Should I stay or should I go?
Predicting husbands’ and wives’ exit-options and analyzing their impact on marital stability

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Structure

1. Theoretical background
2. Realized and hypothetical exit-options
3. Data
4. Results
Theoretical background

- Household and family decision understood as result of intra family bargaining
- Bargaining power due to individual utility level in case of failed negotiations
- The better the individual’s *exit-option*, the less dependent he/she is
- Manser and Brown (1980); McElroy and Horney (1981); Ott (1992)
- Thibaut and Kelley (1961)
Theoretical background

- Applied to marital stability: Marriages are dissolved when individuals are better off alone.
- Individuals who have to fear utility loss are more likely to stay within their marriages.
Theoretical background

- Applied to marital stability: Marriages are dissolved when individuals are better off alone
- Individuals who have to fear utility loss are more likely to stay within their marriages
- Situation in case of divorce remains unknown as long as marriage lasts
- Exit-option remains hypothetical as long as it is not realized in case of divorce
Realized and hypothetical exit-options

- The same is true from a researcher's perspective
- Most researcher make use of proxies (employment, working hours, wages, education)
Realized and hypothetical exit-options

- The same is true from a researcher’s perspective
- Most researcher make use of proxies (employment, working hours, wages, education)
- In fact, some realized exit-options can be observed
Strategy

Three step procedure

1. Regressing realized exit-options of divorcees (OLS)
2. Drawing conclusions regarding unknown exit-options (using coefficients to predict hypothetical exit-options of spouses)
3. Analyzing their impact on marital stability (logistic regression)
Two comparable empirical approaches

- Johnson and Skinner (1986) analyze how female labor participation is influenced by divorce risk.
- Estimate wives’ working hours with (predicted) divorce risks as independent variable.
- Beblo (2000, 2001) also interested in employment of married women.
- Predicted divorce risk is weighted with "‘virtual conflict payoff’", i.e. predicted household income after divorce.
Hypothetical exit-option similar to Beblo’s "virtual conflict payoff"

Not used to estimate female employment, but rather risk of divorce
- Socio-Economic Panel (1984 - 2011)
- Information of husbands and wives during marriage and considerable number of observable marital disruptions
- Biography data gives information about employment history and division of labor before panel entry
10,622 marriages used here (only couples with children)

Average observed duration
- 23.5 years (with biography data)
- 8.5 (in panel)

1,408 Divorces (in panel)
Exit-option calculated as adjusted household net income in the first year after divorce

Cases with time of separation $\geq 4$ excluded

Only couples with children

OLS conducted separately for men ($N = 445$) and women ($N = 542$)
Regressing realized exit-option – Covariates

- Division of labor
  - Dummies generated from sequence and cluster analysis with employment history of men and women
  - Male Breadwinner, Female additional income, Both equally employed, Other

- Age (metric)
- Working hours (metric)
- Education (ISCED, dummies)
- Current decade (dummies)
- No. of children in household, age of youngest child (dummies)
- Health (metric)
Regressing exit-options – Results

<table>
<thead>
<tr>
<th></th>
<th>Women</th>
<th></th>
<th>Men</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\beta$</td>
<td>Std. Err.</td>
<td>$\beta$</td>
<td>Std. Err.</td>
</tr>
<tr>
<td><strong>Division of labor (Reference: Both equally employed)</strong></td>
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<td></td>
</tr>
<tr>
<td>Male breadwinner</td>
<td>-1405.12 (1120.78)</td>
<td>3197.90 (1501.46)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female additional income</td>
<td>-2.42 (996.53)</td>
<td>3102.20 (1295.00)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>-2079.70 (844.55)</td>
<td>733.64 (1120.02)</td>
<td></td>
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</tr>
<tr>
<td>Working hours</td>
<td>132.65 (13.47)</td>
<td>151.24 (16.33)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Education (Reference: ISCED 3 - 4)</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>ISCED 1 - 2</td>
<td>-1391.12 (630.50)</td>
<td>101.41 (913.03)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISCED 5 - 6</td>
<td>2433.35 (613.22)</td>
<td>4415.99 (838.85)</td>
<td></td>
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<tr>
<td><strong>Decade (Reference: 1990 - 1999)</strong></td>
<td></td>
<td></td>
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<tr>
<td>Before 1990</td>
<td>-1265.85 (960.28)</td>
<td>-1049.42 (1484.20)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>After 1999</td>
<td>1005.74 (532.14)</td>
<td>207.73 (724.66)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>42.15 (41.98)</td>
<td>50.80 (46.51)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>No. of children in household (Reference: one child)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>2883.04 (776.21)</td>
<td>2860.48 (1085.04)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Two or more</td>
<td>-1158.28 (521.35)</td>
<td>-1853.15 (1365.22)</td>
<td></td>
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</tr>
<tr>
<td><strong>Age of youngest child (Reference: older than 12)</strong></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>0 - 3 years</td>
<td>3476.99 (1046.19)</td>
<td>2326.30 (2050.93)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 - 6 years</td>
<td>1676.95 (826.97)</td>
<td>2092.50 (2077.52)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 - 12 years</td>
<td>2025.85 (885.69)</td>
<td>2216.53 (1560.19)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td>158.85 (114.78)</td>
<td>329.16 (151.27)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>7500.29 (2331.91)</td>
<td>5329.39 (2866.29)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>546</td>
<td></td>
<td>431</td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.325</td>
<td></td>
<td>0.311</td>
<td></td>
</tr>
</tbody>
</table>

Predicted (hypothetical) exit-options

Mean household income ex-wife 15,813.77
Mean exit-option wife 14,364.27
Mean household income ex-husband 20,851.49
Mean exit-option husband 19,514.20
Ratio of exit-options

\[
\frac{\text{household income ex-wife}}{\text{household income ex-husband}} = 0.758
\]

\[
\frac{\text{exit-option wife}}{\text{exit-option husband}} = 0.736
\]
Ratio of exit-options
Logistic Regression

Probability of getting separated until the following interview (with divorce following)

Left-censored observations not excluded (pooled logit)
Divorce risk – Covariates

- Wives’ exit-option (divided by 1,000)
- Husbands exit-option (divided by 1,000) or relation of spouses exit-options
- Current adjusted household income (divided by 1,000, metric)
- Home ownership (dummy)
- At least one partner had prior marriage (dummy)
- At least one partner has migration background (dummy)
- Woman’s age at marriage (metric), wife older than husband (dummy)
- Year of marriage (dummies)
## Divorce risk – Results

### Tab. 1: Logistic regression, Dependent Variable Separation after interview

<table>
<thead>
<tr>
<th></th>
<th>Model I</th>
<th></th>
<th>Model II</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Exit-Option Woman</td>
<td>0.965*</td>
<td>(0.01)</td>
<td>0.912***</td>
<td>(0.02)</td>
</tr>
<tr>
<td>Exit-Option Man</td>
<td>0.937***</td>
<td>(0.01)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ratio Exit-Options</td>
<td>2.601***</td>
<td>(0.51)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control variables</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

**Chi2** | 460.903 | 444.498
**Prob > chi2** | 0.000 | 0.000
**Pseudo $R^2$** | 0.093 | 0.091

Obs=94,301; marriages=10,622; Source: SOEP 1984 - 2011.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. 
Risk of divorce decreases with an increase of absolute exit-options (both male and female)

Might be driven by "‘welfare effect’"

Importance of relative exit-options: The better the women’s exit-option compared to her husband’s, the more likely marital dissolution becomes

Importance of relative distribution of power within marriages as predicted by theory
Summary

- Exit-options important part of decision making
- Remains unknown until exercised
- Prediction of exit-option one way to analyze its impact
- Proves suitability of proxies
- Reveals importance of relative bargaining power
Thank you for your attention
### Tab. 2: Categorization of division of labor

<table>
<thead>
<tr>
<th>employment husband</th>
<th>employment wife</th>
<th>type</th>
</tr>
</thead>
<tbody>
<tr>
<td>full time</td>
<td>not</td>
<td>male breadwinner</td>
</tr>
<tr>
<td>part time</td>
<td>not</td>
<td>male breadwinner</td>
</tr>
<tr>
<td>full time</td>
<td>part time</td>
<td>female additional income</td>
</tr>
<tr>
<td>not</td>
<td>full time</td>
<td>female breadwinner</td>
</tr>
<tr>
<td>not</td>
<td>part time</td>
<td>female breadwinner</td>
</tr>
<tr>
<td>part time</td>
<td>full time</td>
<td>female breadwinner</td>
</tr>
<tr>
<td>Vollzeit</td>
<td>full time</td>
<td>both equally employed</td>
</tr>
<tr>
<td>part time</td>
<td>part time</td>
<td>both equally employed</td>
</tr>
<tr>
<td>not</td>
<td>not</td>
<td>none employed</td>
</tr>
</tbody>
</table>
Types of division of labor treated as sequences

Calculation of distance matrix for every pair of sequences in full dataset

Hierarchical cluster analysis used to merge similar sequences and generate clusters

Brzinski-Fay et al. (2006)
Sequence index plots, Cluster division of labor

(I) Male Breadwinner

(II) Female additional income

(III) Both equally employed

(IV) Other

Male Breadwinner
Female Breadwinner
Both equally employed
Female additional income
none employed

Back

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Heckman correction

- Relatively small number of observations and collinearity problems
- Puhani (2000) recommends to not use Heckman correction
- Beblo (2000) does neither
- Additional estimates with correction did not lead to noteworthy changes
- $\rho$ insignificant