Dissertation Progress Report

Lin Chen

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### Survey Information

* Survey date: 03/06 – 06/06
* Survey site: WeChat
* Sampling method: Snowball
* Reached: 1587 (7 provincial level district in China)
* Returned: 247 (189 participants are from Anhui Province where the survey started to circulate in WeChat networks)
* Effective sample: 225
* Mean survey completion time: 14mins, 27seconds

### Internal consistency measures of reliability

The questionnaire has six sub-scales. For each of the sub-scales, Cronbach's alpha is used to test its reliability. Below are the sub-scales and their reliability scores.

* 1. mother's status in original family (alpha = 0.92)
  2. mother's status in current family (alpha = 0.92)
  3. life satisfaction (alpha = 0.89)
  4. motherhood satisfaction (alpha = 0.84)
  5. motherhood interferes work (alpha = 0.93)
  6. work interferes motherhood (alpha = 0.95)

In general, Cronbach's alpha indicates great/excellent reliability.

### Regression analysis

In this section, I am using regression techniques to explore the survey data. Models are selected by consideration of AIC and BIC criteria.

#### Education level

The selected model is

education = young\_mother + has\_brothers + mother\_birth\_order + error

where education level (1 - higher school or lower; 2 - college; 3 - university or higher) is positively associated with mother's generation order (p-value = 0.0004). In general, education level is 0.39 higher in younger generation of mothers (age <= 36 years) than older generation (age > 36 years), controlling for whether a participant has brother(s) and her birth order.

\*Lin: This is the side effect of one-child policy. I understand it as that the policy was designed for population control and economic growth, which would both improve on natioanl education level.

Son-preference effect on education is revealed by the negative association between education level and variable has\_brothers (a mother has brother(s)) (p-value = 0.004). Controlling for the other two varibles, a mother who has a brother is 0.22 lower in education.

\*Lin: This is effect of traditional culture of son-preference. Having brothers cause unfair allocation of educational resources in families.

Birth order effect (p-value = 0.004) is also significant. Controlling for the other two variables, every one unit increase in mother's birth order is associated with 0.14 decrease in education level.

\*Lin: This is of more material concern. Bigger children are educated earlier than younger children. When materal resources are limited, bigger children may have advantage in continuing their education.

#### Original family status exploration

The selected model is

status\_origin = has\_brothers + error

Original status of mothers as a response variable is negatively associated with whether mothers have brothers (p-value = 0.05). Mothers consider themselves are highly valued (mean score of 3.51 out of 5) in their original families where they grow up. However, when they have brothers, a deduction of 0.29 in status score is expected.

#### Current status exploration

The selected model is

status\_current = status\_origin + rank2\_husband + has\_brothers

+ income + error

* Original status is the most dramatic predictor (p-value < 2e-16) of mothers' status in current family after marrige.
* It is noted that a mother who thinks that her husband ranks higher his identity as a husband than other identities tend to have greater family status.
* Interestingly, the variable has\_brothers is positively associated with current status, but negatively associated wtih original status. In Chinese culture, a women who has brothers has more symbolic support from her original family. Because marriage is more of two families joint together than having independent families.
* Household income is an other determinant of family status. The higher the per-capita income is, the higher a mother's family status is. (I measured per-capita income. I should have measured mother's own income level too. But it is too late now.)

#### Self and occupation ranks

1) rank\_self = age + error

younger mothers value themselves more than older mothers. I think, the sense of self is aggregating as life experience accumulation.

2) rank\_occupation = education + error

In general, mothers do not value occupation as much as their other identities. Having a job is not much more than gaining material support for the family. However, women having higher education tends to value their occupation more than less educated mothers.

#### Mother's fertility preference

Mother's fertility preference (whether the preference is having only one child) is determined by her own attitude toward only-children and whether her first child is a boy.

fertility\_preference = childhood + first\_son

\*childhood is another sub-scale that measured mothers’ childhood experience /view on only-children

\* first\_son is a dummy variable: 1 = the first child is a boy

1)Mothers who have better view of only-children tend to prefer having only one child.

2) Mothers whoes first child is a boy, are more likely to prefer having a 2nd child. I think this is because they feel less pressure in having a 2nd child, as they have already had a son.

#### Have only one child

I am less interested in this variable – mothers have only one child, as mothers can have a 2nd child later in life. So this variable is less complete. But modeled it anyway.

one\_child = fertility\_preference + husband\_2\_child + error

Whether mothers have/to have a 2nd child is determined by mothers' own fertility preference and their husbands' intentions. I am surprised to see that parents/in-laws intentions are reported by mothers (see the next model for example), but which are not significant factors in their family size planning.

#### In-laws pressure

inlaws\_2\_child = first\_son + age + error

Weather in-laws press on mothers to have a 2nd child depends on two variables - 1) whether the first child is a boy; 2) the mother's age.

First boy, enough. Older age, forget it.

### Content analysis of motherhood perception

The questionnaire asks mothers to provide their own perceptions of motherhood. A content analysis has been undertaken. Two primary codes - modern and traditional mothers are constructed, along with corresponding sets of codes. (should I say the sources of the codes? traditional codes are from [https://baike.baidu.com/item/%E4%B8%AD%E5%8D%8E%E6%AF%8D%E4%BA%B2%E6%96%87%E5%8C%96%E5%A4%8D%E5%85%B4%E5%B7%A5%E7%A8%8B/19483382](https://baike.baidu.com/item/中华母亲文化复兴工程/19483382), and modern codes are from the content itself.)

Mothers perceptions of motherhood are then analysed using the code book. An external coder coded the content, and the inter-coder reliability is 89.78% (202/225). Top 10 recurrent codes are listed in the table below.

Table1: Top ten recurrent codes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Primary code | Codes | Freq | Primary code | Codes | Freq |
| modern | self | 29 | traditional | great | 31 |
| modern | role model | 9 | traditional | caring | 30 |
| modern | strong | 9 | traditional | dedication | 30 |
| modern | friend | 6 | traditional | love | 29 |
| modern | core of family | 5 | traditional | responsibility | 25 |
| modern | enlightenment | 4 | traditional | education | 23 |
| modern | strict | 4 | traditional | selfless | 17 |
| modern | pillar | 3 | traditional | accompany | 13 |
| modern | grow up together with children | 3 | traditional | childbearing | 10 |
| modern | brave | 2 | traditional | not asking for return | 8 |

**Note:** 1 pillar is a word I pick up to represent mothers who are the major supporter in a family; it is similar but slightly different from core of family, which is has more sense of centredness. Depending on mothers expressions, mothers are catogorised into Traditional mother, Transitioning mother and Modern mother (and unknown mother who is not identifiable). In the sample there are 112 traditional, 53 transitioning, 33 modern perceptions of motherhood and 27 unknown types of perceptions. Of known types of motherhood perceptions (198), 56.57 % are traditional, and -55.57 are transitional or modern.

#### Logistic regression: exploration of motherhood perception

I filtered out unknown types of motherhood perceptions (remaining 198 out of 225 effective sample size), constructed the response variable as motherhood\_type (1 = traditional, 0 = other), and did logistic regression for it.

How the mother perceives motherhood is determined by her education level and how much she value her sense of self. I have argued that education is an indicator of empowerment/liberation, and self is more of life experience accumulation.

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Group by whether a mother is herself an only-child, below are group means in different dependent variables (alpha = 0.05)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Group: mother is only child | fertility\_preference | rank\_daughter | education | age | one\_child | childhood |
| TRUE | 3.44 | 3.05 | 2.27 | 33.5 | 0.85 | 3.58 |
| FALSE | 2.68 | 2.69 | 1.84 | 35.96 | 0.61 | 3.22 |

Group by whether a mother has brother(s), below are group means in different dependent variables (alpha = 0.05)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Group: mother has brothers | fertility\_preference | motherhood1 | motherhood2 | motherhood3 | education | age |
| TRUE | 2.7 | 2.03 | 2.04 | 2.33 | 1.79 | 36.93 |
| FALSE | 3.23 | 2.43 | 2.44 | 2.82 | 2.23 | 32.92 |

Group by whether a mother has a son, below are group means in different dependent variables (alpha = 0.05)

|  |  |  |  |
| --- | --- | --- | --- |
| Group: mother has son | Inlaws\_2\_child | has\_brothers | one-child |
| TRUE | 0.52 | 0.61 | 0.59 |
| FALSE | 0.65 | 0.42 | 0.88 |

Group by whether a mother has only one child, below are group means in different dependent variables (alpha = 0.05)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Group: has only one child | fertility\_preference | husband\_2\_child | parents\_2\_child | self\_2\_child | Parents-2\_child | inlaws\_2\_child | only\_child | has\_son |
| TRUE | 3.31 | 0.36 | 0.42 | 0.28 | 0.51 | 0.62 | 0.43 | 0.56 |
| FALSE | 2.12 | 0.62 | 0.58 | 0.51 | 0.38 | 0.45 | 0.17 | 0.87 |

Group by whether a mother is younger than 36 years, below are group means in different dependent variables (alpha = 0.05)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Group: younger generation of mothers | rank\_self | rank\_daughter | education | age | has\_brothers | only\_child |
| TRUE | 2.61 | 2.98 | 2.17 | 30.96 | 0.46 | 0.42 |
| FALSE | 3.09 | 2.51 | 1.65 | 43.18 | 0.70 | 0.22 |