

Gender Earnings Inequality and Wage Policy: Teachers, Health Care and Social Workers in Kyrgyzstan

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Publication

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- Builds on research presented last year, LIK Conference, Bishkek

Background event

- December 2010: strike by teachers in Osh and Jalalabad oblasts
- Demands: higher salaries, better working conditions, compensation for rising utility prices
- In 2010: teachers among the lowest paid public employees
- Other teacher strikes for better salaries: US (3 states), Scotland, Tunisia, Algeria, Argentina, Uruguay, Mexico, Brazil, Venezuela

Result of the strike

- 2011
 - Teachers, health care and social workers received new salary for the fall semester; large adjustment in base salary
 - Increase in salary larger for rural workers than for urban workers
 - Increase in salary larger in high mountain areas than other areas
- 2012: salary adjusted downwards; government budget problem
- 2015, 2019: salary adjusted upwards

Literature

- Large literature on gender wage gap in higher income countries: importance of education, health, experience; discrimination
- Smaller literature on gender wage gap in Central Asia (10 papers)
 - Gender wage gap fell from 1993-1997 (40-15%), Kyrgyzstan
 - Gender wage gap (20%) changed little, 1996-2009, Kazakhstan
 - Gender wage gap fell from 2003-2009 (25-18%), Tajikistan
- Most of the change could not be explained by observable characteristics; suggested pervasive market discrimination. Risk-taking was important.

Policy effects on wages in the literature

- Anderson and Pomfret: open markets to trade, gap falls; Kyrgyzstan
- Khitarishvili: occupational and industrial segregation; discrimination
- Blau and Kahn review, 2003: wage-setting policies may be needed to redress gender inequality in pay
- Jenish, 2015: LIK 2010-11; effect of 2010 wage policy on hours of work
 - Reduced labor shortage by 14.5% (teachers) & 11.4% (health care workers)

Wage policy in Kyrgyzstan

- December 2010: average monthly salary for teachers = 860-1150 soms (\$30-40/month) and 575 soms (\$20) in some communities
- Fall 2011: salary for teachers, health care and social workers
 - 10% bonus for workers with 5 years of experience; 20% bonus for 10 years; 30% bonus for 15 years or more
 - Fixed payment for Ph.d. or Candidate of Science degree
 - Minimum hours of work lowered to 6/week
 - Increase from 6 to 7.1% of GDP spent on education

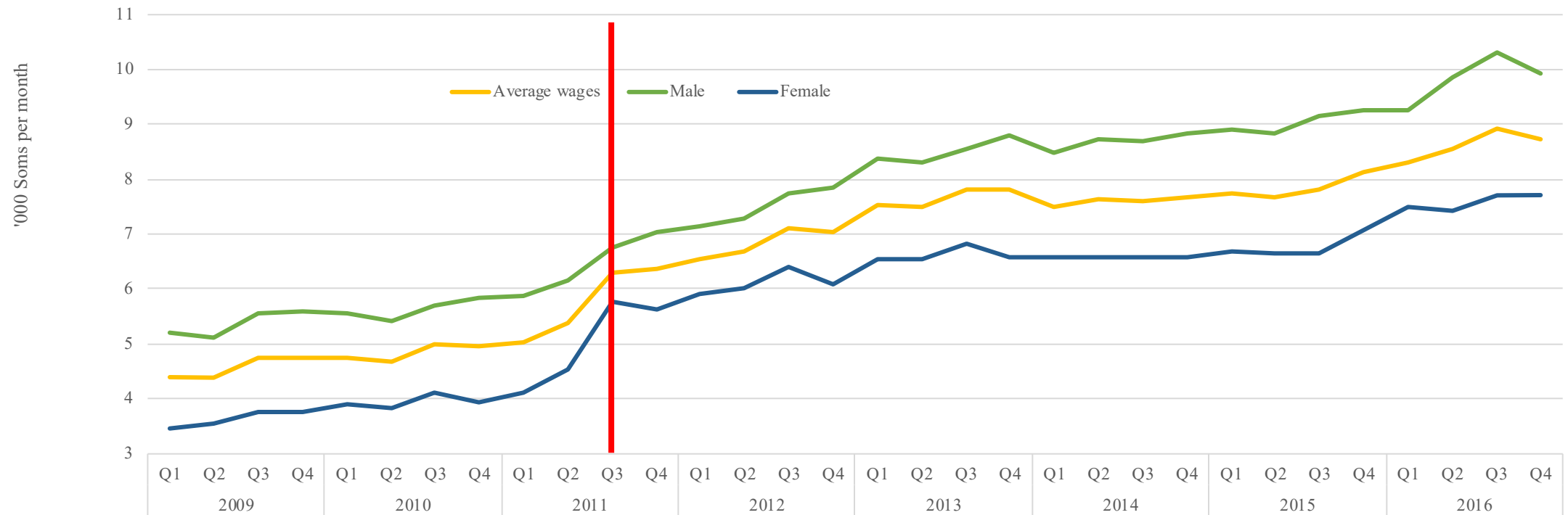
Data

- Labor Force Survey data, 2009-2016
- Life in Kyrgyzstan data, 2010-2016

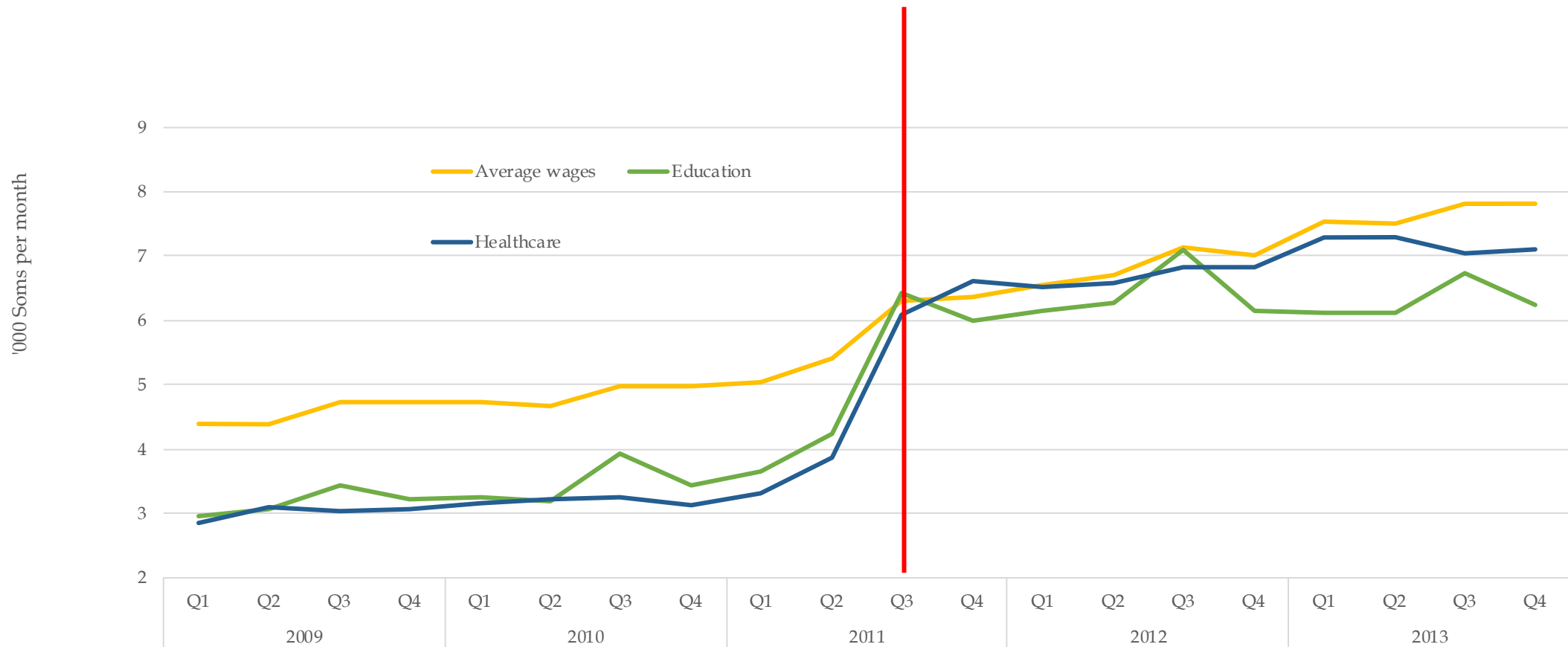
LFS, by quarter

- Wage workers, positive salaries: monthly earnings
- Aged 23-62 (men)/23-60 (women)
- Wages of women/men: 70% in 2010; 79% in 2011; 77% in 2016
 - Annual averages
 - Largest relative wage changes among teachers, health care and social workers

Monthly wages, LFS, by quarter, 2009-2016



Monthly wages, LFS, 2009-2016: teachers, health care and social workers



LIK, annual data

- Persons who report positive earnings; not self-employed; not employed in agriculture or mining
- Completed secondary education
- Aged 23-65
- Sample sizes: 3026 employees; 1527 women; 1499 men

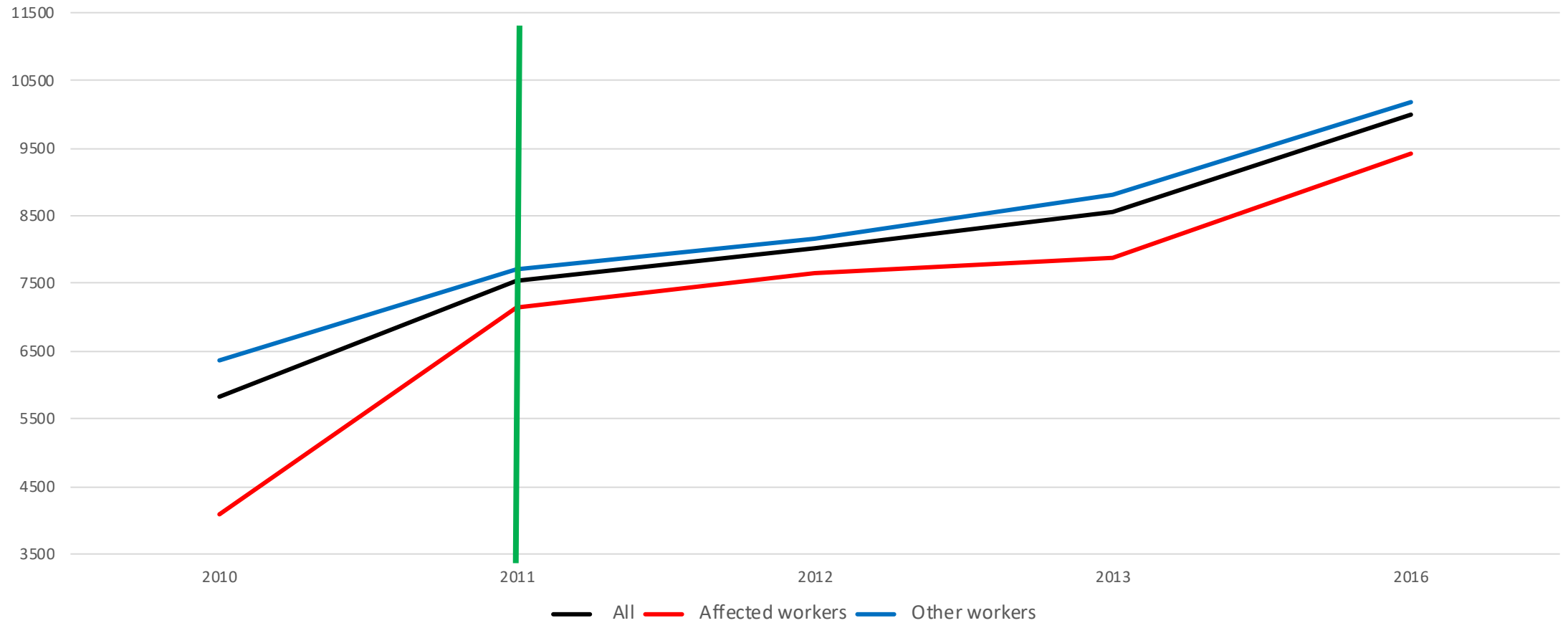
LIK descriptive statistics, 2010-2016, pooled: (female/male, %)

	All Workers	Women	Men
Monthly earnings	7950	6905 (76%)	9141
Hourly earnings	52	48 (84%)	57
Hours of work/ week	41	39 (91%)	43
Teacher, health care or social worker (=1)	.27	.39	.13

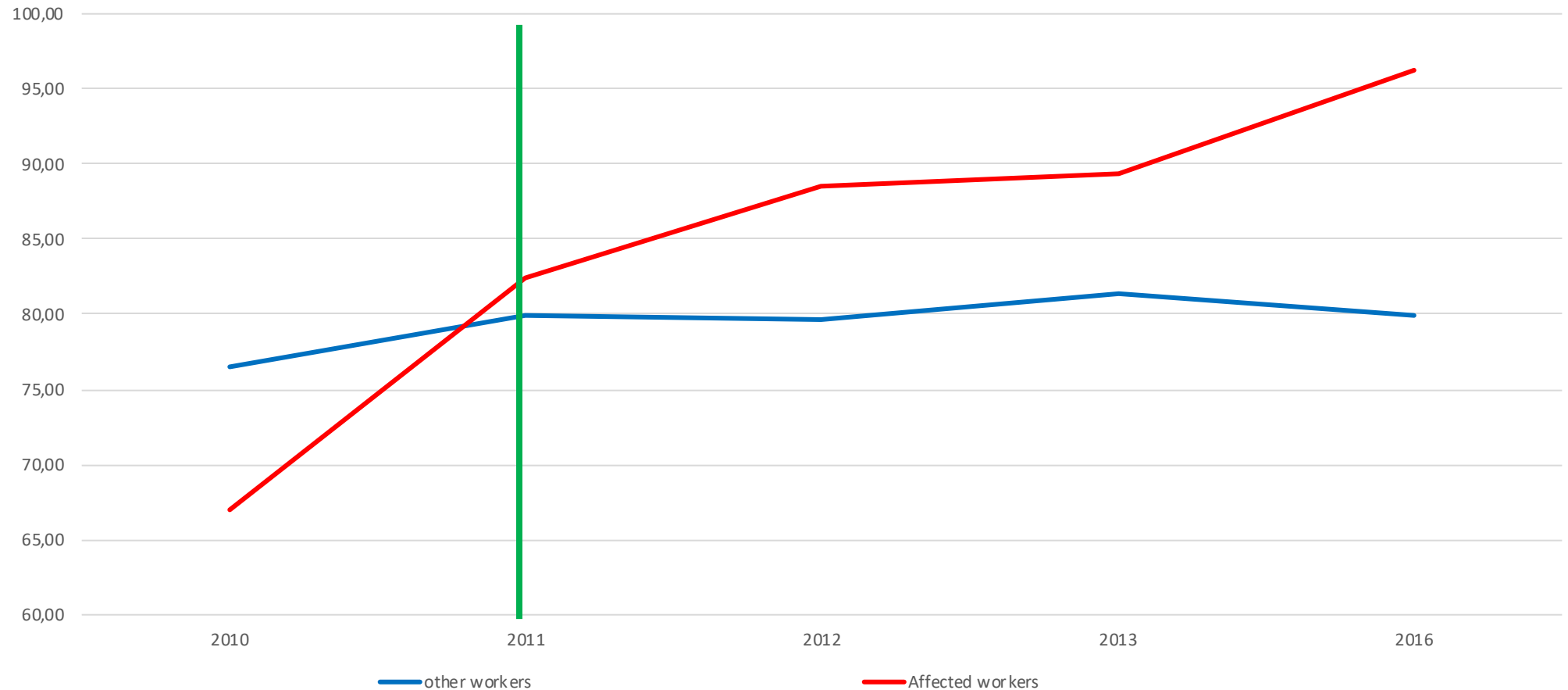
Teachers, health and social workers compared to other workers: (EHS/other, %)

	Teachers, Health & Social Workers (EHS)	Other Jobs
Nominal monthly wage	7251 (88%)	8205
Nominal hourly wage	57 (112%)	51
Hours of work/week	35 (81%)	43

LIK, trends in average monthly wages



LIK, gender differences in average monthly wages (women/men, %)



Variables

- Outcomes (Y): monthly wages and hours of work
- Policy variables:
 - $P=1$ if a individual is a teacher, health care or social worker and $\text{year} > 2010$
 $P=0$ if individual is another worker or $\text{year} = 2010$
 - Rural (R) interaction with P; year (Y) interactions with P; elevation $>$ median
 - Rural, year, P interactions
- Other independent variables
 - “Experience”, education, ethnicity, region, season of interview

Model: $Y = \ln(\text{monthly wage})$

- Regression, random and fixed effects
- Fixed effects for year and job
- Policy effect: interaction between year and job if year > 2010

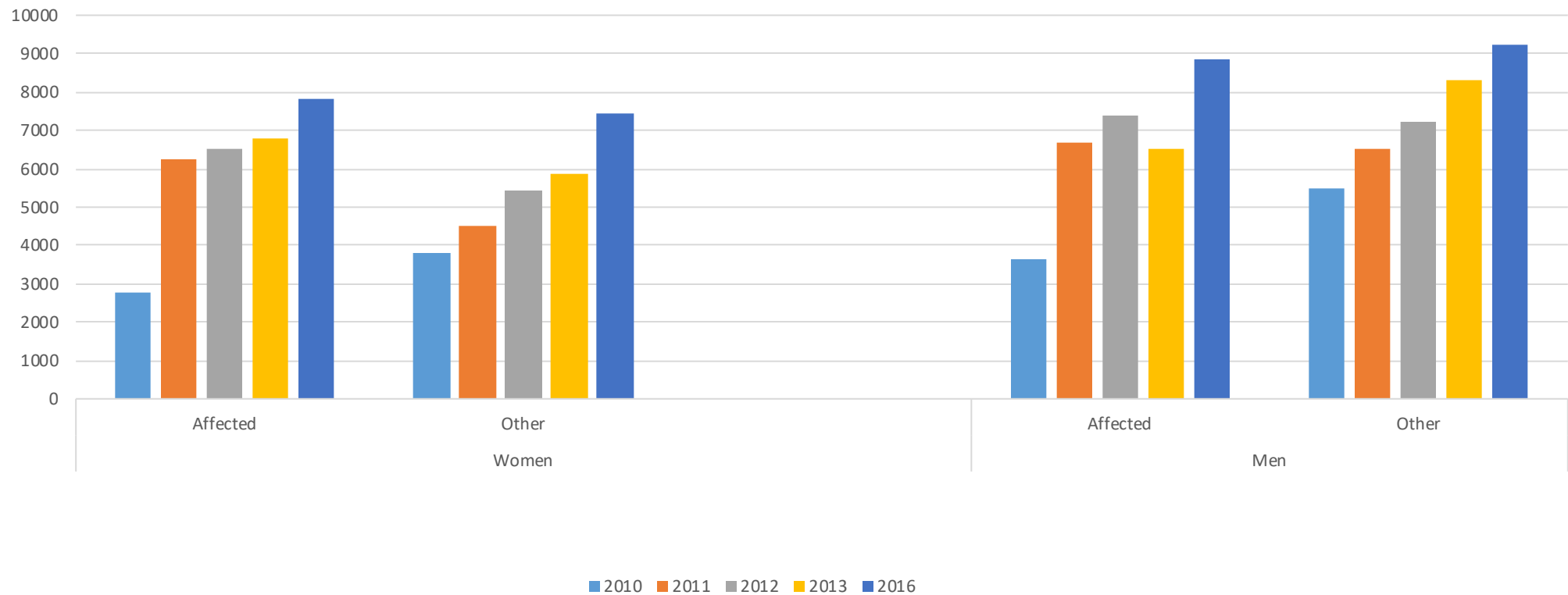
- Also interact with rural-urban:
 - Expect wage increase to be higher for rural workers

- Control for elevation: no interaction is significant; high elevation jobs pay less than lower elevation jobs in each year

Policy effects

- $\ln w_i^g = \alpha^g + \beta_p^g P_i^g + \beta_r^g R_i^g + \sum \beta_t^g Y_{ti}^g + \beta_{pr}^g P_i^g R_i^g + \sum \beta_{pt}^g P_i^g Y_{ti}^g + \sum \beta_{prt}^g P_i^g R_i^g Y_{ti}^g + \beta_i^g X_i^g + \varepsilon_i$
- Calculate predicted wage if: urban/rural; EHS/other job; by year

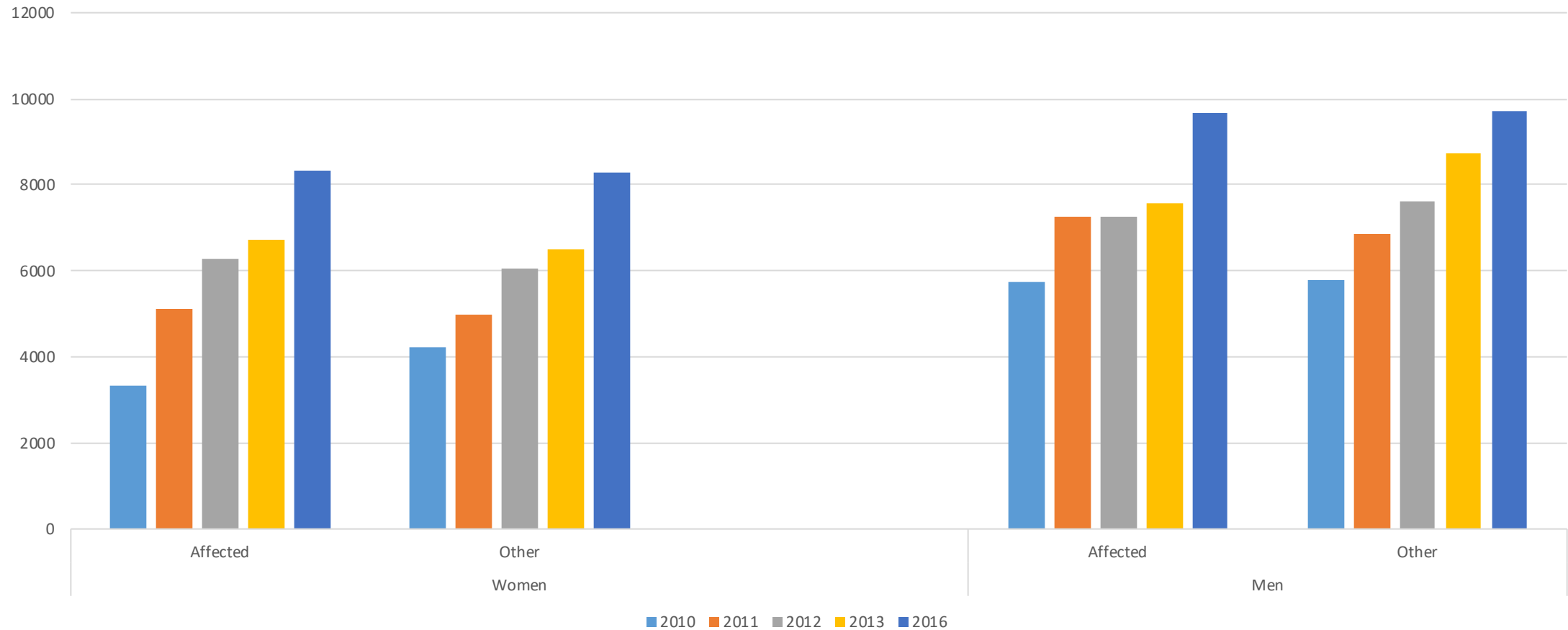
Predicted monthly wage (soms), rural: Affected = teachers, health care & social workers



Results: What the rural figures say

- Women, rural:
 - Teachers, health care & social workers (EHS) earn less than other workers before the policy (2010).
 - In 2011-2013 after the policy is in effect, EHS earn more than other workers; by 2016, the wages of EHS and other workers are similar.
- Men, rural:
 - EHS earn less than other workers in 2010.
 - EHS earn more than other workers in 2011-2012; by 2016, the wages of EHS and other workers are similar.

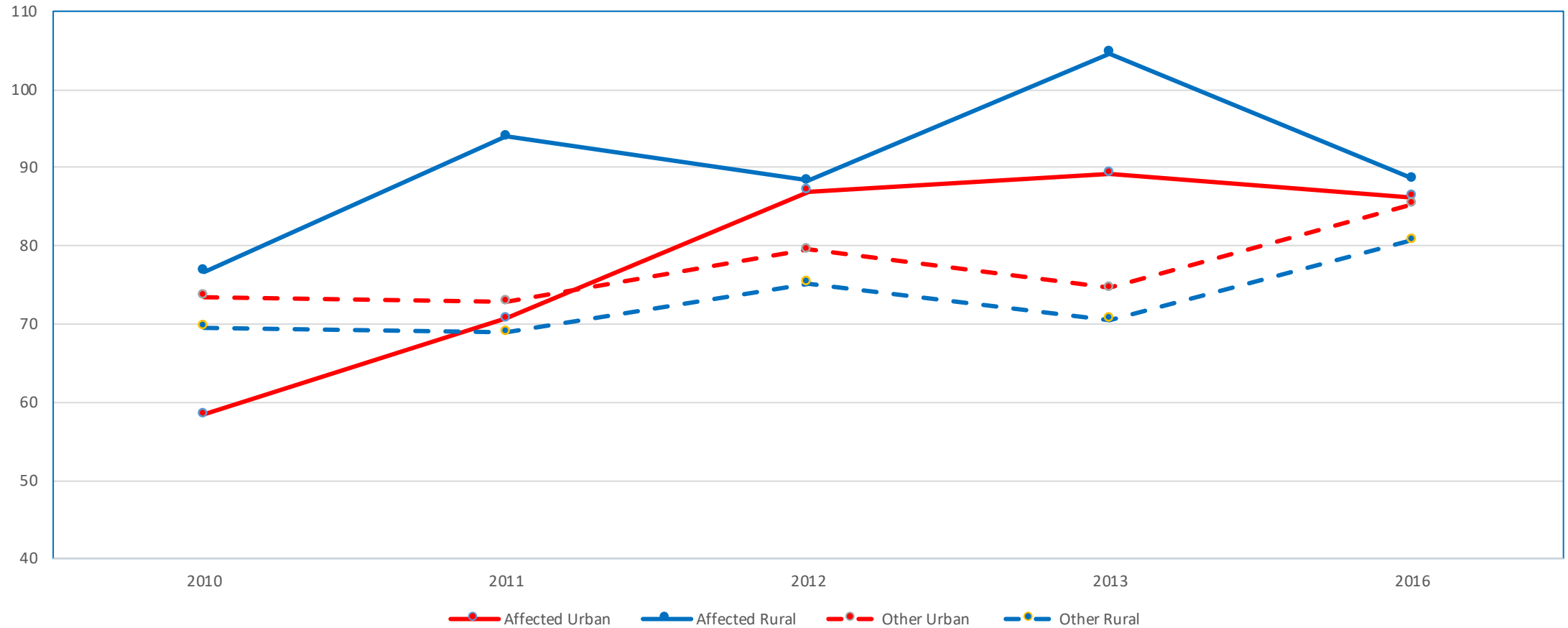
Predicted monthly wage (soms), urban: Affected = teachers, health care & social workers



Results: What the urban figures say

- Women, urban:
 - Same pattern as rural women
- Men:
 - Wages for EHS and other workers are very similar in all years.
- Policy had the largest positive effect on the wages of women, especially in rural areas.
- As a result: improvement in the gender gap overall, rural and urban.

Wage of women/wage of men (%), rural and urban



Conclusions

- Policy met many of its goals: powerful tool to redress the wage gaps
 - Wages in EHS increased relative to wages in other jobs.
 - Rural areas experienced larger increases in EHS wages than urban areas.
 - Gender gap in wages narrowed for EHS jobs after 2010.
 - Gender gap in wages across all jobs narrowed after 2010.
- Wage setting policies can, in some cases, be effective in reducing the gender gap in wages.

Thank you!!