 1970 census:
  - Female LFP rate of 85%
  - 74% of doctors, 40% of engineers and 43% of university teaching staff are women
- By the 1989 census women make up 98% of accountants, 93% of economists, and 59% of engineers
- The reaction to high employment in 1992:
  - Parliament debates a measure that would make it illegal for women with children under 14 to work full-time

Sources: McAuley, 1981; Dodge, 1977; Bridger, Kay and Pinnick, 1996

1. BACKGROUND: SOVIET RUSSIA

- Labour force participation was very high, with only a small difference between men and women
- But there was a large difference in pay – women earned 71% of the male wage in 1989 (vs. 75% in the US)
- Each industry was assigned a basic wage according to its strategic importance, training required and unpleasantness
  - → Men more likely to work in heavy industry
  - → Women more likely to work in services and light industry
  - → Health, education and planning & administration were female-dominated and not highly regarded

Sources: McAuley, 1981; Atkinson & Micklewright, 1992; Blau & Kahn, 2006

1. BACKGROUND: SOVIET RUSSIA (cont.)

- Within each industry, there were six skill grades which corresponded to fixed multiples of the basic industry wage
- Women were more concentrated in the lower skill grades
  - → This is based on 1970s data, so could reflect lower education of older women
  - → There was no part-time work

Source: McAuley, 1981

1. BACKGROUND: WHAT TO EXPECT?

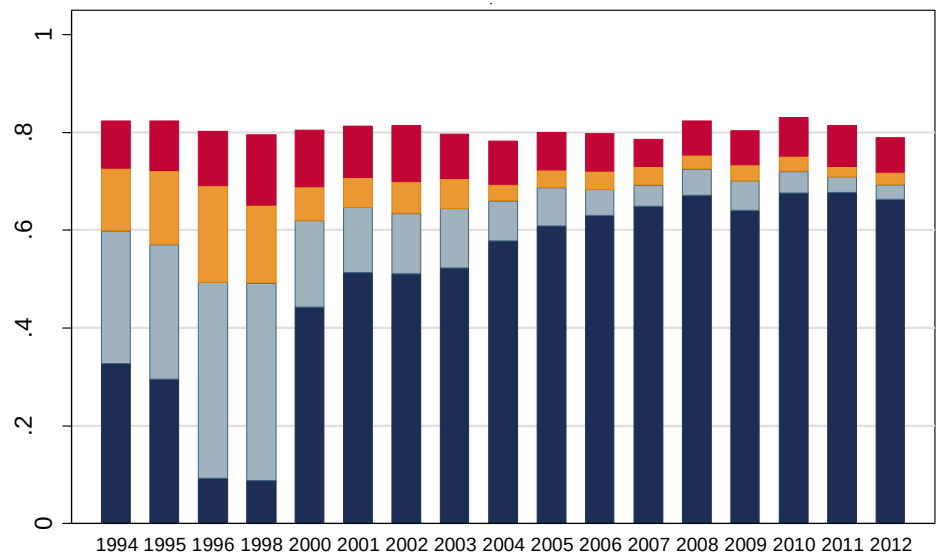
What would we expect to happen after perestroika?

- In general, an increase in wage inequality would widen the pay gap
- Labour demand shifts *may* favour women, though men may enter traditionally female jobs
- Higher returns to education would favour women, but higher returns to hours worked would favour men
- Employer discrimination becomes costly, but so does maternity leave and on-site childcare
- Less-skilled women might be more likely to drop out of the labour force or work part-time

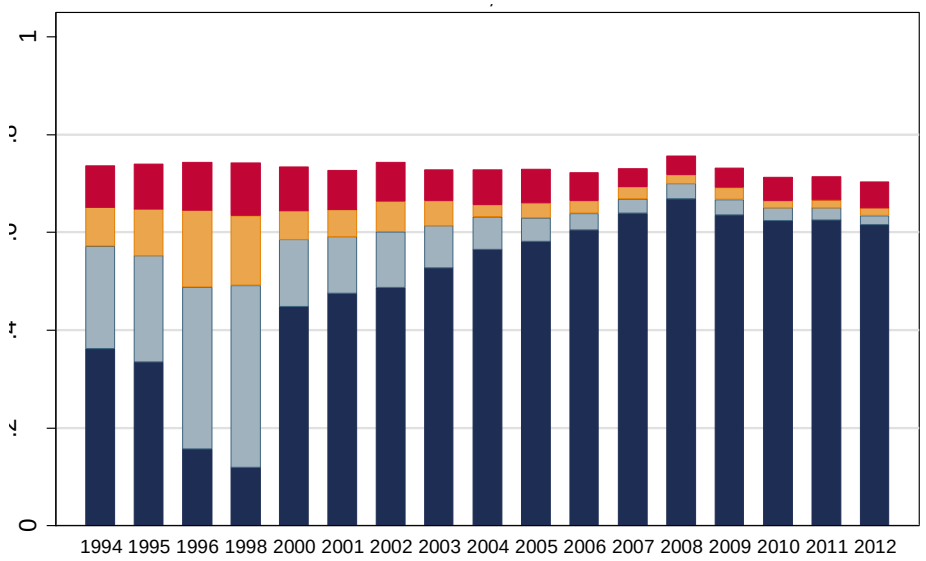
2. THE TRANSITION ECONOMY - LFP

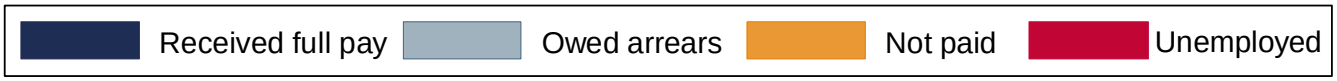
- Data are from the Russian Longitudinal Monitoring Survey (RLMS)
  - → 1994/5-2012, urban Russia only

Male LFP, 1994-2012

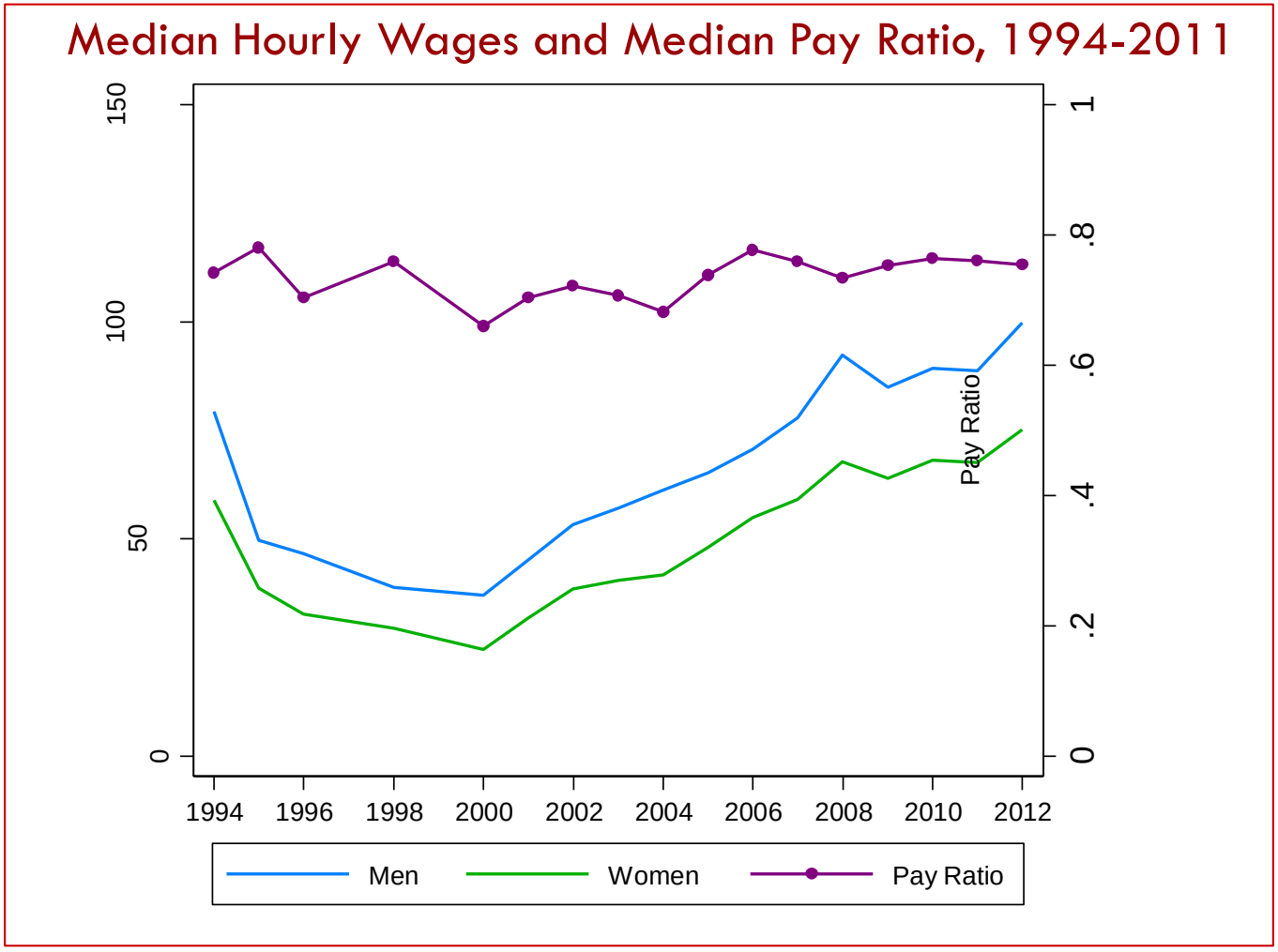


Female LFP, 1994-2012

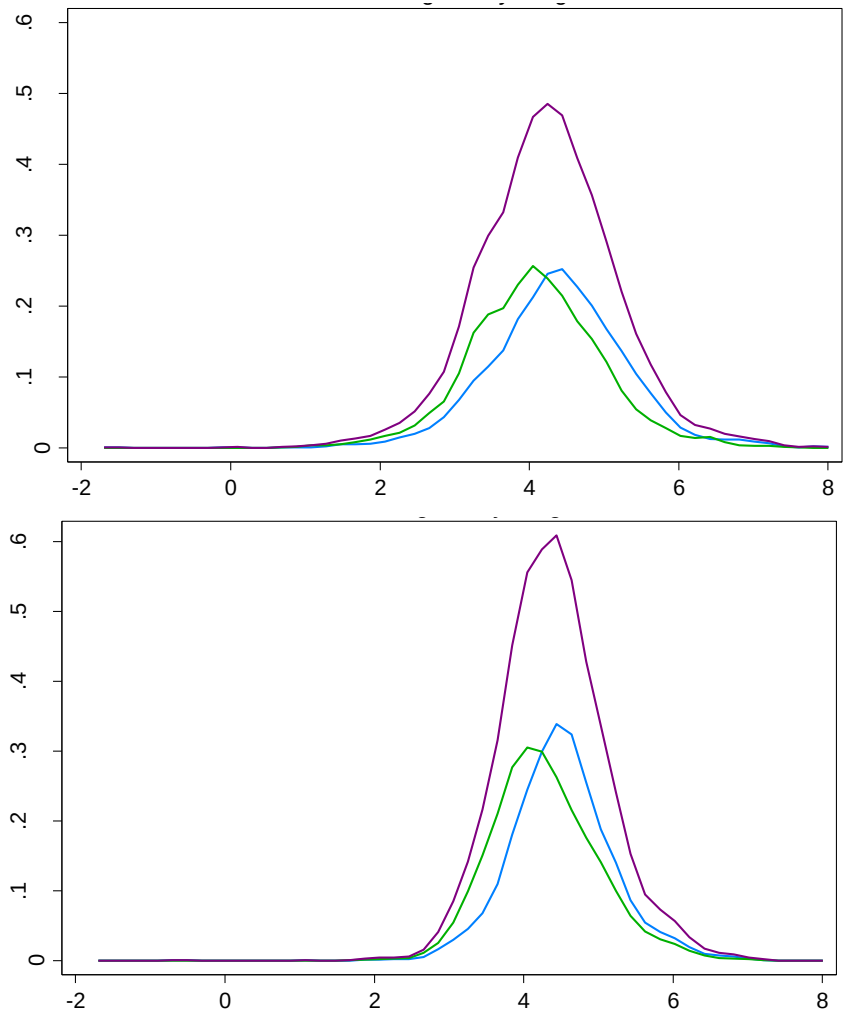




2. TRANSITION – AVERAGE WAGES



2. TRANSITION – THE WAGE DISTRIBUTION



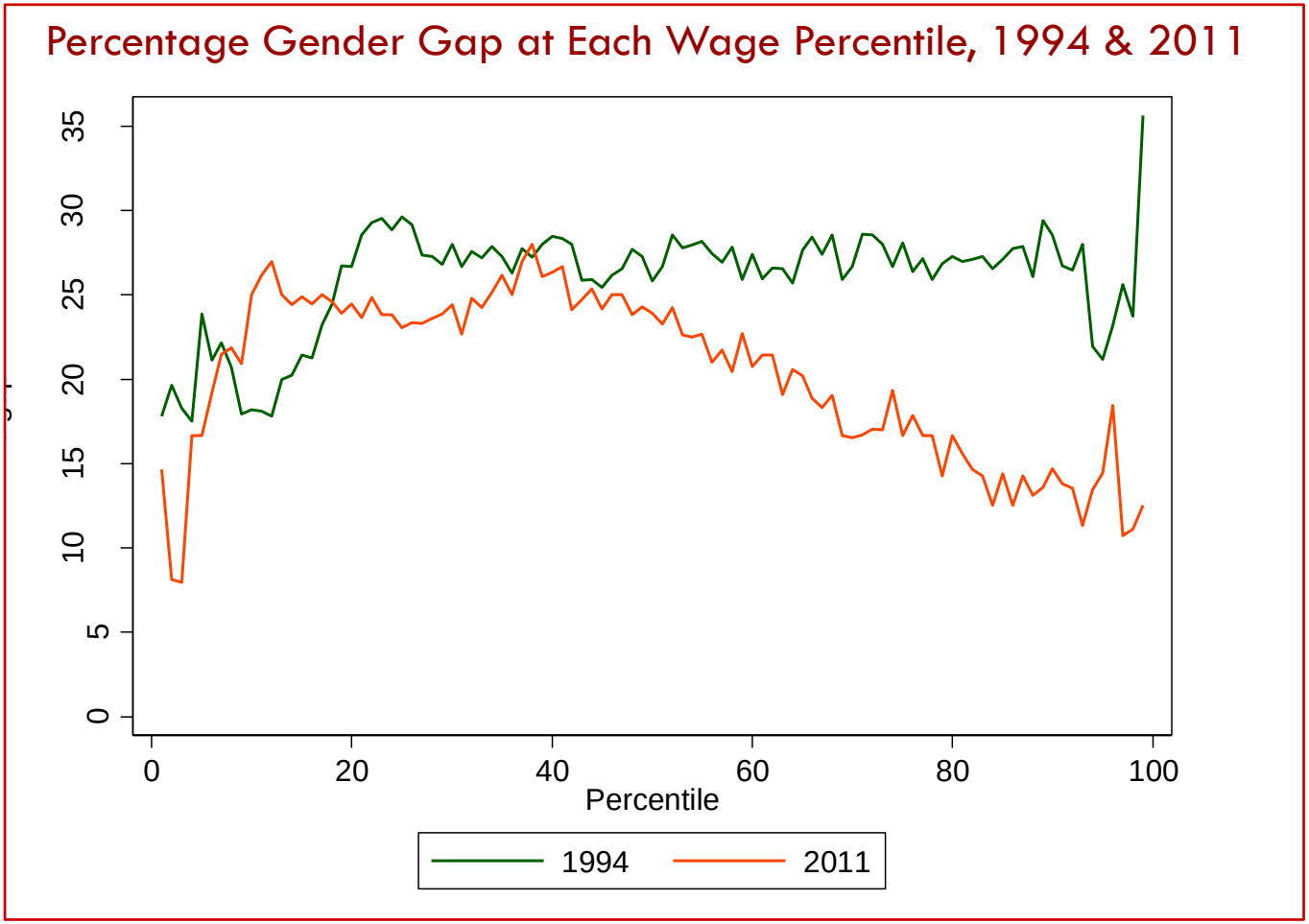
Kernel Plots: Log Hourly Wages

1994

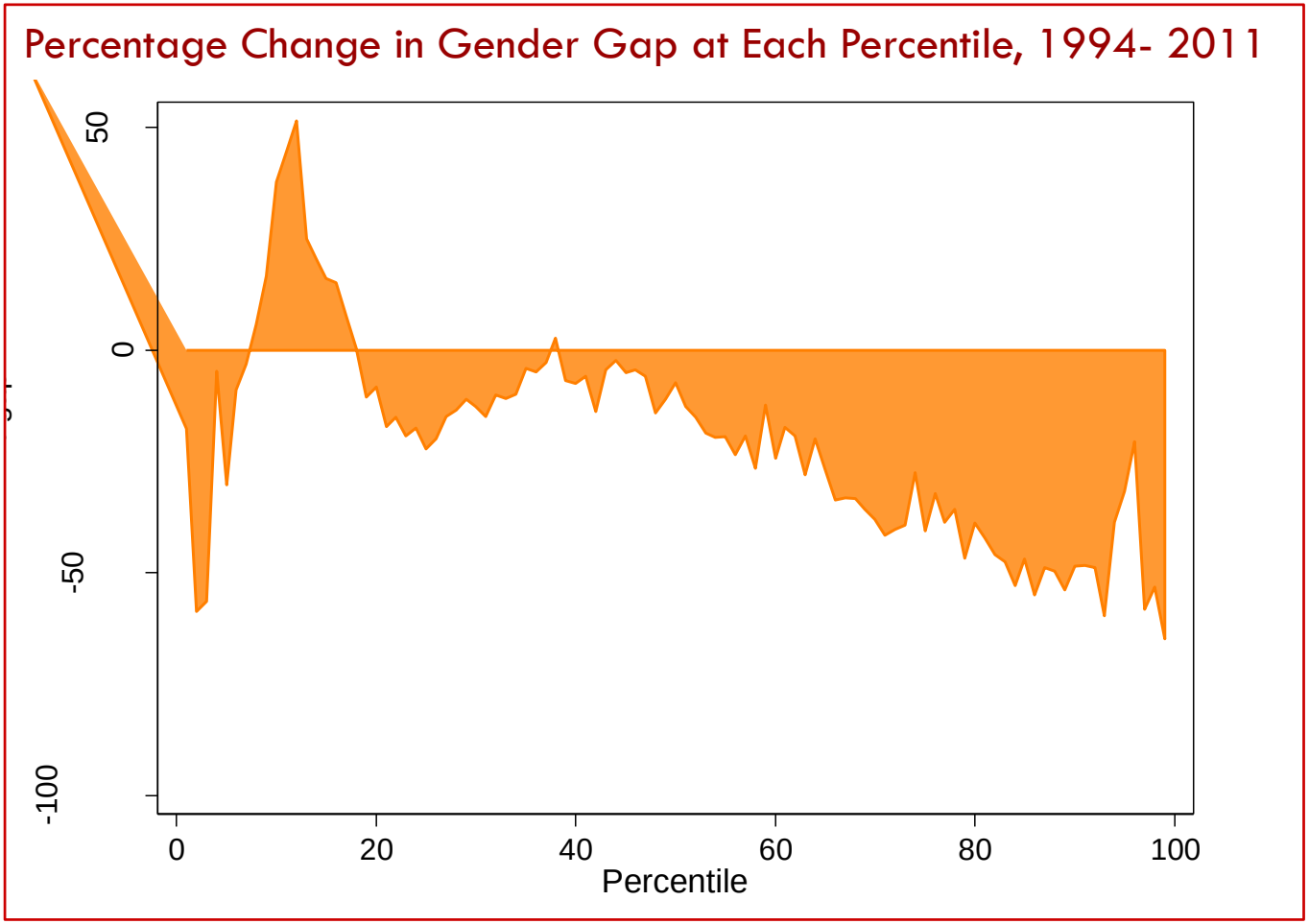
2011

Men Women Overall

2. TRANSITION – CHANGES IN THE PAY GAP



2. TRANSITION – CHANGES IN THE PAY GAP



3. THE RANK REGRESSION APPROACH

- Based on Fortin and Lemieux (1998)
- Decomposes changes over time at any point of the wage distribution into four categories:
  1. Changes in skills
  2. Changes in skill 'weights', e.g. the importance of education relative to work experience in the perception of overall skill
  3. Changes in the relative position of men and women in the wage distribution (changes in unobserved factors that would result in different wages for the same measured skill)
  4. Changes in wage structure (changes in the returns to measured skill in the distribution of reference)

3. THE RANK REGRESSION APPROACH (cont.)

The set-up:

1) Generate predicted male and female wage distributions in 1994 and 2011

→ split the wage distribution into an arbitrary number of ranks

→ estimate the probability of falling in each rank with an ordered probit

$$w_i = \Lambda(r_i^*)$$

$$r_i^* = \sum_{k=1}^{10} \beta_k Educ_{k,i} + \beta_{11} Potexp_i + \beta_{12}(Potexp_i)^2 + \sum_{h=1}^{28} \beta_h Region_{h,i} + \varepsilon_i$$

→ use these probabilities as weights in kernel density to check fit with actual distribution, adjust number of ranks

3. THE RANK REGRESSION APPROACH (cont.)

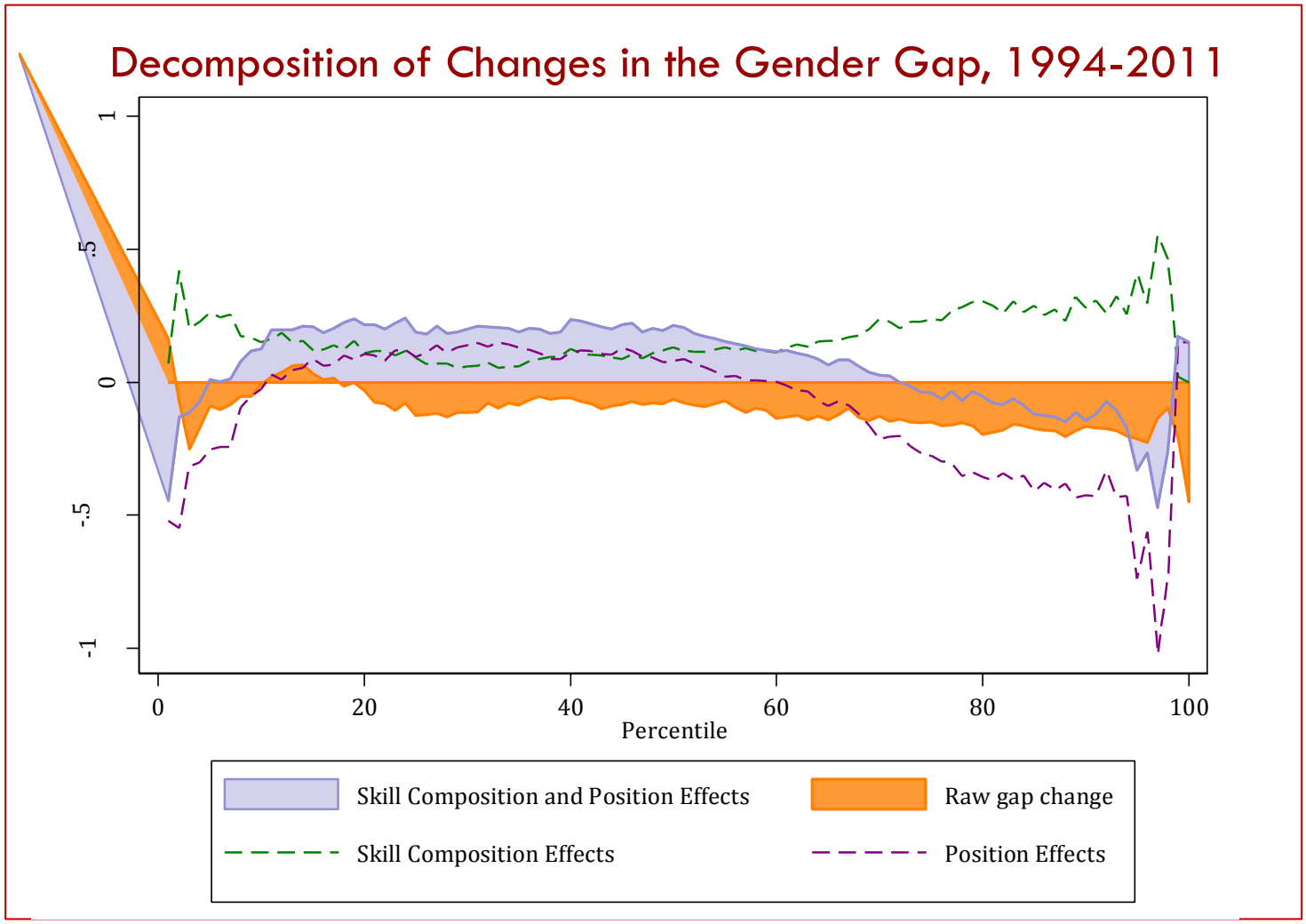
2) Generate counterfactual distributions to estimate the contribution of specific factors over 1994-2011

- **Relative changes in skills** → *difference between actual change in pay gap and what would have happened if skills didn't change*
  (predict probabilities for 2011 wage ranks and 2011 β with 1994 X)
- **Relative changes in skill "weights"** → *incremental difference if skill weights also didn't change*
  (predict probabilities for 2011wage ranks with 1994 $X\beta$)
- **Changes in relative position (unobserved skills)** → *incremental difference if position in wage distribution didn't change*
  (1994 $X\beta$ and women in same rank in male distribution as 1994, but 2011 wages)
- **Changes in wage structure** → *the residual*

4. PRELIMINARY RESULTS

1. Changes in the importance of particular skills favoured men
2. This was offset to some extent by women catching up to men in terms of unobservables
3. Most of the dramatic change we observed over 1994-2011 is attributed to a reduction in wage inequality

4. PRELIMINARY RESULTS



5. FUTURE DIRECTIONS

- Do decomposition for 1995-2003 and 2003-2012, perhaps using a less data-hungry methodology
- Refined education and occupation categories
- Look at specific roles of education, occupation, hours worked etc (quantities and returns)
- The role of the minimum wage? Non-working women?
- Suggestions?