FERTILITY CRISIS

What are the causes of low fertility rate in Hong Kong?

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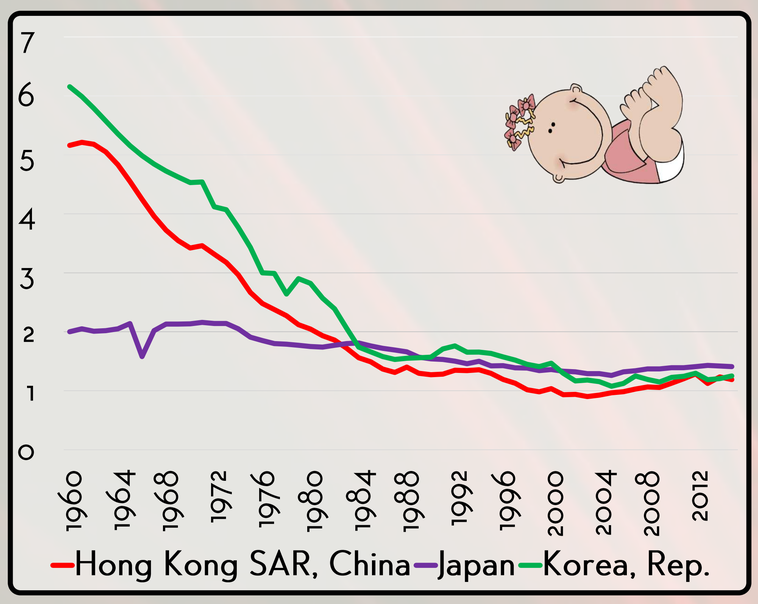


Figure 2: Yearly TFR of HKSAR, South Korea and Japan (World Bank, 2015)

- TFR of Asian economies generally ↓
- HK: *LOWEST* of the three

TOTAL FERTILITY RATE

- Total fertility rate (TFR): the average number of children born per woman in her lifetime , which is an important indicator of population growth and age structure.
- Replacement level of TFR to maintain the current population is 2.1

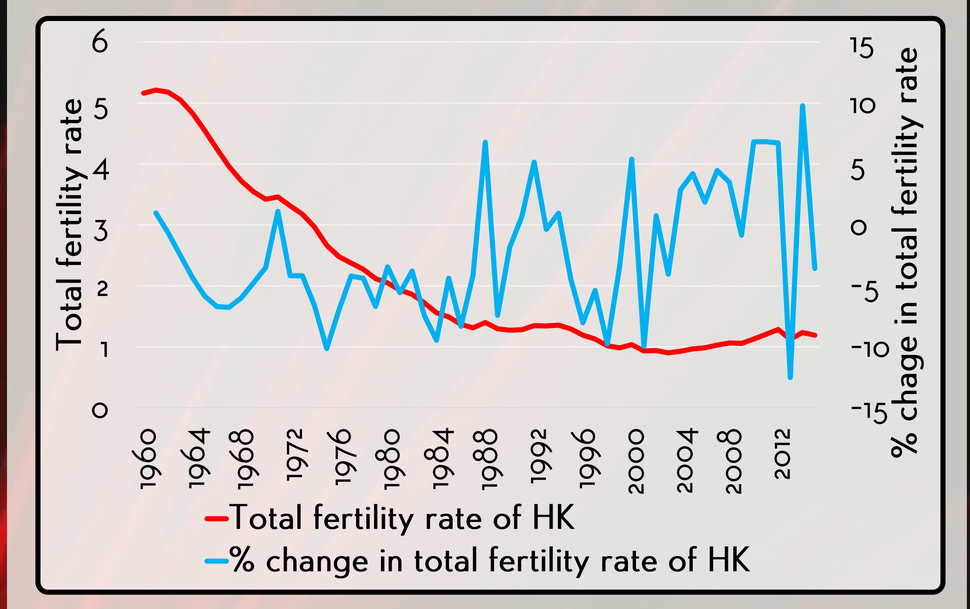
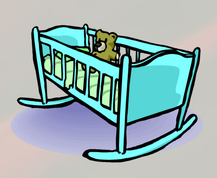
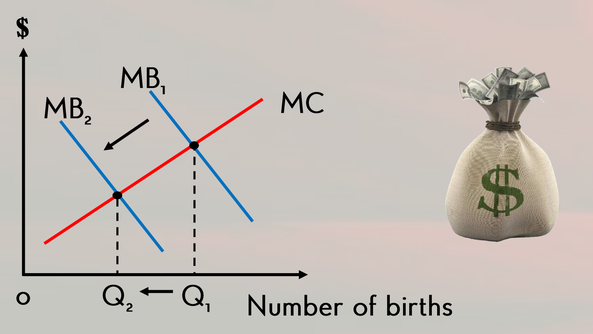


Figure 1: Yearly TFR and % change in yearly TFR of Hong Kong (World Bank, 2015)

- 1961: HK's highest TFR of 5.21
- *1962-2003: decrease to the lowest pt of 0.901*
- *2003-2012: TFR slightly increased to 1.285 but still < 2.1*
- *Largest % decrease & increase in TFR: 2013 (-12.5%) & 2014 (9.8%)*



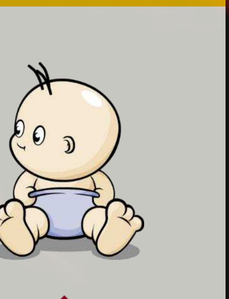
EFFECT OF WOMEN' AVERAGE SALARY



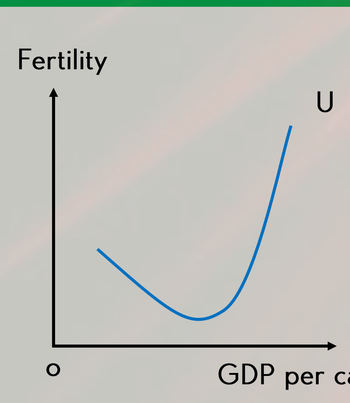
- A rise in women' average salary ↑ opportunity costs:
  1. Parental Costs
  2. Time Costs
  3. loss in *Salary* and *Promotion Opportunities*: an ↑ of *9%* of income earnings
- MB lowered by the ↑ in opportunity costs

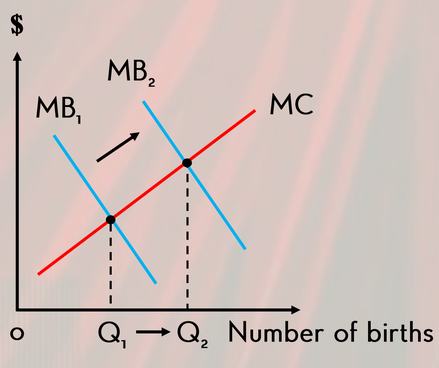
EFFECT OF TAX EXEMPTION

- Effect of tax exemption
- less impact on families with relatively *OLDER WIVES* (28 or above)
- 1981-2015: median age of women at first childbirth in Hong Kong in 25 years > 28
- Insignificant effect



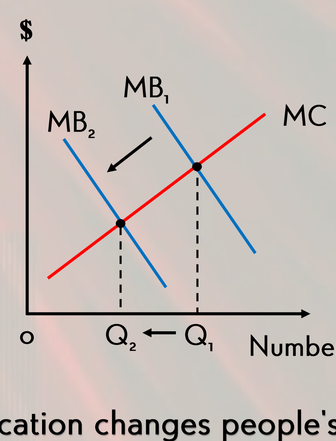
EFFECT OF GDP PER CAPITA





- MB ↑ by income effect: people in countries with low infant mortality rate treat children as normal good
- Normal good: income ↑, fertility ↑
  HK's infant mortality: very close to 0 in the 1990s

EFFECT OF AVERAGE YEAR OF EDUCATION



Education changes people's *family size preference* :
MB lowered by the preference changes

Women	1. Understand the *Cost of Bearing Children* and greater confidence in *Govt Welfare* and *Infant Survival Rate* ⇒ Have Fewer Children 2. *More Bargaining Power* ⇒ Influence their husbands to have fewer children
Household	Higher Education level ⇒ Spend more on oneself and *LESS* on children

HYPOTHESIS

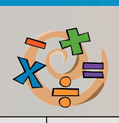
- Time period: 1989 to 2015
- *All other factors assumed constant*

Hypothesis

Factors	MC-MB analysis (1981-2015)	Effects on fertility rate
GDP per capita	MB shifts upward (↑)	Positive (+)
Tax exemption	Insignificant effect (?)	Insignificant (?)
Women's average salary	MB shifts downward (↓)	Negative (-)
Average years of education	MB shifts downward (↓)	Negative (-)

REGRESSION RESULT

- Regression Model:
- *FR = Fertility rate*
- $FR = \beta0+\beta1GDPpc+\beta2\_EDU+\beta3\_TE+\beta4\_WS+\beta5\_Q$



MaThS

Independent Variable:	Coefficients (βi)	P-value
GDP per capita (GDPpc)	Positive (+)	Significant
Average years of education (EDU)	Negative (-)	Significant
Tax exemption (TE)	Positive (+)	Insignificant (?)
Average women's salary (WS)	Negative (-)	Significant
Dummy(effect of mainland women giving births in HK) (Q)	Positive (+)	Significant

- $FR = 4.89+7.73\cdot10^{-6}\cdot GDPpc-0.31\cdot EDU+1.86\cdot10^{-6}\cdot TE-0.00014\cdot WS+0.099\cdot Q$

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