

CHINA'S REBALANCING AND GENDER INEQUALITY

Mariya Brussevich, Era Dabla-Norris & Grace Bin Li
International Monetary Fund

1. INTRODUCTION

Objective Examine China's rebalancing (shift in consumption and employment toward service sector) from a gender perspective.

Contributions

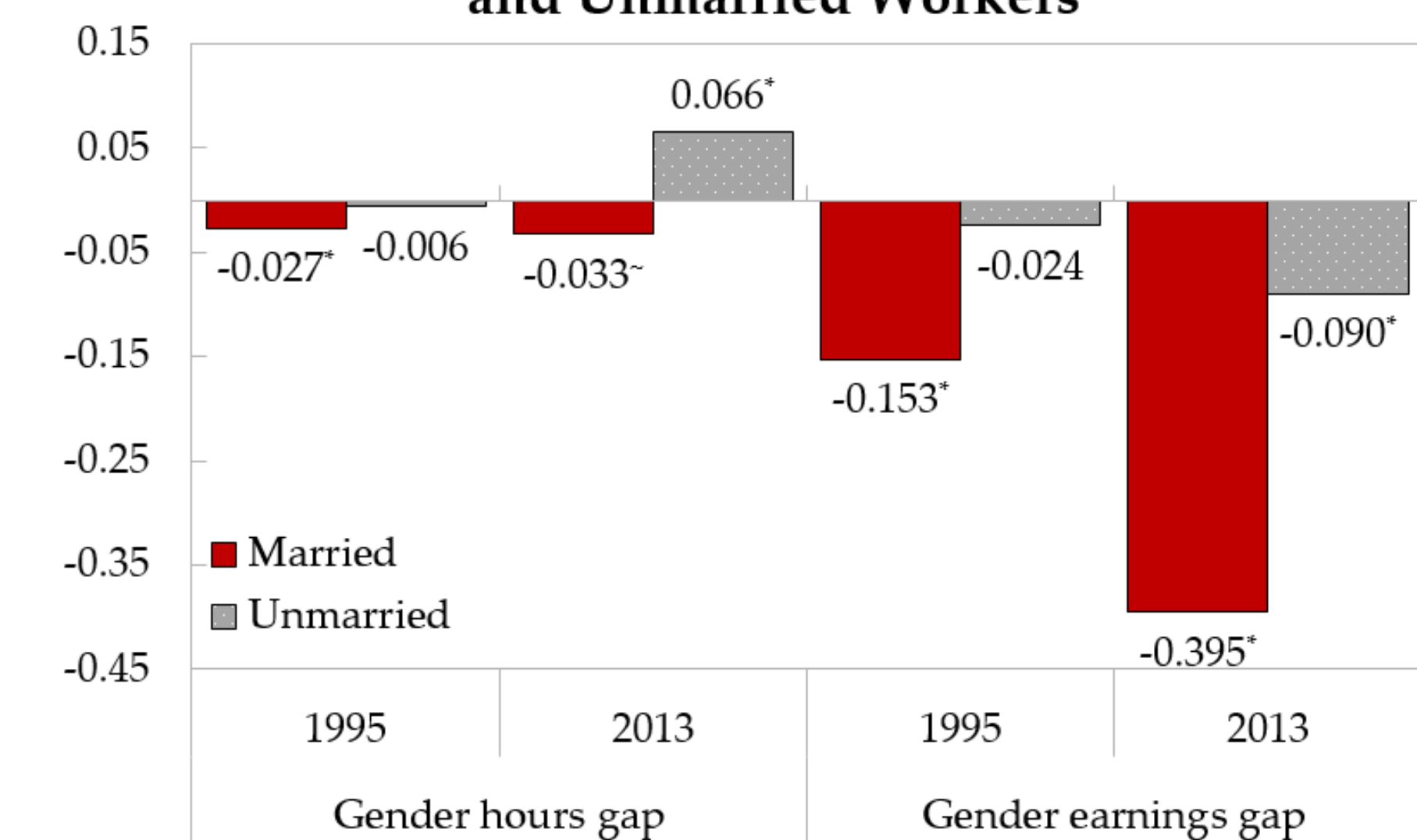
- Document widening gender inequality in hours and wages for married and unmarried women in China in the last two decades.
- Estimate women's time-varying labor supply elasticities to own and spouse's wages.
- Examine widening gender inequality in China in a model of structural transformation with home production.

3. WHO DRIVES GENDER GAPS?

Married women saw a bigger increase in conditional hours and earnings gaps.

The effect is more pronounced in **urban areas**.

Conditional Gender Hours and Earnings Gaps for Married and Unmarried Workers



Notes: Natural logarithm of weekly work hours or annual earnings are dependent variables. Coefficients on the binary variable "Female" are reported. All regressions control for age, age squared, presence of children in the household, education level, and urban residence. Statistical significance levels: * p<0.01, ~ p<0.1

2. PUZZLE

Three facts:

1. Widening gender gap in labor force participation (LFP) (12.5% in 2000 to 17% in 2013);
2. Widening conditional gender earnings gap (12% in 1995 to 35% in 2013);
3. Rising services employment share and declining employment share in the goods sector (agriculture and industry).

Puzzle: Rising service sector employment is associated with narrowing gender wage gaps (Ngai and Petrongolo, 2017; Rendall, 2013), contrary to the case of China.

Evidence from Chinese provinces suggests presence of a **U-shaped relationship** between FLFP and income.

4. LABOR SUPPLY ELASTICITIES

3-stage Heckman selection correction approach.

- **Estimating equation:**

$$h_i = \alpha^h + \beta_1^h \log(\hat{w}_i) + \beta_2^h \log(w_i^s) + \beta_4^h \lambda_i + \beta_5^h X_i^h + \epsilon_i^h$$

- h_i – own annual hours of work; $\log(w_i)$, $\log(w_i^s)$ – own, spouse's log hourly wages.
- λ_i – inverse Mills ratio; X_i^h – controls.
- Instrument wages: (quadratic) experience; county public employment share.

Table 1: Rising Labor Supply Elasticities of Married Women

	1995	2013
Own Log Wage	0.050	0.303
Spouse Log Wage	-0.074	-0.173

5. MODEL OF STRUCTURAL TRANSFORMATION

Build on Ngai and Petrongolo (2017)

- 3 sectors: goods, market and home-produced services.
- Key prediction: structural transformation and marketization of home-produced services narrow gender wage and hours gaps.

Technology

- Goods and services ($j = g, s$) are produced using female (L_{fj}) and male (L_{mj}) labor:

$$Y_j = A_j L_j, \quad L_j = \left[\xi_j L_{fj}^{\frac{\eta-1}{\eta}} + (1 - \xi_j) L_{mj}^{\frac{\eta-1}{\eta}} \right]^{\frac{\eta}{\eta-1}}$$

- Women have comparative advantage in services: $\xi_s > \xi_g$.
- Labor productivity, A_j , grows faster in goods sector.

Households

- Households derive utility from consuming

goods and services:

$$U = \ln c, \quad c = \left[\omega c_g^{\frac{\epsilon-1}{\epsilon}} + (1 - \omega) c_z^{\frac{\epsilon-1}{\epsilon}} \right]^{\frac{\epsilon}{\epsilon-1}}$$

- c_z are a CES composite of market- and home-produced services:

$$c_z = \left[\psi c_s^{\frac{\sigma-1}{\sigma}} + (1 - \psi) c_h^{\frac{\sigma-1}{\sigma}} \right]^{\frac{\sigma}{\sigma-1}}$$

- Women and men produce home services:

$$c_h = A_h \left[\xi_h L_{fh}^{\frac{\eta-1}{\eta}} + (1 - \xi_h) L_{mh}^{\frac{\eta-1}{\eta}} \right]^{\frac{\eta}{\eta-1}}$$

- Market services productivity grows faster.
- Budget constraint:

$$p_g c_g + p_s c_s = w_m (L_m - L_{mh}) + w_f (L_f - L_{fh})$$

- Labor markets clear:

$$L_{ig} + L_{is} = L_i - L_{ih}, \quad i = f, m$$

6. MODEL COUNTERFACTUALS

- Time-varying productivity wedge, π_j , in $\xi_j = \pi_j \chi_j$: $\frac{w_f}{w_m} = \frac{\pi_j \chi_j}{1 - \pi_j \chi_j} \left(\frac{L_{mj}}{L_{fj}} \right)^{\frac{1}{\eta}}$
- Calibration: **widening productivity wedge** (barriers to FLFP) over time.
- CF1: Reduce π_j to 1 – no barriers to FLFP (relative to case of the U.S. in 2008).
- CF2: Marketization—increase market sector productivity growth relative to home production.

Table 2: Counterfactual results

	Wage Gap		Market Hours Gap	
	2000	2013	2000	2013
Model Baseline	84.4	69.1	46.6	35.9
CF 1		77.9		72.8
CF 2		78.1		77.7

7. MAIN TAKEAWAYS

- Service sector expansion is accompanied by widening gender gaps in China (contrary to the case of advanced economies).
- Married women in urban areas are driving the widening hours and earnings gaps.
- Female labor supply elasticity to spouse's and own wages rose together with household incomes (suggesting a U-shaped relationship between FLFP and incomes).
- Female productivity wedges (barriers to

FLFP) increased, inducing women's reallocation from market to home production.

- Reducing barriers to FLFP and accelerating marketization of home-produced services would narrow gender gaps in China.

8. REFERENCES

- Ngai, L.R., and B. Petrongolo (2017): "Gender gaps and the rise of the service economy," *American Economic Journal: Macroeconomics*, 9(4), 1–44.
- Rendall, M. (2013): "Structural change in developing countries: has it decreased gender inequality?," *World Development*, 45, 1–16.