Comparison of Real Male Marital Wage Premium across generation (U.S.) and Countries (U.S./China/Taiwan)

Bob Lin, Liz Lu, Yuan Tien

"Male marital wage premium" (MWP), a well-known phenomenon, refers to the fact that married men earn more money than unmarried ones. However, the effect of marriage on male's wage is still uncertain since the phenomenon is possible due to the attractiveness of high earnings and high earning potential males in the marriage market (i.e., selection bias). Past researchers mainly applied two methods to exclude the effect of selection. The first utilizes fixed effect regression, benefiting from the advantages of panel data to control individual wage differences and wage growth differences. For example, Ludwig and Brüderl (2018) use the National Longitudinal Survey of Youth in the U.S. and show no male marital wage premium after excluding the effect of selection. Their paper challenges past result by analyzing the difference of their model which allows individual wage growth heterogeneity and past models with homogeneous wage growth. The second method adopts the treatment effect model with cross-sectional data. For instance, Nakosteen and Zimmer (1987) uses Michigan Panel Survey of Income Dynamic to show no male marital wage premium after excluding the effect of selection.

Despite no evidence of marriage effect in the above-mentioned papers, many studies that use similar methods on different datasets covering different countries still find the existence of "real male marital wage premium." In this paper, we apply the two approaches (i.e., fixed effect and treatment effect) on the samples from panel data and cross-sectional data respectively. Overall, our paper investigates the existence of "real male marital wage premium" across generations in the U.S. and across countries. If both methods can effectively rule out the selection issue, they should produce similar results across time and space. Additionally, If the fixed effect model does not overperform the treatment effect one, then scholars could feel at ease when replicating MWP with more attainable cross-sectional data.

Explanation for male marital wage premium

The existence and the causal mechanism of male marital wage premium remain a hot debate for social scientists. Three main theories, market specialization[1], effort allocation[2], employer bias[3], support the causal effect of marriage on male's wage. The first claims that marriage allows husbands to invest more in market-specific skills, assuming the wives take care of the housework. The second mechanism, effort allocation, follows similar logic by saying that married men can devote more time into work. The last theory asserts that the employer could view married men more productive or view the breadwinners more deserving of financial support than unmarried ones. Despite some empirical evidence of the three theories, potential selection into marriage may bias the results. Past attempts to rule out selection issue use either treatment effect method (for cross-sectional data) or fixed effect method (for panel data)[4]. Ideally, the two methods should yield the same conclusion about the existence of causal MWP.

Research Design

[1] Kenny (1983); Chun and Lee (2001)
[2] Becker (1985); Hersch and Stratton (2000); Stratton (2002)
[3] Siebert and Sloane (1981); Waite and Gallagher (2000); Grossbard-Shechtman and Neuman (2003)
[4] Nakosteen and Zimmer (1987); Ludwig and Brüderl (2018)

To evaluate MWP across time and space, we gather data from US National Longitudinal Survey (NLS), China Family Panel Studeis (CFPS) and Taiwan Panel Study of Family Dynamics (PSFD). All of them are national representative panel data with overlap between their time frame (2010 -2016). Table 1 provides a summary of the data:

Table 1. Data summary

Data	Sample	Type	Time frame
US National Longitudinal Survey	National	Panel data	1997 (Round 1) – 2019 (Round 19)
China Family Panel Studies	National	Panel data	2010 - 2020
Taiwan Panel Study of Family Dynamics	National	Panel data	2000 - 2018

Regarding identification strategy, we utilize the fixed effect and treatment effect models to identify our variable of interest: male wage premium. For the fixed effect model, our estimation is implemented at the individual-year level since we have annual observations of individual wage. Equation 1 describes the model of choice:

Equation 1: Fixed effect model

$$\ln w_{it} = \alpha_{2i} exp_{it} + \beta m_{it} + \gamma X_{it} + \alpha_{1i} + \epsilon_{it}$$

where $\ln w_{it}$ denotes the outcome of interest: the natural log of person i's wage at time t. exp_{it} is labor market experience, and X_{it} are the control variables. The key variable used for identification in our regression the marriage dummy, m_{it}, such that $m_{it} = 1$ for a person who is married. The wage level α_{1i} is an individual-specific constant, as well as α_{2i}.

The treatment effect model follows Heckman (1979) and Nakosteen and Zimmer (1987) proposed method to deal with selection bias. We will first consider marriage equation and wage equations separately (i.e., treat marriage as an endogenous variable). Afterwards, we estimate the combination of the two models, normalize, and calculate the inverse mills ratio for every individual. Finally, we put the ratio as a righthand-side variable along with marital status and other controls in the wage equation. Equation 2 illustrates the model for estimation:

Equation 2: Treatment effect model

$$lnw_i = \alpha + \beta m_i + \eta MR_i + \gamma X_i + \epsilon_i$$

Where m_i is the dummy for marital status, MR is the mills ratio, X_i are the control variables.

Schedule

April 2 – April 9: Review methods and models, and clean the data (US, China, Taiwan) for estimation
April 10 – April 16: Clean the data and produce preliminary results
April 16 – April 22: Produce results and graphs
April 23 – April 30: Write the paper

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