Demographic change during forced migration: Comparing marriage and fertility among Syrian refugees in Jordan and the pre-conflict Syrian population

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Conflict impacts on marriage transitions and fertility rates

- Theoretically the impact of conflict on marriage transitions and fertility rates could be positive or negative

- Empirical findings on marriage are mixed
  - Downward pressures: reduced availability of men, disruption of social networks
  - Upward pressures: Marriage may be a protective factor (for women and/or for men) in contexts of conflict

- Several studies of fertility find decline during conflict followed by a rebound post-conflict
  - Marriage rates during/post conflict affect fertility rates
  - Downward pressures: spousal separation, intended postponement of births
  - Upward pressures: desire to replace lost family members, disrupted access to contraception

References: Agadjanian and Prata 2002 (Angola); Heuveline and Poch 2007 (Cambodia); Williams et al. 2012 (Nepal); Cetorelli 2014 (Iraq); Verwimp et al 2018 (Burundi)
Marriage and fertility among forced migrants: The Syrian case

• In addition to conflict-driven mechanisms of impact, selection into the host country is a major factor with forced migrants

• The Syrian civil war has displaced at least 5.6 million people outside Syrian borders*
  • Jordan hosts 3rd largest number of refugees, with 1.3 million Syrian refugees according to 2015 census (national population of 6.6 million); ~700,000 registered according to UNHCR*

• Many arguments that early marriage (and fertility) have increased among Syrian refugees in Jordan and Lebanon
  • Most studies rely on unrepresentative samples and/or do not consider selection or composition of Syrian population
  • Calculate marriage rates based on new marriages, not the population
  • Ex: Jordan Higher Population Council found that 44% of new Syrian marriages in 2015 were early (bride under age 18)

*UNHCR persons of concern as of November 2018
Research questions (and answers)

1. What are the patterns of marriage and fertility outcomes among the Syrian refugee population in Jordan?
   • High fertility, early transition to marriage

2. Has early marriage increased among the Syrian refugee population in Jordan since displacement?
   • No. May be some compression of marriage to ages < 20

3. Is there evidence of changes in fertility behavior among the Syrian refugee population?
   • No. Rates have been high since prior to the conflict.
# Data

<table>
<thead>
<tr>
<th>Surveys</th>
<th>Sample</th>
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<tbody>
<tr>
<td>• Jordan Labor Market Panel Survey (JLMPS) 2016</td>
<td>• Women aged 15-49 in survey year for most analyses</td>
</tr>
<tr>
<td>• Pan Arab Project for Family Health (PAPFAM) Syria 2009</td>
<td>• N=667 in JLMPS</td>
</tr>
<tr>
<td>• Nationally representative</td>
<td>• N=31,302 in PAPFAM</td>
</tr>
<tr>
<td>• Include full birth histories and retrospective data on marriage age</td>
<td>• Use expanded age range for birth histories in JLMPS (15-59) for retrospective fertility rates</td>
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</tbody>
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Methods

- Descriptive analysis comparing JLMPS and PAPFAM samples

- Survival analysis (Kaplan-Meier failure function) for descriptive analysis of age at first marriage

- Discrete time (complementary log-log) hazard models for change in age at first marriage, fertility
  - Transformed/annualized outcomes:
    - Hazard of first marriage at age (starting at age 15)
    - Hazard of having a birth in year
  - Marriage models include controls for education, calendar year, country of residence
Syrian refugees in Jordan are young and highly selected

Population pyramid, Syrians (PAPFAM 2009) and Syrian refugees in Jordan (JLMPS 2016)

- Nearly 50% of Syrian refugee population is under 15; relatively few men in 20s
- Less educated: 70% of women had < basic education compared to 50% in PAPFAM
- Governorate of origin: 40% from Dara’a
Earlier transitions to marriage among the Syrians now in Jordan

Proportion married by age, women & men aged 15-49 at time of survey
Divergence in marriage patterns pre-conflict

Proportion married by age, women aged 15-49 at time of survey
Denominators matter

Marriage statistics by birth cohort, women aged 15-39 at time of survey

<table>
<thead>
<tr>
<th></th>
<th>PAPFAM 2009</th>
<th>JLMPS 2016</th>
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<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td><strong>A. All women</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>(age at time of survey)</em></td>
<td>19-34</td>
<td>24-39</td>
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<tr>
<td>Married before age 18, percent</td>
<td>19</td>
<td>31</td>
</tr>
<tr>
<td>Married before age 16, percent</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>N</td>
<td>17,490</td>
<td>337</td>
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</table>

|                                |            |            |            |
| **B. Ever-married women**      |             |            |            |
| Age at marriage, average       | 19          | 19         | 17         |
| Married before age 18, percent  | 38          | 34         | 47         |
| Married before age 16, percent  | 16          | 10         | 20         |
| N                              | 8,505       | 314        | 110        |
Hazard of marriage before and after displacement

Hazards of marriage, differences by country of residence (time-varying), women aged 15-49 at time of survey
Fertility rates among Syrian refugees in Jordan

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<tr>
<td>Pre-conflict (2009)</td>
<td>3.5</td>
<td>4.9</td>
<td>4.4</td>
<td>4.7</td>
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<tr>
<td>Displacement</td>
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</table>
ASFRs among the refugee population over time

Births per 1,000 Women

Age groups

- Syria national 2009 (PAPFAM 2009)
- Refugees now in Jordan 2009 (JLMPS 2016)
- Refugees now in Jordan 2016 (JLMPS 2016)
Hazard ratios for fertility over time – Syrian national population vs. refugees now in Jordan

Hazards of birth, differences by year, women aged 15-49 at time of survey
Summary and implications

- Syrians in Jordan have higher fertility and earlier marriage than national averages pre-conflict
  - Because they are a selected group
  - No evidence of increased fertility or earlier transition to marriage after arrival in Jordan
  - May be some compression of marriage to ages <20

- Previous estimations of early marriage have confounded a high percentage of marriages being early with an increased risk of early marriage

- Results from qualitative companion study and other literature suggest there are countervailing forces affecting Syrian refugees that confirm with both upward and downward pressures on marriage/fertility from demographic theory
  - Longitudinal data (very rare in MENA) is greatly needed for future research
Working papers


Available through ERF: http://erf.org.eg/publication_cat/working-paper-series/

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