The Male Marital Wage Premium: Further Results on an Enduring Puzzle

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The Male Marital Wage Premium

- Married men earn more than unmarried men
  - Marital wage premium (MWP)
  - “… one of the most well documented phenomena in social science” (Waite & Gallagher 2000: 99)

- Early studies used cross-sectional data
  - Self-selection: high wage men more attractive marriage partners

- However, also recent longitudinal studies find a MWP
  - Ahituv/Lerman (2007) Demography
    NLSY79, FE (fixed-effects) regression: 7.6 %
  - Barg/Beblo (2007) Schmollers Jahrbuch
    SOEP 1992-2004, PS matching: 3.6 %
  - Pollmann-Schult/Diewald (2007) KZfSS
    SOEP 1984-2004, FE regression: 1.9 %
Is There Really a MWP?

- Thus, marriage makes men more productive workers
  - Remark: Not the effect on labor hours, but the effect on productivity (gross hourly wage rate)
- We are not convinced: we introduce three innovations
- Taking the theory seriously
  - Theories imply certain time paths of the MWP
    1. How develops the MWP over the duration of a marriage?
  - Theories imply effects for separation and remarriage
    2. What are the effects of separation and remarriage?
- Methodological improvement
  - Self-selection may operate on wage growth (not only on level)
  - Can be controlled for by FE-IS (fixed-effects individual slopes)
    3. How high is the MWP when using FE-IS?
Explanations for a Causal MWP

- Family Economics (Becker 1981)
  - Precondition: there is a traditional division of labor
  - Married men specialize on market work
    They accumulate more market specific skills
  - Married women specialize on household work
    Married men are released from strenuous housework
    They can put more effort in their market work

- Lifestyle explanation
  - After marriage men are domesticated by their wives

- Demand side explanation
  - Paternalism of employers
    - Prominent example: marriage premium for German public sector workers (*Familien-, Ortszuschlag*)
Implications for Time Path of MWP

- ln W
- EXP
- marriage
- specialization
  - work effort, domestication, employer favoritism
- never-married

[Diagram showing a graph with lines indicating the relationship between ln W and EXP, with notes on specialization and never-married.]
Implications for the Effect of Separation

\[ \ln W \]

- marriage
- separation

[Diagram showing a graph with the x-axis labeled 'EXP', the y-axis labeled '\ln W', and two lines indicating 'never-married'.]
Arguments for a Spurious MWP

- (Self)-selection of high wage males into marriage
  - They gain more from specialization and therefore are more willing to marry
  - They are more attractive marriage partners
    - Due to their higher wage
    - Due to other unobservables correlated with wage
      e.g. physical traits: beauty, health; social skills: communication, problem solving; personality: happiness, self-confidence

- It is not only level, but also „steepness“ of the career
  - Promising young men (steep wage career) are attractive marriage partners

- Standard FE models yield upwardly biased estimates
Selection on Wage Growth

In $W$ vs marriage

promising young man is married, though he earns less

never-married

Standard FE model yields upwardly biased estimate for the marriage effect
FE-IS Model

- Solution: Fixed-effects model with individual slopes
- FE-IS extends within-transformation of conventional FE
  - Allows for individual slopes in addition to individual constants
- FE:
  \[
  \ln w_{it} = \alpha_1 \exp_{it} + \alpha_2 \exp_{it}^2 + \beta_1 m_{it} + \ldots + \alpha_i + \varepsilon_{it}
  \]
- FE-IS:
  \[
  \ln w_{it} = \alpha_{1i} \exp_{it} + \alpha_{2i} \exp_{it}^2 + \beta_1 m_{it} + \ldots + \alpha_i + \varepsilon_{it}
  \]
  \[
  = z_{it} \alpha_i + x_{it} \beta + \varepsilon_{it}
  \]
  \[
  z_{it} \ (1 \times J), \ \alpha_i \ (J \times 1), \ \ x_{it} \ (1 \times K), \ \beta \ (K \times 1)
  \]
FE-IS Estimation

- Extended within-transformation (Polachek/Kim 1994)
  - Idea: Subtract not just mean wage (individual constant), but individual wage career (individual constant and slope)

- Premultiply through by \( \Omega_i = I_T - Z_i(\bar{Z}_i' \bar{Z}_i)^{-1} \bar{Z}_i' \)

  - \( \Omega_i y_i = \tilde{y}_i \), residuals from OLS of \( \ln w_{it} \) on \( z_{it} \) for each \( i \)
  - \( \Omega_i X_i = \tilde{X}_i \), residuals from OLS of \( X_i \) on \( z_{it} \) for each \( i \)
  - \( \Omega_i Z_i = 0 \), this eliminates unobserved individual constant and slope
Data and Research Strategy

- German Socio-Economic Panel, waves 1984-2006
  - West German residents
  - Cohorts 1935 to 1975, up to age 60
  - no self-employees, private sector workers (samples I-IV) or public sector workers (sample V)

- Samples
  - Sample I (N=1,504): effect of marriage
    - Cohorts 1945-75, never-married when first observed, at least 4 obs.
  - Sample II (N=3,017): time-path of marriage effect
    - Sample I + men in 1st marriage when first observed
  - Sample III (N=4,024): effect of separation/divorce
    - Cohorts 1935-70, in 1st marriage when first observed, at least 2 obs.
  - Sample IV (N=477): effect of remarriage
    - Cohorts 1935-70, separated/divorced or cohabiting after 1st marriage when first observed, at least 2 obs.
  - Sample V (N=758): public sector premium
    - Like sample II, but public sector workers (Beamte, AN im öffentlichen Dienst)
Variables

- **Hourly wages**
  - Log. monthly gross earnings (deflated), divided by actual work hours * 4.36

- **Marital status**
  - Derived from (monthly) marriage biography, 6 states
    - Never-married single, cohabiting prior to 1st marriage, 1st marriage, separated/divorced, cohabiting after 1st marriage, remarriage

- **Marriage duration**
  - 20 year dummies

- **Labor market experience (linear and squared)**
  - Years worked up to t-1, derived from yearly work history file
    - Full-time employment counts as 1 year, part-time employment or vocational training as half a year

- **Control variables**
  - Number of biological children, education (yrs.), dummy in education, tenure (yrs.), dummies for survey year
Results I: Time Path of the MWP

![Graph showing the time path of the MWP with years in first marriage on the x-axis and marriage effect on the y-axis, with confidence intervals represented by lines.]
Results I: MWP in the public sector

Marriage effect +/- 1.96 se

Years in first marriage
# Results II: Separation and Remarriage

<table>
<thead>
<tr>
<th></th>
<th>Separation sample III</th>
<th>Remarriage sample IV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>POLS</td>
<td>FE</td>
</tr>
<tr>
<td><strong>Separation</strong></td>
<td></td>
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<tr>
<td></td>
<td>-0.060**</td>
<td>-0.002</td>
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<tr>
<td></td>
<td>(0.018)</td>
<td>(0.013)</td>
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<td><strong>Remarriage</strong></td>
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<td></td>
<td>-0.015</td>
<td>-0.009</td>
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<td></td>
<td>(0.033)</td>
<td>(0.030)</td>
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<tr>
<td><strong>Cohab. after</strong></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>-0.073</td>
<td>-0.014</td>
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<tr>
<td></td>
<td>(0.040)</td>
<td>(0.024)</td>
</tr>
<tr>
<td><strong># children</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.013*</td>
<td>0.024**</td>
</tr>
<tr>
<td></td>
<td>(0.005)</td>
<td>(0.005)</td>
</tr>
<tr>
<td><strong>Person-years</strong></td>
<td>31,200</td>
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</tr>
</tbody>
</table>

* p<.05, **p<.01, robust S.E. in parentheses
## Results III: MWP with POLS, FE, and FE-IS

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<tr>
<th></th>
<th>POLS</th>
<th>FE</th>
<th>FE-IS</th>
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<tbody>
<tr>
<td>1st marriage</td>
<td>0.078**</td>
<td>0.036**</td>
<td>0.015</td>
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<tr>
<td></td>
<td>(0.014)</td>
<td>(0.013)</td>
<td>(0.010)</td>
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<tr>
<td>Cohab. prior</td>
<td>0.044**</td>
<td>0.009</td>
<td>0.018*</td>
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<tr>
<td></td>
<td>(0.013)</td>
<td>(0.012)</td>
<td>(0.008)</td>
</tr>
<tr>
<td>Separation</td>
<td>0.028</td>
<td>-0.005</td>
<td>0.029</td>
</tr>
<tr>
<td></td>
<td>(0.033)</td>
<td>(0.026)</td>
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<tr>
<td></td>
<td>(0.061)</td>
<td>(0.043)</td>
<td>(0.031)</td>
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<tr>
<td>Remarriage</td>
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<tr>
<td>Person-years</td>
<td>14,910</td>
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Conclusion

- Marriage does not make men more productive workers
  - Time path of MWP is declining
  - No effects of separation/divorce and remarriage
  - FE-IS model provides (almost) zero MWP

- More general: Family formation (including cohabitation) and dissolution do not affect wages
  - Literature on benefits of marriage needs to be reconsidered
  - Current trends in family formation do not alter wage structure

- Methodological: take life-courses seriously
  - Do not only match on level obtained (FE)
  - But also on the trajectory (FE-IS)