

# Fertility Prospects in South-Eastern Asia

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Millions  
of people  
in eleven  
sovereign  
nations



# The Nature of SE Asia

## ■ Syncretism

- Waves of imported religions
- Divisions of successive colonial powers
- Webs of trade, migration and exchange of slaves/labour

## ■ Nationalism

- Defined by positive and negative identities
- Built in a cauldron of modernism
- Sometimes linked with Marxist ideologies
- Both repels and welcomes foreign influences

# Population in S-E Asia

**Today over half a billion, in four decades might add the equivalent of Indonesia's population of 2000.**

**Note:  
Vietnam & Thailand falling behind the Philippines**

<i>Country or area</i>	<i>Population (thousands)</i>			
	<i>1950</i>	<i>2009</i>	<i>2009 per cent</i>	<i>2050</i>
<b>Brunei Darussalam</b>	<b>48</b>	<b>400</b>	<b>0</b>	<b>658</b>
<b>Cambodia</b>	<b>4 346</b>	<b>14 805</b>	<b>3</b>	<b>23 795</b>
<b>Indonesia</b>	<b>77 152</b>	<b>229 965</b>	<b>39</b>	<b>288 110</b>
<b>Lao PDR</b>	<b>1 666</b>	<b>6 320</b>	<b>1</b>	<b>10 744</b>
<b>Malaysia</b>	<b>6 110</b>	<b>27 468</b>	<b>5</b>	<b>39 664</b>
<b>Myanmar</b>	<b>17 158</b>	<b>50 020</b>	<b>9</b>	<b>63 373</b>
<b>Philippines</b>	<b>19 996</b>	<b>91 983</b>	<b>16</b>	<b>146 156</b>
<b>Singapore</b>	<b>1 022</b>	<b>4 737</b>	<b>1</b>	<b>5 221</b>
<b>Thailand</b>	<b>20 607</b>	<b>67 764</b>	<b>12</b>	<b>73 361</b>
<b>Timor-Leste</b>	<b>433</b>	<b>1 134</b>	<b>0</b>	<b>3 217</b>
<b>Viet Nam</b>	<b>27 367</b>	<b>88 069</b>	<b>15</b>	<b>111 666</b>
<b>South-Eastern Asia</b>	<b>175 905</b>	<b>582 664</b>	<b>100</b>	<b>765 966</b>

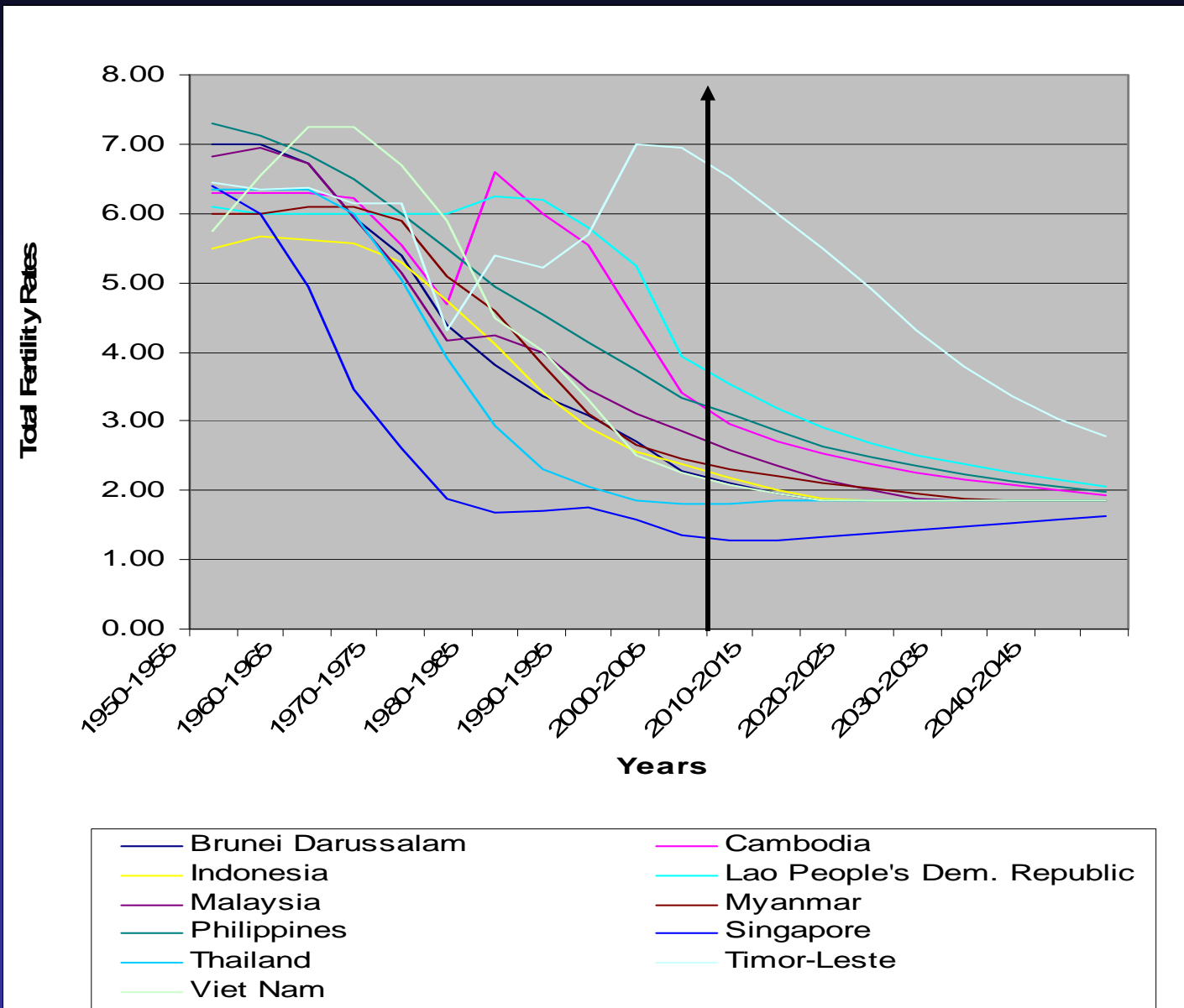
*Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat (2009). World Population Prospects: The 2008 Revision. Highlights. New York: United Nations.*

# Consider the comparison Millions

Year	South- Eastern Asia	Europe
1950	182	547
2050	786	628

# Fertility Transitions in South-Eastern Asia

Why does it appear to go from varied and irregular to smooth convergence?

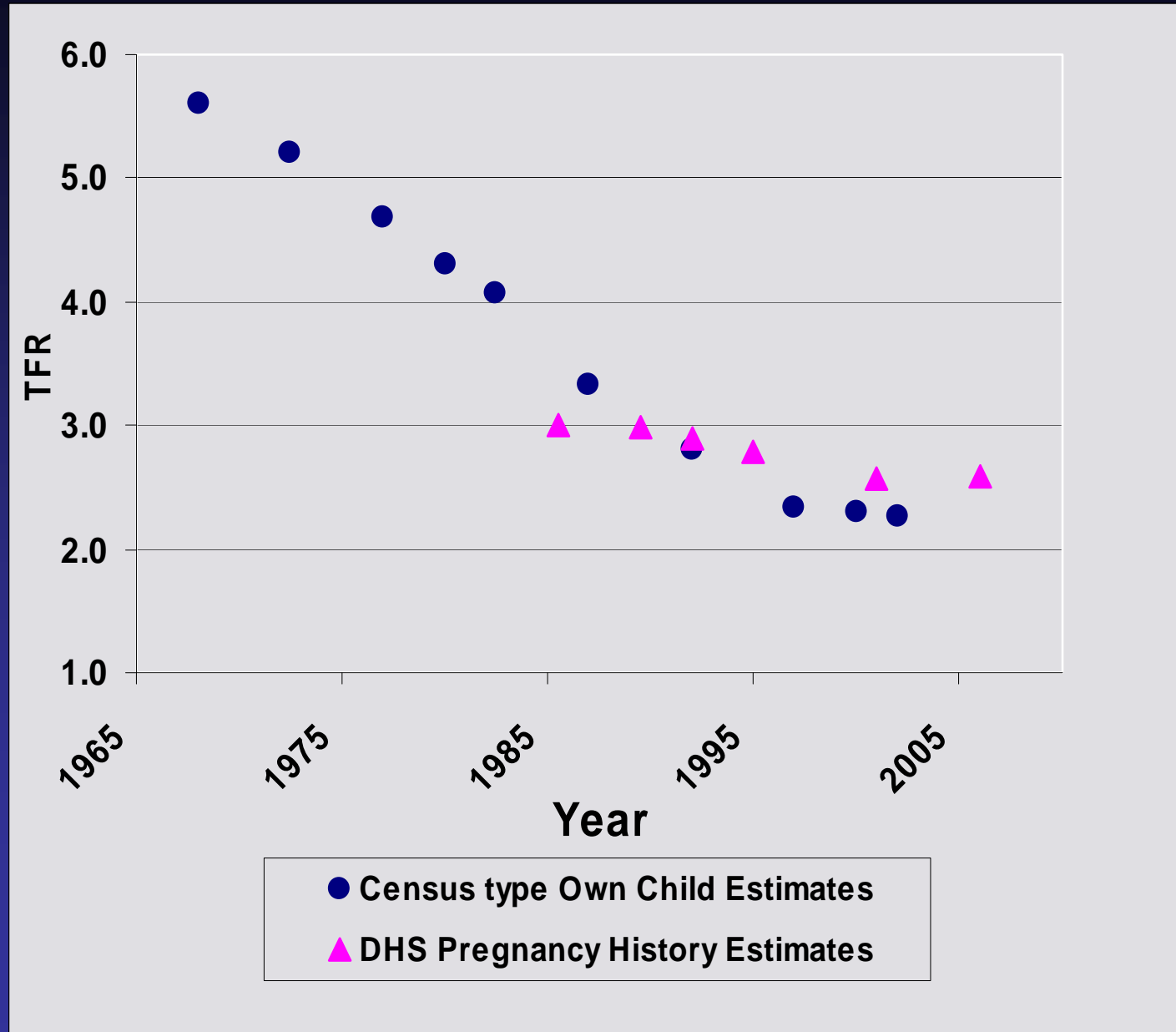


## Sidetrack – Data problems in the analysis of Indonesian fertility

- **Reference:** The discussion about China's fertility. Why would the government want to overstate fertility when it is working to reduce fertility?
- **Case:** Indonesia has had a family planning program since 1968. Recently the target has been to reduce fertility to 2.1 by the year 2010.
- **Problem:** Divergent data.

# TFR estimates from DHS and Censuses

**Why does the DHS appear to be flat when the census type surveys show steady decline?**





# Proportions of women single, by age-group, various enumerations

Age Group	Census	SUSENAS	DHS	SUPAS	DHS
	2000	2002	2002-3	2005	2007
15-19	89.3	89.7	85.4	90.8	86.9
20-24	43.1	47.0	41.2	51.4	38.3
25-29	16.7	16.3	13.8	19.7	15.4
30-34	6.9	6.5	5.9	8.1	7.0
35-39	3.5	2.9	3.0	4.3	3.6
40-44	2.4	2.1	2.1	2.6	2.6
45-49	2.0	1.4	2.0	2.0	1.9
All WRA	28.7	27.6	25.0	28.8	23.7

Rising proportion single?

## Estimate of missing single women in DHS 2007

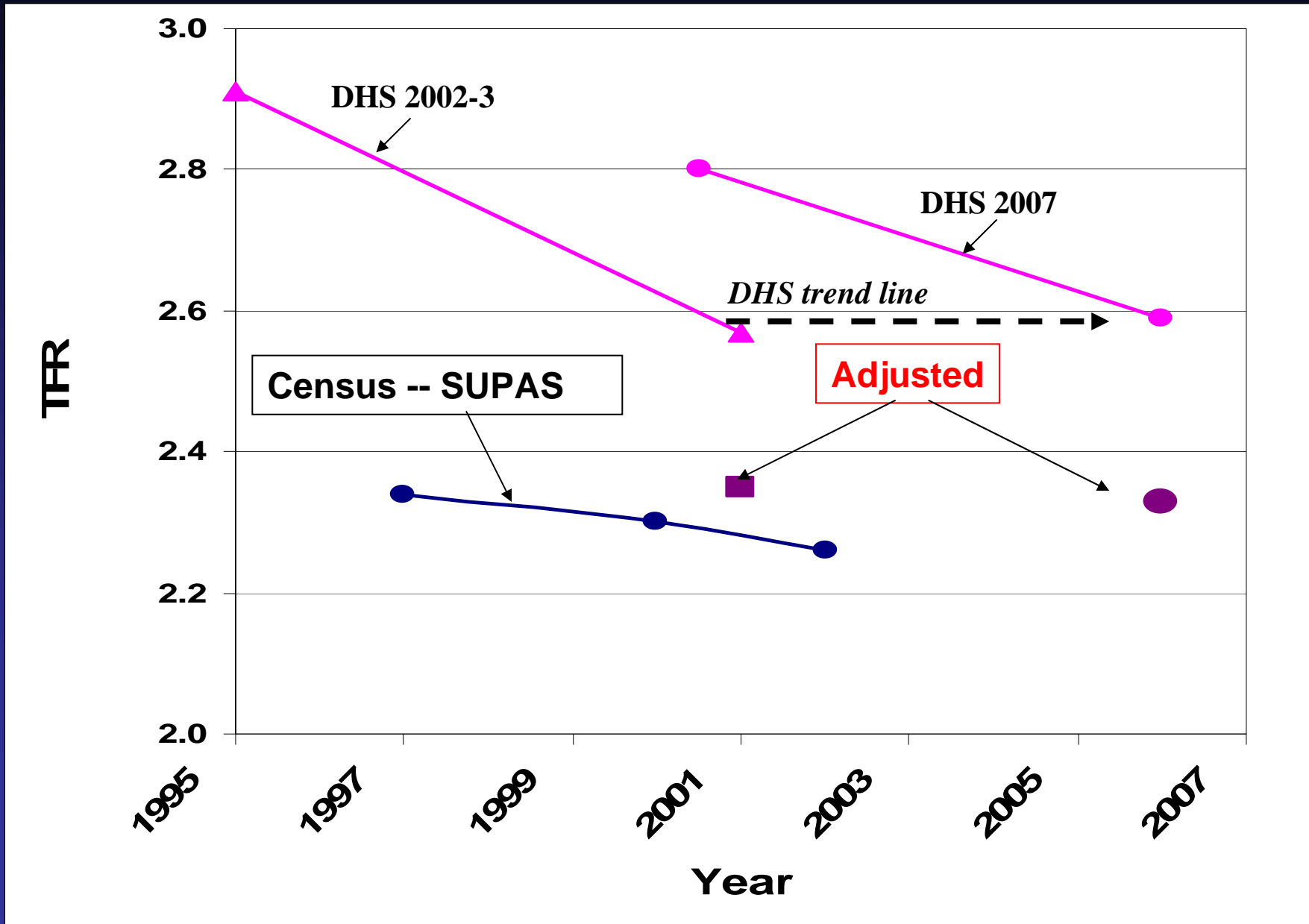
$$x = [(cs * Dw) - Ds]/(1-cs)$$

Age Groups	2007 DHS Women	2007 DHS Single	2007 DHS % Single	2005 SUPAS %Single	X =missing women	Adjusted total Women
	Dw	Ds	ds	cs	x	Dw'
<b>15-19</b>	6849	5949	0.8686	0.9080	<b>2936</b>	<b>9786</b>
<b>20-24</b>	7040	2693	0.3825	0.5142	<b>1908</b>	<b>8948</b>
<b>25-29</b>	7156	1099	0.1535	0.1974	<b>391</b>	<b>7548</b>
<b>30-34</b>	6730	468	0.0695	0.0810	<b>84</b>	<b>6814</b>
<b>35-39</b>	6473	235	0.0364	0.0431	<b>45</b>	<b>6518</b>
<b>40-44</b>	5722	148	0.0259	0.0255	<b>-2</b>	<b>5720</b>
<b>45-49</b>	5127	96	0.0188	0.0197	<b>5</b>	<b>5132</b>
<b>All WRA</b>	45098	10689	0.2370	0.2879	<b>5368</b>	<b>50466</b>

# Adjustment of 2007 DHS ASFR and Total Fertility Rates --

<i>Age of mothers</i>	<i>'Current' Fertility estimate</i>	<i>Women recorded in DHS</i>	<i>Annual births</i>	<i>Women adjusted</i>	<i>Adjusted DHS Fertility</i>
15-19	51	6849	349	9786	36
20-24	135	7040	950	8948	106
25-29	134	7156	959	7548	127
30-34	108	6730	727	6814	107
35-39	65	6473	421	6518	65
40-44	19	5722	109	5720	19
45-49	6	5127	31	5132	6
<b>Total</b>		<b>45098</b>	<b>3546</b>	<b>50466</b>	
<b>TFR</b>	<b>2.59</b>				<b>2.33</b>

# Indonesia's real transition



## Government and donor interpretations of fertility trends

- For three years the National Family Planning Program has used the raw DHS results to argue that there might be a 'baby boom' which could lead to a 'population explosion'.
- They resisted the adjustment
- November 11, 2009. Bappenas and IPADI declared the adjustment to be 'official'
- Lesson: Motivations for selection of fertility estimates are sometimes very mixed.

# Determinants of fertility

## ■ Proximate

- Marriage
- Contraception
- Abortion

## ■ Upstream

- Women's education
- Women's occupation
- Government policies for fertility control
- Advocacy for reproductive and sexual rights

# *Brunei* Marital Status Indices

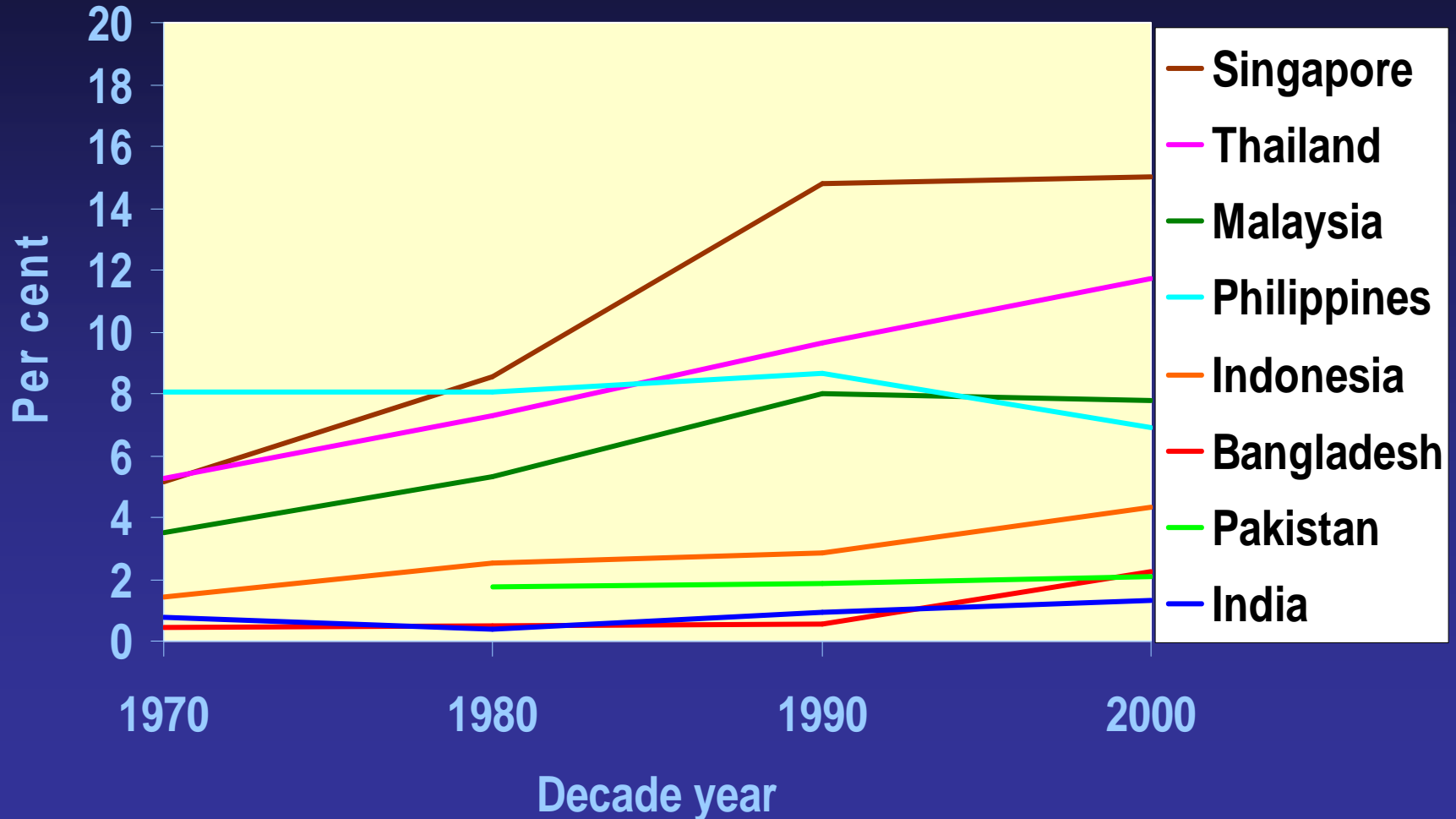
	<b>SMAM</b>		<b>Hutterite Marital Status Indices</b>				
	<b>Female</b>	<b>Male</b>	<b>Is</b>	<b>Im</b>	<b>Iw</b>	<b>Id</b>	<b>Ip</b>
	<b>Total</b>	<b>Total</b>	<b>Single</b>	<b>Married</b>	<b>Widow</b>	<b>Divorced</b>	<b>Separated</b>
<b>1960</b>	<b>19.5</b>	<b>25.7</b>	<b>0.208</b>	<b>0.760</b>	<b>0.018</b>	<b>0.014</b>	<b>0.000</b>
<b>1971</b>	<b>22.4</b>	<b>26.3</b>	<b>0.356</b>	<b>0.623</b>	<b>0.021</b>	<b>0.000</b>	<b>0.000</b>
<b>1981</b>	<b>23.6</b>	<b>26.5</b>	<b>0.389</b>	<b>0.595</b>	<b>0.010</b>	<b>0.006</b>	<b>0.000</b>
<b>1986</b>	<b>25.0</b>	<b>26.1</b>	<b>0.432</b>	<b>0.551</b>	<b>0.007</b>	<b>0.010</b>	<b>0.000</b>
<b>1991</b>	<b>25.1</b>	<b>27.3</b>	<b>0.407</b>	<b>0.569</b>	<b>0.009</b>	<b>0.015</b>	<b>0.000</b>

# HMSI generalizations

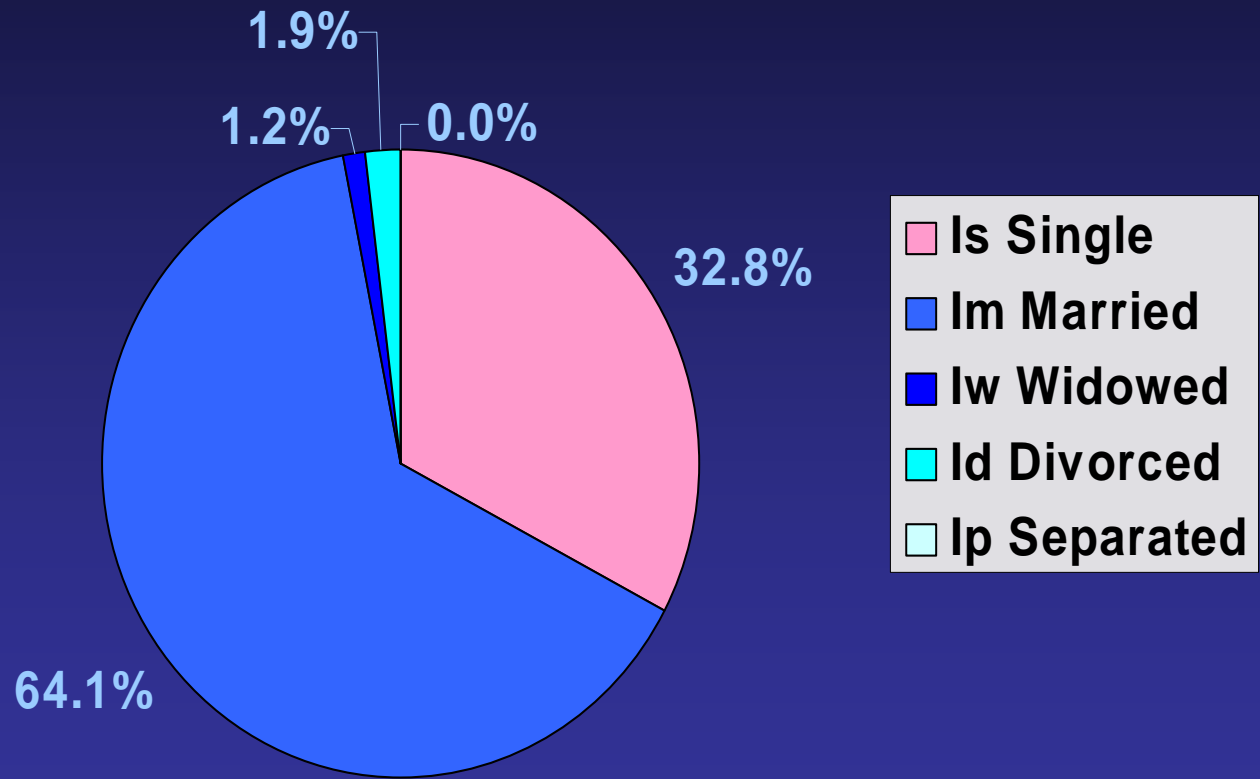
- Singlehood rising everywhere
- Currently married falling
- Divorced rising in Vietnam, Cambodia, Philippines
- Divorced falling in Indonesia and Malaysia
- Widowhood falling everywhere



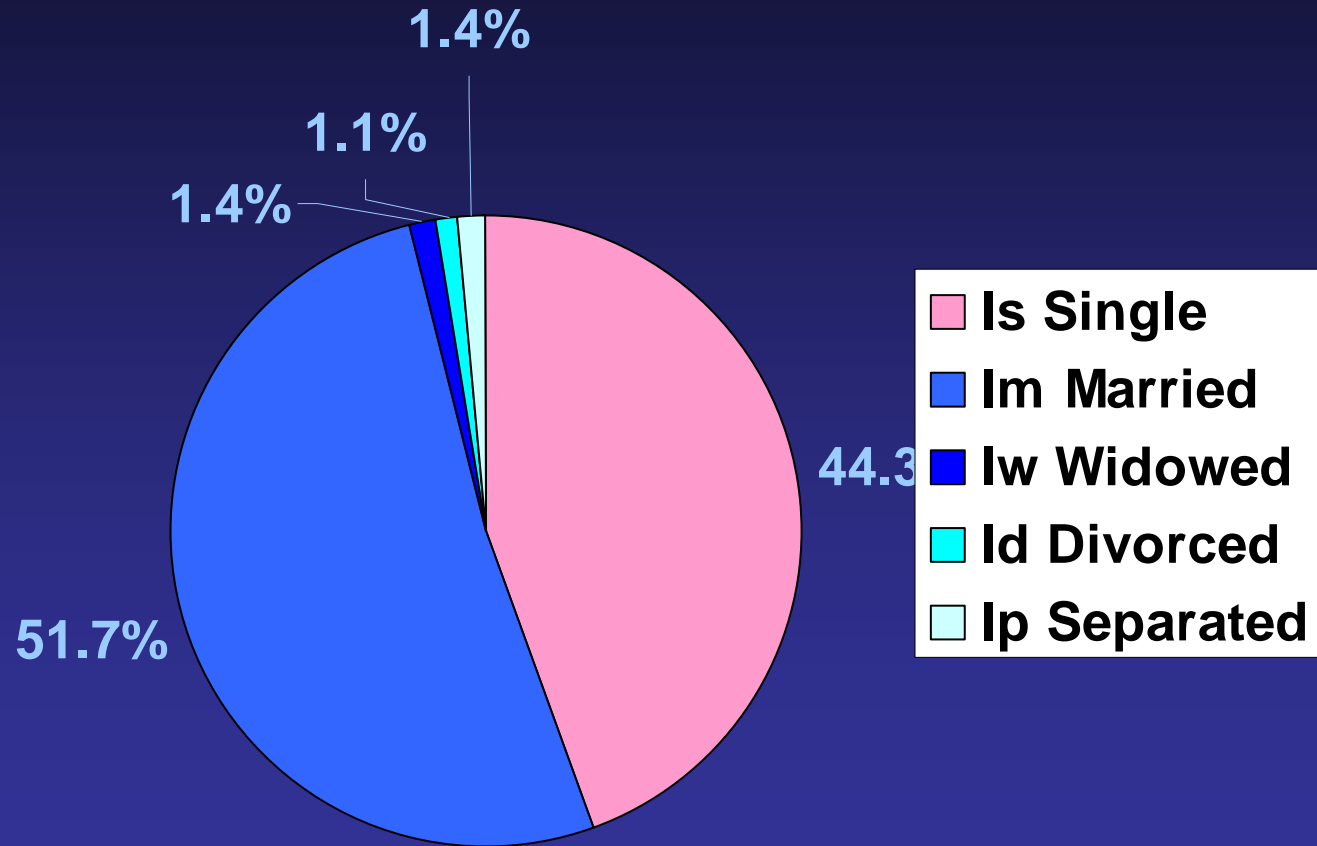
# Never Married Persons, Age 35-39, Select Countries



# Hutterite Weighted Indices, Viet Nam, 2005



# Hutterite Weighted Indices, Thailand, Urban Population, 2000



# Patterns of contraceptive preference

	CPR	TUB	VAS	PIL	INJ	IMP	IUD	CND	RTH	WTD	OTM
Brunei	..	..	..	..	..	..	..	..	..	..	..
Cambodia	40.0	1.7	0.1	11.0	7.9	0.2	1.8	2.9	4.5	8.3	0.1
Indonesia	61.4	3.0	0.2	13.2	31.8	2.8	4.9	1.3	1.5	2.1	0.4
Lao PDR	32.2	4.7	0.0	12.9	7.7	?	3.0	0.5	2.2	0.7	0.3
Malaysia	54.5	<- 6.4 ->		13.4	0.0	0.0	3.9	5.3	8.8	6.9	8.9
Myanmar	37.0	4.7	1.3	8.6	14.9	0.0	1.8	0.3	1.8	1.0	1.4
Philippines	48.9	10.5	0.1	13.2	3.1	0.0	4.1	1.9	6.7	8.2	0.6
Singapore	62.0	<- 16.0 ->		10.0	0.0	0.0	5.0	22.0	<- 7.0 ->		2.0
Thailand	71.5	24.5	1.0	30.9	11.1	?	1.2	1.4	0.6	0.4	0.2
Timor-L	10.0	0.6	0.0	0.8	5.6	0.0	0.0	0.0	1.1	0.0	0.2
Viet Nam	78.5	5.9	0.5	6.3	0.4	0.0	37.7	5.8	7.5	14.3	0.1
S-E Asia	59.9	7.4	0.5	13.8	17.4		9.6	2.1	3.5	4.6	0.8

# Abortion Enigmas

Country	Abortion			Source
	Year	Rate	Ratio	
Brunei D.	..	..	..	..
Cambodia	2005	<b>20.2</b>	<b>21.6</b>	Fetters, 2009
Indonesia	2000	<b>37.0</b>	<b>43.0</b>	Utomo, 2001
Lao PDR	..	..	..	
Malaysia	..	..	..	
Myanmar	..	..	..	
Philippines	2000	<b>27.0</b>	<b>18.0</b>	Juarez, 2005
Singapore	2003	<b>15.0</b>	<b>16.0</b>	Sedgh, 2007
Thailand	1978	<b>27.7</b>	..	
Timor-L	..	..	..	
Viet Nam	2003	<b>26.0</b>	<b>33.0</b>	Sedgh, 2007
S-E Asia	2003	<b>39.0</b>	<b>45.0</b>	Sedgh, 2007

# Discussion

- Hutterite indices going in divergent directions
  - What are the social determinants of marriage, contraception and abortion?
- Regressions capture individual behaviour
  - Minority social-political decisions in conflict with individual preferences? Why do we call this **context**?
- Women's **life cycle** reproductive and sexual health
- Difference between **errors** and **uncertainties**
- We need **better data to overcome errors**
- We need **more data to overcome uncertainty**



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# Adjustment ASFR dan TFR dari SDKI 2002-03

<i>Age of mothers</i>	<i>'Current' Fertility estimate</i>	<i>Women recorded in DHS</i>	<i>Annual births</i>	<i>Women adjusted</i>	<i>Adjusted DHS Fertility</i>
15-19	51	6845	349	<b>9138</b>	38
20-24	131	6422	841	<b>6965</b>	121
25-29	143	6134	877	<b>6519</b>	135
30-34	99	5484	543	<b>5910</b>	92
35-39	66	5127	338	<b>5376</b>	63
40-44	19	4361	83	<b>4719</b>	18
45-49	4	3500	14	<b>4169</b>	3
<b>Total</b>		<b>37873</b>	<b>3046</b>	<b>42796</b>	
<b>TFR</b>	<b>2.57</b>				<b>2.35</b>



# Estimate of missing single women in DHS 2002/3

$$x = [(cs * Dw) - Ds] / (1 - cs)$$

Age Groups	2002/3 DHS Women	2002/3 DHS Single	2002/3 DHS % Single	2002 SUSENAS %Single	X= missing single women	Adjusted total Women
	Dw	Ds	ds	cs	x	D'
15-19	6715	5735	0.8540	0.8927	2423	9138
20-24	6738	2776	0.4120	0.4312	227	6965
25-29	6302	870	0.1380	0.1667	217	6519
30-34	5844	345	0.0590	0.0695	66	5910
35-39	5349	160	0.0300	0.0349	27	5376
40-44	4704	99	0.0210	0.0241	15	4719
45-49	4170	83	0.0200	0.0198	-1	4169
All WRA	39822	10068	0.2500	0.2870	2974	42796