Determinants of Abortion in a High Contraceptive-Use Setting in a Northern Province in Vietnam

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Research Question

In Vietnam→ unusual situation where high rates of contraceptive use co-exist with very high rates of induced abortion

- Has baffled researchers and policy makers

**Key Research Question**- Given the ready access to and the high reported use of contraceptives in Vietnam, why are the rates of Abortion so high?

- Are contraceptives not being used effectively?
- Is a sex selection at birth problem beginning to arise?
- Are there other issues policy makers should be paying attention to?
Background

- Vietnam - Rapid fertility decline in the last three decades to replacement levels
  - Total Fertility Rate 5.7 births per woman in 1979 → 2.0 in 1998-2002 (VNDHS, 2002)
- High current use rates of contraceptives: 80% (VDHS 2002)
- Among the highest rates of induced abortion in the world
  - 1.5 million documented abortions in public facilities in Vietnam (Henshaw, Singh, Haas, 1999).
  - Abortion was widely promoted in the Vietnam’s early family planning campaigns
  - Heavily subsidized by the government.
  - Readily accessible to the general population (Goodkind, 1994; Teerawichitchainan & Amin, 2010).
Background

Anomalous Situation in Vietnam- High Contraceptive Use coexists with High Rates of Abortion

Logical expectation: rise in contraceptive use or its effectiveness → decline in induced abortion and vice versa if TFR is constant (Marston & Cleland, 2003).

- Coexistence of high rates or the parallel rise of contraceptive use and abortion is possible in settings where TFR is high (Marston & Cleland, 2003)
- However, in Vietnam: High rate of contraceptive use - High rate of abortion – TFR already at replacement levels

Explore the reasons → Study in Thai Nguyen Province

TN : High abortion, high proportion of ethnic minority, high use of traditional contraceptives
Hypotheses

Potential Determinants of Abortion in a High Contraceptive Use Setting

1. Ineffective current use of contraceptives, particularly due to the continued high rates of use of traditional forms of contraception.

2. Sex selective abortion as a result of son preference, and the informal two child policy.

3. Lack of adequate FP and post-abortion counseling on proper and effective contraceptive methods to avoid unwanted pregnancy.

4. Ease of access of abortion as continued subsidization and marketing of abortion by the government as a means of contraception alongside
Data & Measures

**Data:** Population Council and PHAD Vietnam: Population based HH Survey in Thai Nguyen Prov., Vietnam
- 2668 Women and Men of Reproductive Age from 2490 households
- Multistage stratified cluster sampling method, oversampling ethnic minorities and P135 designated (poor) populations
- Covers issues related to sexual and reproductive health, particularly abortion.

**Study Sample:**
- 930 sexually active women of reproductive age (15-49 years old).
- 98% of these women have data on abortion (N=913)

**Key Feature: Chronological Abortion History Module**
- Number of boys and girls at the time of abortion
- Type of Contraceptive Used Prior to Abortion
- Knowledge of Sex of Fetus Prior to Abortion
- Presence of Post Abortion Counseling
Empirical Strategy

Descriptive Analysis:
- From Overall Sample of Women: Contraceptive Use and Abortion in TN
- From Abortion Module: Descriptive Bivariate Evidence on type of contraceptive use prior to abortion; sex selective abortion and presence of post abortion counseling among women who have had one or more abortions.

Multivariate Analysis:
- Overall Sample: Logistic regressions predicting demand for abortion (N=913)
  \[ Y (\text{Abortion}=1) = \beta_0 + \beta_1 (\text{Abortion Determinant}) + \beta_2 \ ' X + \epsilon \]
- Abortion Determinants tested:
  - Non-use or ineffective use of contraception: Traditional vs. Modern Methods
  - Sex Selective Abortion: use proxy → whether family has only girl children
  - X’s- Covariates → age, educational att., employment status, ethnic minority, P135 commune residency, SES (Wealth Quintiles)
Results: Descriptive Statistics from Study Sample
Contraceptive Use and Abortion in Thai Nguyen

Table 1. Contraceptive Use Among Women in Thai Nguyen

<table>
<thead>
<tr>
<th>Contraceptive Use</th>
<th>All Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVER USE</td>
<td>N=930</td>
</tr>
<tr>
<td>Ever Used Contraceptive Method</td>
<td>92.8</td>
</tr>
<tr>
<td>CURRENT USE</td>
<td>N=864</td>
</tr>
<tr>
<td>Currently Using Contraceptive Method</td>
<td>81.6</td>
</tr>
<tr>
<td>Modern Methods</td>
<td>78.13</td>
</tr>
<tr>
<td>Traditional Methods</td>
<td>21.64</td>
</tr>
</tbody>
</table>

Table 2. Abortion Among Women in Thai Nguyen

<table>
<thead>
<tr>
<th>Abortion</th>
<th>All Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVER HAD ABORTION</td>
<td>N=913</td>
</tr>
<tr>
<td>Ever had an abortion in her lifetime?</td>
<td>41.95</td>
</tr>
<tr>
<td>NUMBER of ABORTIONS</td>
<td>N=379</td>
</tr>
<tr>
<td>1</td>
<td>67.28</td>
</tr>
<tr>
<td>2</td>
<td>22.43</td>
</tr>
<tr>
<td>3</td>
<td>7.12</td>
</tr>
<tr>
<td>4 +</td>
<td>3.16</td>
</tr>
</tbody>
</table>
Descriptive Results from Abortion History Module
Contraceptive Use and Abortion in Thai Nguyen

Characteristics of Women who have ever had an Abortion (N=383)

<table>
<thead>
<tr>
<th>Characteristics of Women</th>
<th>1&lt;sup&gt;st&lt;/sup&gt; abortion (n=383)</th>
<th>2&lt;sup&gt;nd&lt;/sup&gt; abortion (n=124)</th>
<th>3&lt;sup&gt;rd&lt;/sup&gt; + abortion (n=51)</th>
</tr>
</thead>
</table>

Type of Contraceptive Method Used prior to Abortion

- Use of Any Method
  - 28.76
  - 37.4
  - 38.46

- Traditional
  - 45.87
  - 50
  - 61.54

- Modern
  - 54.13
  - 50
  - 38.46
## Descriptive Results from Last Abortion

### Contraceptive Use and Abortion in Thai Nguyen

#### Type of Contraceptive Used prior to Last Abortion

<table>
<thead>
<tr>
<th>Contraceptive method (N=140)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Modern Methods</strong></td>
<td></td>
</tr>
<tr>
<td>Pill</td>
<td>21.43</td>
</tr>
<tr>
<td>IUD</td>
<td>20.71</td>
</tr>
<tr>
<td>Injectable/Depo-Provera</td>
<td>0.71</td>
</tr>
<tr>
<td>Condom</td>
<td>5</td>
</tr>
<tr>
<td>Male sterilization</td>
<td>0</td>
</tr>
<tr>
<td>Female sterilization</td>
<td>0</td>
</tr>
<tr>
<td>Emergency contraception</td>
<td>0.71</td>
</tr>
<tr>
<td><strong>Traditional Methods</strong></td>
<td></td>
</tr>
<tr>
<td>Herbs</td>
<td>0.71</td>
</tr>
<tr>
<td>Safe days/abstinence</td>
<td>20.71</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>32.86</td>
</tr>
</tbody>
</table>
## Results: Multivariate Analysis

### Contraceptive Use and Abortion in Thai Nguyen

**Contraceptive Use Predicting Ever Having an Abortion Among Sexually Active Women (N=913)**

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Ever Used Traditional Methods</th>
<th>Never Used Contraceptives</th>
<th>Age</th>
<th>Number of Children</th>
<th>Has Two or More Children</th>
<th>Children- Girls only</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.667*** (0.267)</td>
<td>0.648 (0.178)</td>
<td>1.036*** (0.012)</td>
<td>1.277** (0.140)</td>
<td>1.785*** (0.355)</td>
<td>0.720* (0.132)</td>
</tr>
<tr>
<td></td>
<td>1.648*** (0.266)</td>
<td>0.520** (0.137)</td>
<td>1.042*** (0.011)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Observations                     | 820                           | 850                       |

SE errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1. Analyses control for Schooling, SES Wealth Indices, Employment, Ethnic Minority, Residence in P135 Communes
# Descriptive Results from Abortion History Module

## Sex Selective Abortion

<table>
<thead>
<tr>
<th>Characteristics of Women</th>
<th>1\textsuperscript{st} abortion (n=383)</th>
<th>2\textsuperscript{nd} abortion (n=124)</th>
<th>3\textsuperscript{rd} + abortion (n=51)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characteristics of Women</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Sex Selective Abortion

Whether the couple knew the sex of the child prior to abortion

<table>
<thead>
<tr>
<th></th>
<th>1\textsuperscript{st}</th>
<th>2\textsuperscript{nd}</th>
<th>3\textsuperscript{rd} +</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>22.02</td>
<td>20.49</td>
<td>12.82</td>
</tr>
</tbody>
</table>

If Yes, What percentage of fetuses were female?

<table>
<thead>
<tr>
<th></th>
<th>1\textsuperscript{st}</th>
<th>2\textsuperscript{nd}</th>
<th>3\textsuperscript{rd} +</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>98.8</td>
<td>96</td>
<td>80</td>
</tr>
</tbody>
</table>
**Results: Multivariate Analysis**

**Sex Selection Proxy predicting Demand for Abortion**

Sex Selection Proxy Variables Predicting Ever Having an Abortion Among Sexually Active Women (N=913)

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Ever Had an Abortion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has Two or More Children X Girl Children Only</td>
<td>1.149 (0.460)</td>
</tr>
<tr>
<td>Has Two or More Children</td>
<td>1.902*** (0.372)</td>
</tr>
<tr>
<td>Children- Girls only</td>
<td>0.732* (0.133)</td>
</tr>
<tr>
<td>Age</td>
<td>1.044*** (0.010)</td>
</tr>
</tbody>
</table>

Observations: 850

SE errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1. Analyses control for Schooling, SES Wealth Indices, Employment, Ethnic Minority, Residence in P135 Communes
### Descriptive Results from Abortion History Module

#### Presence of Counseling after Abortion

<table>
<thead>
<tr>
<th>Characteristics of Women who have ever had an Abortion (N=383)</th>
<th>1(^{st}) abortion (n=383)</th>
<th>2(^{nd}) abortion (n=124)</th>
<th>3(^{rd}) + abortion (n=51)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Post Abortion Counseling</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whether woman received counseling on family planning after abortion</td>
<td>59.53</td>
<td>63.71</td>
<td>73.68</td>
</tr>
</tbody>
</table>
### Descriptive Results from Last Abortion:
Post Abortion Counseling after last Last Abortion

<table>
<thead>
<tr>
<th>Counseling about FP after abortion</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>What was discussed/done during the post abortion counselling session? (N=386)</td>
<td></td>
</tr>
<tr>
<td>Possibility of getting pregnant after abortion</td>
<td>30.8</td>
</tr>
<tr>
<td>Introduced to available FP method</td>
<td>41.21</td>
</tr>
<tr>
<td>Supplied contraceptive methods or refer to place where client can get it</td>
<td>17.32</td>
</tr>
</tbody>
</table>
Descriptive Results from Last Abortion

Ease of Attaining Abortion

Perceptions regarding difficulty of getting an abortion (N=379)

<table>
<thead>
<tr>
<th>Opinion about how difficult it is for a woman to get access to abortion services</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficult or Very Difficult</td>
<td>54.09</td>
</tr>
<tr>
<td>Easy or Very Easy or indifferent</td>
<td>55.91</td>
</tr>
</tbody>
</table>
Discussion & Conclusions

Use of traditional methods of contraception disproportionately high among women who have had abortions

- Multivariate Analysis indicates traditional methods influences abortion
- Reported contraceptive prevalence rates might be misleading if unreliable traditional method use is high
- Need to promote use of safe and reliable modern contraceptives

Strong Indication that Sex Selective Abortion might be at play from descriptive Abortion History data

- Multivariate analysis contradictory on sex selection- opposite results
- Two child policy might have an influence instead
- Need complete and more accurate data to substantiate claims, Very challenging to get such data

Post abortion counseling prevalence is higher than expected but quality might be low

- Providing information on or supplying effective means of modern contraception should be a priority

Population Council