

Does Marriage Make Us Healthier? Inter-country Comparable Evidence from China, Japan and Korea

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1 Background, Motivation, and Objectives

Married people have been repeatedly documented to enjoy better health. Particularly, many works showed positive marriage protection on health. But further investigation is still necessary for at least two points: (1) None of them theoretically shows the marriage-health causality, (2) Scant attention were paid to Asian countries in which situation differs to the Western dues to diametrical culture background. Therefore, we aim to construct a theoretical bridge between marriage and health by relaxing depreciation rate assumption in Grossman's model, then investigate marriage protection effect between and within three East Asian countries: China, Japan, and Korea.

2 Theoretical Model and Empirical Strategies

We mainly follow Grossman but assume an endogenous depreciation rate δ_t . In detail, δ_t decreases with proper health investment I_{t-1} and marriage $m_t = 1$; increases by age t . Solving the utility maximization problem to derive the optimal health capital $\frac{\phi'_t w_t}{\pi^I_{t-1}} = r - \tilde{\pi}^I_{t-1} + \delta_t + \frac{\partial \delta_t}{\partial I_{t-1}} H_t$, we realize the RHS - price of health - satisfies our assumptions. Subsequently, each counterpart is specified and linearized for regression. We follow Grossman and leave out ϕ' and π^I here, while specify $\delta_t = \beta_6^{x_t} \{t^{\beta_7} / [(m_t + 1)^{\beta_8} I_{t-1}^{\beta_9}]\}^{\frac{1}{n}}$ to derive $\ln H_t = \alpha_0 + \alpha_1 \ln w_t - \alpha_1 \ln p_t + \alpha_2 E_t + \alpha_3 \ln I_{t-1} - \alpha_4 \ln t + \alpha_5 \ln(m_t + 1) - x_t \alpha_6 + u_t$. Technically, to solve the endogeneity owing to simultaneous relation of marriage and health, 2SLS - the IV method - is also implemented besides to OLS.

3 Data and Measurements

The empirical analysis is based on a micro-based data from China, Japan and Korea provided by the East Asian Social Survey, an East Asian version of ESS. Health indicators were collected in year 2010 and coded in identical format among countries, in which we utilize a series of SF-12 subscores (i.e., eight domains scaled from 0 to 100 to measure health) and a variety of health-related indicators (e.g., self-rated health status, probability of suffering chronic diseases) to represent both the physical and mental components of health. Besides to included demographic and socio-economic control variables, two instruments - community size and education level of respondent's father - are implemented to solve potential endogeneity of our treatment, the marital status.

4 Results and Conclusion

Generally, significant-positive marriage protection effects are expected to be found in both physical and mental components of health indicators, and current regression results are summarized as follows.

By country, married Chinese generally report strongest protection, meanwhile Japanese and Korean are faintly protected. Interestingly, married Japanese dominate Korean in SF-12 subscores but get dominated in the more subjective health-related indicators, indicating Japanese pessimistic belief of their health. By Gender, male dominates female regardless of marital status, while female is more obviously protected than male if married. For instance, one physical health indicators, the General Health - a SF-12 subscore - significantly sees a country-average 23.863 higher score for married individuals, while corresponding 24.322 and 13.551 lower for Japanese and Korean compared to this average. Besides, married male enjoys a 11.661 higher score, yet still lower than the increased 19.685 for female, implying a stronger protection for female. In summary, although the effects varies among countries in East Asia, as marriage do protect our physical and mental health, it shall be considered when governments implement health-related policies.