Geography, gender and the migration trajectories of Indonesian and Filipino transnational parents

Lucy Jordan (University of Hong Kong) jordanlp@hku.hk
Tim Chuk (University of Hong Kong)
Elspeth Graham (University of St. Andrews)
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Introduction

• Transnational parents usually have multiple migration experiences.

• Multiple migration experiences have been interpreted as “stages of accumulating migrant capital to eventually gain legal entry into preferred destinations (e.g., Europe or North America) (Paul, 2011)”, which is also known as the stepwise migration hypothesis.

• Migration trajectories are diversified and complex. While the West may be popular destinations, transnational parents make migration decisions based on other personal factors, such as the age of their children and the convenience of visiting home.

• Here we explore the diversity of migration trajectories from a data-driven perspective. We cluster the migration trajectories into groups based on their similarities among one another, and compare the characteristics of the groups.
Method - Overview

• Using data collected in 2008 (Wave I) and 2016 (Wave II) for the Child Health and Migrant Parents in Southeast Asia (CHAMPSEA) project we examine the migration trajectories of transnational parents in Indonesia ($N = 682$) and the Philippines ($N = 476$).

• We track the migration histories of the transnational parents from the birth of the child to the date of the interview (Wave II). The data consists of the migration location and duration (in months) of each episode, including the time the transnational parents spent at home between migration episodes.
CHAMPSeA Wave 1

- Eligible households in Indonesia, Philippines, Thailand and Vietnam:
  - **Age of Index Child [IC]**
    - Either ages 3, 4, 5 (young children) OR 9, 10, 11 (middle childhood)
  - **Household Migration Status**
    - Either transnational households (one or both transnational migrant parents away for at least six continuous months) OR non-migrant households (both parents staying with the Index Child in the same household on most nights over the same time period)
  - **Intact, heterosexual families**

  - **Phase 1: Quantitative Surveys** (around 1,000 per country)
    - 3 different questionnaire surveys (or activity for young child)
      - Household Questionnaire for a Responsible Adult [RA];
      - Carer Questionnaire for the primary carer of the IC (may or may not be the same person as RA);
      - Older Child Questionnaire [IC aged 9 to 11] or Young Child Activity [IC aged 3 to 5].
    - Height and weight measurements of IC and siblings
CHAMPSseA Wave 1

Phase 2a: Qualitative Interviews (around 50 per country)
- Carers (in all four countries) from transnational and non-migrant households
- IC aged 9 to 11 from transnational households (only in Indonesia and the Philippines; 16 per country)
- The sample here is derived according to:
  - theoretical assumptions of the study;
  - outcomes of the quantitative surveys, taking into consideration a variety of transnational households’ circumstances such as gender and age of the IC; the relationship between the carer and the IC; migration status of the household; and physical health and psychological well-being of the IC.

Phase 2b: Qualitative Interviews (10 households per country)
- In Indonesia and the Philippines only
  - returned migrant
  - Carers
  - IC aged 9 to 11
CHAMPSeA Wave II

- Follow-up study conducted 8 years later

- **Phase 1 (2016):** Survey/interview the same CHAMPSEA 2008 households in Indonesia and the Philippines
  - No restrictions
  - Middle Childhood: Children, aged 3 to 5 in 2008, who are now 11, 12 and 13
  - Young Adults: Older Children who were then 9, 10 and 11, and now 17, 18 and 19.
- 2-3 questionnaires per household

<table>
<thead>
<tr>
<th>Middle Childhood Household [IC aged 11 to 13]</th>
<th>Young Adult Household [IC aged 17 to 19]</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Household Questionnaire (MC) for RA</td>
<td>• Household Questionnaire (YA) for RA</td>
</tr>
<tr>
<td>• Carer Questionnaire (may or may not be RA)</td>
<td>• Young Adult Questionnaire for IC</td>
</tr>
<tr>
<td>• Middle Childhood Questionnaire for IC</td>
<td>* If YA is away, a proxy questionnaire is administered to the RA</td>
</tr>
</tbody>
</table>
Method – Analytical Approach

• We apply sequence analysis using the monthly migration data over the (up to) two decades. Each sequence is a string of destinations, each element of a string represents one month period.

• We pool the sequences of the parents from the two countries, estimate the similarities of each sequence to all other sequences (i.e. pairwise similarities). The estimation is done with Levenstein distance, which measures the similarity between two sequences by counting the number of steps needed to transform one string to the other. The results are stored in a similarity matrix.

• We cluster the similarity matrix into groups using k-mean clustering. We repeat the clustering analysis for 2 to 8 clusters and select the result with the best mean silhouette value.
Results

• Results show that three clusters is the optimal solution.

• Distribution of the parents from the two countries over the three clusters are significantly different, $\chi^2(4) = 10.33$, $p = .005$.

• Numbers of fathers and mothers in the clusters are marginally different, $\chi^2(4) = 5.54$, $p = .06$.

• Distribution of the two age groups over the clusters are also significantly different, $\chi^2(4) = 494.32$, $p < .001$. 
Results

- Different clusters show different patterns.
- Parents in Cluster 1 and 2 migrated to significantly more destinations, visited home significantly more often, and spent significantly more time at home than those in Cluster 3.
- Those in Cluster 3 spent significantly more time away from home than the others.
- We compare the households’ Wave I socio-economic status (SES) to their wave II SES. No difference is found among the groups, $\chi^2(2) = 4.66, p = .10$.

### Results Table

<table>
<thead>
<tr>
<th></th>
<th>Cluster 1</th>
<th>Cluster 2</th>
<th>Cluster 3</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How many destinations</td>
<td>2.85</td>
<td>2.85</td>
<td>1.93</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>2. Number of visits back home</td>
<td>4.76</td>
<td>3.03</td>
<td>1.52</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>3. Time spent at home (months)</td>
<td>29.11</td>
<td>26.94</td>
<td>21.21</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>4. Time spent away from home (months)</td>
<td>24.36</td>
<td>25.57</td>
<td>28.03</td>
<td>=.01</td>
</tr>
</tbody>
</table>

### SES (Wave I vs Wave II)

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Increase/Equal</th>
<th>Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluster 1</td>
<td>183</td>
<td>93</td>
</tr>
<tr>
<td>Cluster 2</td>
<td>366</td>
<td>140</td>
</tr>
<tr>
<td>Cluster 3</td>
<td>277</td>
<td>99</td>
</tr>
</tbody>
</table>
Results

• When we cluster the two countries separately, we find 2 clusters for Indonesia and 3 for the Philippines.

• Distribution of the parents over the clusters are significantly different (Indonesia: $\chi^2(2) = 5.78$, $p = .02$; Philippines: $\chi^2(4) = 29.73$, $p < .001$).

• Distribution of the two age groups over the clusters are also significantly different (Indonesia: $\chi^2(2) = 22.98$, $p < .001$; Philippines: $\chi^2(4) = 144.36$, $p < .001$).
Results

- Indonesian parents in the two clusters show different migration patterns.
- Parents in Cluster 1 migrated to significantly more destinations, visited home significantly more often, and spent significantly more time at home than parents in Cluster 2.
- Parents in Cluster 2 spent significantly more time away from home than cluster 1.
- Those in Cluster 2 have significantly better performance in SES than cluster 1, $\chi^2(2) = 4.59, p = .03$.

<table>
<thead>
<tr>
<th></th>
<th>Cluster 1</th>
<th>Cluster 2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How many destinations</td>
<td>2.82</td>
<td>2.06</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>2. Number of visits back home</td>
<td>3.64</td>
<td>1.62</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>3. Time spent at home (months)</td>
<td>37.99</td>
<td>28.98</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>4. Time spent away from home (months)</td>
<td>25.82</td>
<td>30.07</td>
<td>=.002</td>
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SES (wave I vs wave II)

<table>
<thead>
<tr>
<th></th>
<th>Increase/Equal</th>
<th>Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>cluster1</td>
<td>99</td>
<td>52</td>
</tr>
<tr>
<td>cluster2</td>
<td>395</td>
<td>136</td>
</tr>
</tbody>
</table>
Results

- Parents in different clusters show diverse migration patterns.
- Parents in Cluster 1 and 3 migrated to significantly more destinations and visited home significantly more often than parents in Cluster 2.
- Parents in Cluster 2 spent significantly more time away from home than Cluster 1 and 3.
- No difference is found among the groups in terms of the change in SES over the two waves, $\chi^2(4) = .12, p = .94$.

### Philippines

<table>
<thead>
<tr>
<th></th>
<th>cluster 1</th>
<th>cluster 2</th>
<th>cluster 3</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How many destinations</td>
<td>2.89</td>
<td>1.79</td>
<td>2.94</td>
<td>p&lt;.001</td>
</tr>
<tr>
<td>2. Number of visits back home</td>
<td>2.98</td>
<td>1.42</td>
<td>5.47</td>
<td>p&lt;.001</td>
</tr>
<tr>
<td>3. Time spent at home (months)</td>
<td>13.8</td>
<td>12.63</td>
<td>9.28</td>
<td>p=.12</td>
</tr>
<tr>
<td>4. Time spent away from home (months)</td>
<td>24.34</td>
<td>26.97</td>
<td>21.91</td>
<td>p=.05</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SES (wave I vs wave II)</th>
<th>Increase/Equal</th>
<th>Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>cluster1</td>
<td>152</td>
<td>56</td>
</tr>
<tr>
<td>cluster2</td>
<td>101</td>
<td>40</td>
</tr>
<tr>
<td>cluster3</td>
<td>91</td>
<td>36</td>
</tr>
</tbody>
</table>
Discussion points

• Sequence analysis discovers group and migration pattern differences in a data-driven fashion.
  • Pros: No prior assumption needs to be made. Group differences (e.g., parents from different countries, different age or gender groups) and migration pattern differences (e.g., time spent at home; number of destinations visited over the decades) naturally emerged from the data.
  • Cons: Results may not be always interpretable. For instance, the number of clusters was decided based on the mean silhouette values, but the difference between Clusters 1 and 2 (two countries combined) was unclear.
Alternative classification approaches

Theoretically informed analyses can offer an alternative view

• Stepwise-migration; Onward-migration (Roseman, 1983; Paul, 2013).

• Structural and individual components
  • Structural: e.g., policies in origin and destination countries (Hugo, 2012; Kaur, 2010; Paul, 2013)
  • Individual: aspirations and agency (Carling & Schewel, 2017); cultural distance (Wang, Degragg, & Nijkamp, 2016)

• The trajectories of parents of children under 18 have received scant attention, and can be combined with existing theories to consider life-course of families and migration.
Acknowledgements

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Selected References


