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Low fertility in Asia: demographic trends and policy challenges

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Scope

- My focus is upon five Asian societies with very low fertility (under 1.5 births per woman).
- Japan, Hong Kong, Taiwan, Singapore and South Korea.
- With some attention given to the cities of China.

Total Fertility Rates, 2006

Group 1 Countries	TFR	Group 2 Countries	TFR
United States	2.10	Switzerland	1.44
Iceland	2.08	Austria	1.40
New Zealand	2.00	Portugal	1.36
France	1.98	Malta	1.39
Ireland	1.90	Germany	1.33
Norway	1.90	Italy	1.35
Australia	1.81	Spain	1.38
Finland	1.84	Greece	1.40
Denmark	1.85	Japan	1.32
United Kingdom	1.84	Singapore	1.28
Sweden	1.85	Taiwan	1.12
Netherlands	1.72	Republic of Korea	1.12
Belgium	1.74	Hong Kong SAR	0.98
Luxembourg	1.64		
Canada	1.59		

Source: Eurostat and national statistical offices.

Total Fertility Rates, 1997 and 2009

	1997	2009
Japan	1.39	1.37
Hong Kong SAR	1.10	1.04
Taiwan	1.77	1.03
Singapore	1.61	1.22
Republic of Korea	1.54	1.15

Tempo effects?

- Are the TFRs in these societies temporarily low because of a timing or tempo effect? Yes, to some extent.

- But for Hong Kong and Japan, fertility has now been very low for a long time hence there is not much likelihood of any sizeable tempo effect. In these two societies and in Singapore, **completed cohort fertility** is now below 1.5.

- For Taiwan and Korea, completed cohort fertility is down to 1.7. There is still some chance that a tempo effect could be in operation. Too early to say but the expectation must be that they will follow the other three.

Completed parity distributions

- Very low and falling percentages with 3+ births.
- Initial rise in Parity 1 in Hong Kong, Japan and Korea, but now falling. A stepping stone to zero births? Parity 1 still rising in Taiwan, unclear for Singapore.
- Parity 2 exceptionally high in Korea (almost two thirds of all women). Others around the normal 40%.
- Main story is startling rise in Parity 0.

Source: Frejka, T, Jones, G. and Sardon, J-P. 2010. East Asian Childbearing Patterns and Policy Developments. Population and Development Review. 36(3), September 2010: 579-606.

Parity Zero

- For completed cohorts, Parity 0 is now about 36% in Hong Kong, 32% in Japan, 21% in both Singapore and Taiwan but only 8% in Korea.

- Falling percentages with 1 birth and rising percentages with zero births suggest that very low fertility is now an entrenched phenomenon in all these societies other than Korea.

- Korea remains different from the others. Zero parity remains low and Parity 2 is very high. Parity 3+ is very low. There remains a potential that Korean fertility can rise to a reasonable level through the ending of the tempo effect.

The end of the tempo transition

- The ending of the tempo transition can be measured by lack of change in cumulated cohort fertility by age for successive birth cohorts. This measure is shown for each of the five societies in Frejka et al.

- Using this measure, the transition seems to be at an end in Hong Kong and slowing rapidly in Japan. In the other three societies, however, the transition to later childbearing is still continuing strongly.

Demographic summary

- **Hong Kong**: Cross-sectional fertility and cohort fertility is likely to level off at around 1.15-1.2 in the next five years.
- **Japan:** Cross-sectional fertility and cohort fertility is likely to level off at around 1.4 in the next five years.
- **Singapore**: Cross-sectional fertility will remain low for about a decade before rising to around 1.4, the current cohort level. Ethnic differences may have an effect.
- **Taiwan**: Cohort fertility will continue to fall and cross-sectional fertility will remain low for at least a decade. The end point is unclear but may be around 1.3.

Demographic summary: Korea

- The future of fertility in Korea is not as clear cut as in the other East Asian societies. Cross-sectional fertility is very low at present but a major tempo effect is likely to be involved.

- Completed cohort fertility is about 1.75 for the most recent cohort and childlessness remains low. The Parity 2 percentage is exceptionally high.

- The issue is the extent to which continued delay of the first birth will lower completed cohort fertility.

Causes of low fertility

- Rapid rise in education levels for women.
- New opportunities in the paid labour force for women to realise upon their enhanced human capital.
- Extreme difficulty of combining work and family for mothers.
- Economic uncertainty for young people. Insecure work contracts. Long working hours.
- Unfavourable gender attitudes. Persistent familism.
- Economic competition from China.

Low fertility trap?

- When one third of women have no births, societal institutions and expectations may change in ways that entrench very low fertility. The opportunity costs for women that do have children become higher in such societies inducing even lower fertility. Employers and governments become less likely to recognise the needs of workers with children. Forms of transport, shopping, services, leisure may become less child-friendly.

- Is this emerging in Japan and Hong Kong? Certainly there is evidence from Japan that large numbers have lost confidence in having children. The risks are considered to be too great in a highly risk averse population.

Demographic and economic consequences of very low fertility: The case of Japan.

- The following analysis uses the MoDEM2 model to examine future scenarios for Japan.

- MoDEM2 is freely available at:
- *www.pc.gov.au/research/**commission**research/.../**modem**/**modem**2*

Usage of MoDEM2

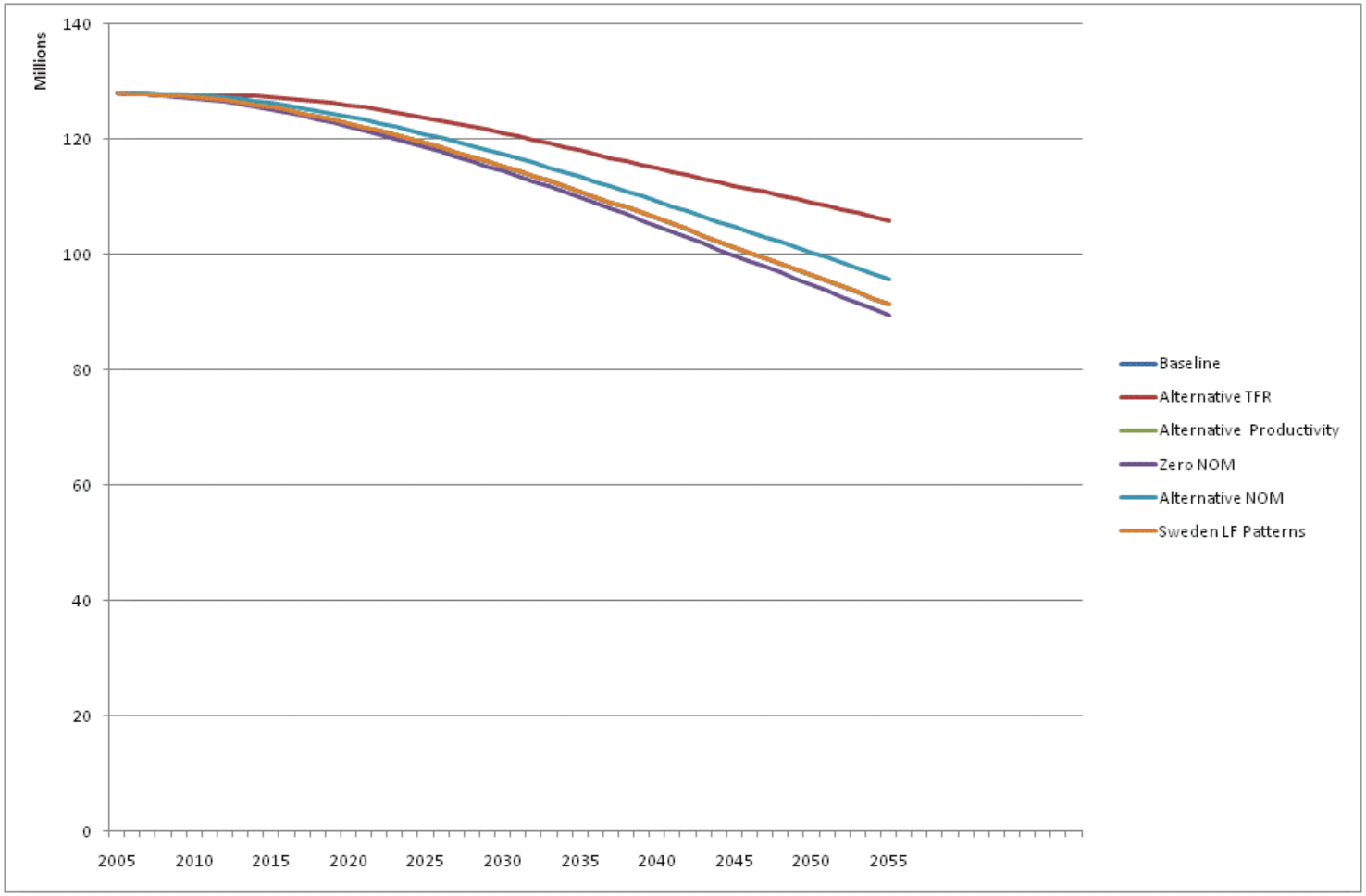
- MoDEM2 can be used to make projections of employment, GDP and GDP per capita according to varying scenarios for all of the model inputs described earlier.

- We can investigate:
  - The impacts on GDP per capita of changing birth and migration rates and changing age structure of the population.
  - The effects of changes in labour force participation, unemployment or hours of work on GDP per capita
  - The effects of changes in labour productivity.

Japan

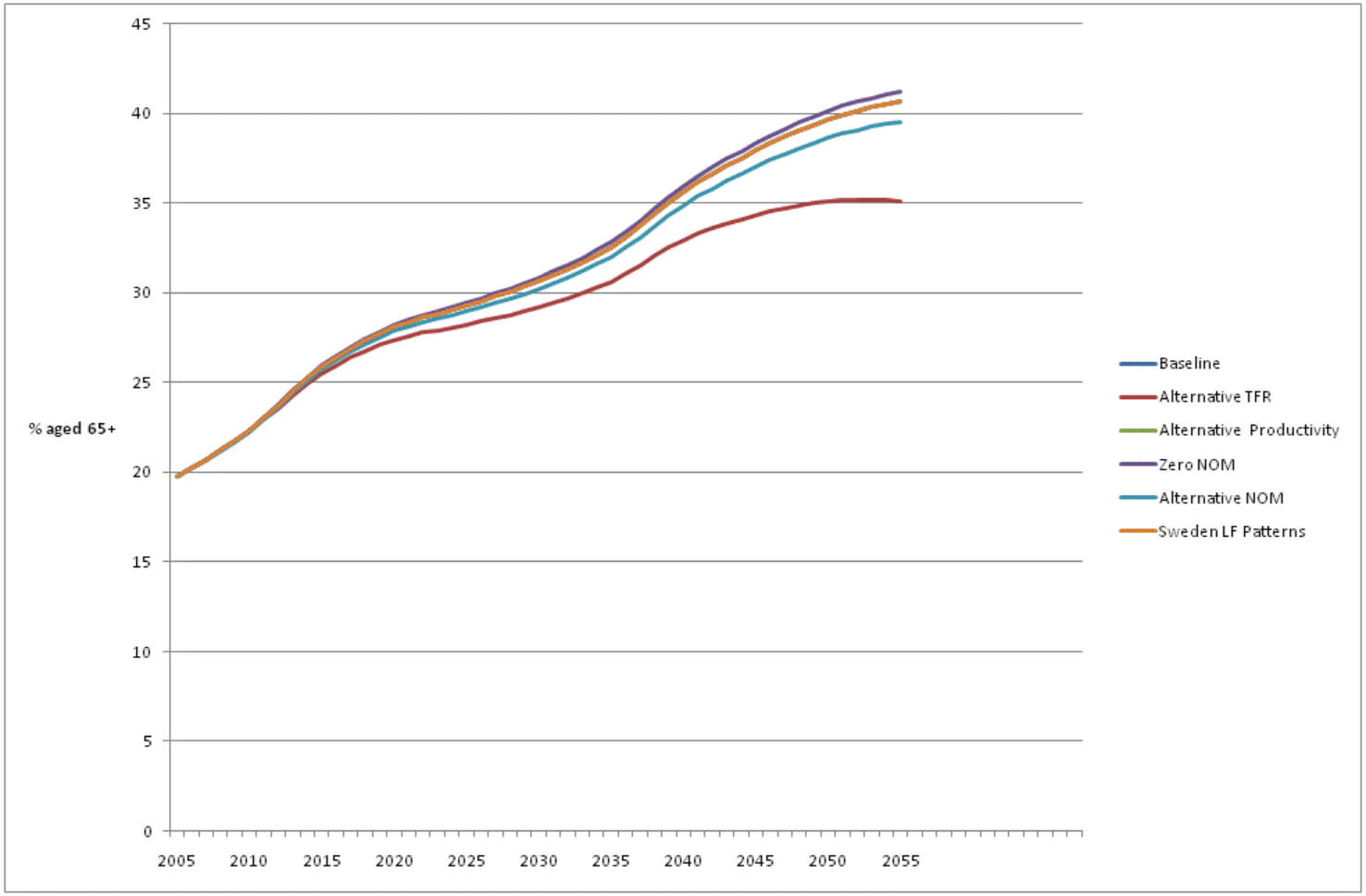
Scenarios	TFR	Migration (000)	Productivity	LFPR *
Baseline	1.27	30	1.84	64.22
Alternative TFR	**1.7 in 2010**	30	1.84	64.22
Zero NOM	1.27	**0**	1.84	64.22
Alternative NOM	1.27	**100**	1.84	64.22
Alternative productivity	1.27	30	**2.00**	64.22
Sweden's LFPR in 2025	1.27	30	1.84	**Linear increase from 64.22 in 2005 to 67.27 in 2025**

Japan: Total population



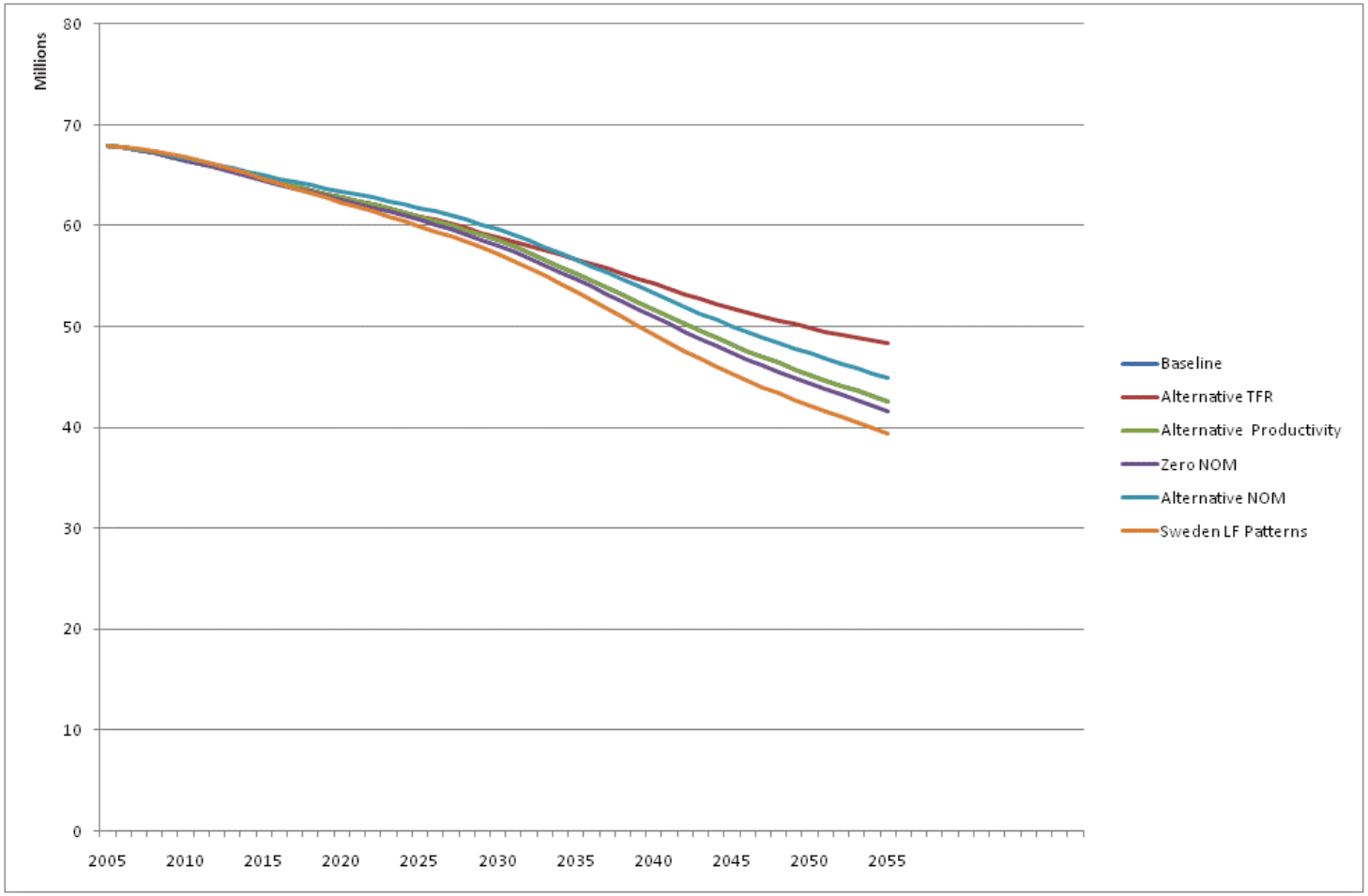
Note: Baseline scenario equals to two following scenarios: alternative productivity and Sweden's LF patterns

Japan: % aged 65+



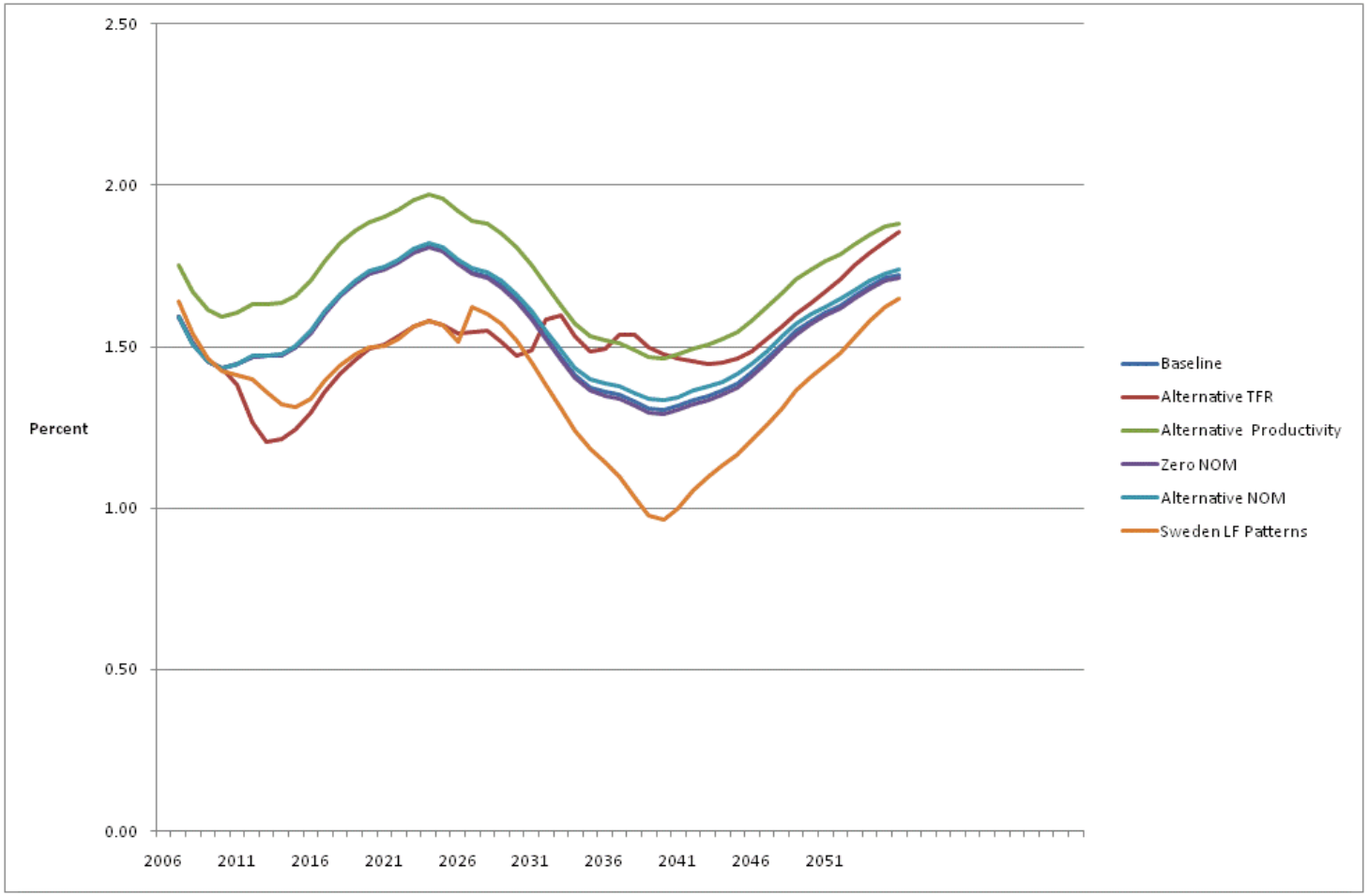
Note: Baseline scenario equals to two following scenarios: alternative productivity and Sweden's LF patterns

Japan: Size of labour force



Note: Baseline scenario equals to alternative productivity

Japan: Annual GDP per capita growth



Unknown consequences

- Maybe the relatively rosy result of the last slide will not eventuate because the demographic trends may affect productivity:
  - 1. The ageing of the labour force may lower productivity because of the relative absence of dynamic and technologically skilled young people. This may lower the productivity of older workers (complementarity). Some signs of this already.
  - 2. There may be ‘size of economy’ effects. Downsizing may be relatively unproductive. Shortage of labour may lead to wage inflation.
  - 3. This is venturing into the unknown.

Policy aims: Hong Kong, Singapore, Japan

- The potential policy aims vary because the economies are different and there are some demographic differences as well.

- Hong Kong and Singapore rely already upon relatively large scale immigration and this can continue. The issue then becomes turnover of the population. Some increase in completed fertility would serve to insure against too high a rate of population turnover.

- Can Japan simply get smaller while maintaining/improving its standard of living and growing much older? It should be attempting to increase its fertility to at least 1.6. Migration is not a solution.

Policy aims: Taiwan, Korea

- For Taiwan, migration is less of an option. Taiwan needs to slow or reverse the increase in age at first birth to shorten the duration of the tempo effect on its births. Then it probably needs to add 0.3 to its fertility rate as well.

- For Korea, stopping the increase in age at first birth may be all that is required. However, sustaining the current cohort completed fertility may require some policy initiative.

Policy approaches for higher fertility: Hong Kong, Singapore and Japan

- Low fertility is already well entrenched in these societies with high percentages childless. In this circumstance, even a small increase in cohort completed fertility (say, 0.2 births per woman) will be difficult to achieve.

- Look more to the approaches of the English-speaking countries?
  - Family-friendly employers (shorter working hours, professionally-oriented and rewarded part-time work, carer's leave, flexible working hours).
  - Lower direct costs of children, financial transfers
  - Greater gender equity in the household
  - Instilling confidence in having children, political leadership

Policy approaches for higher fertility: Taiwan and Korea

- Very low fertility is not yet entrenched in these societies. Fertility is very low at present because of the rapid increase in the age at first birth. So, stop the rise.

- Rising age at first birth is driven by risk aversion. Women (and men to an extent) invest in their own human capital so that they can be confident that their future is guaranteed.

- Required are incentives to have the first birth at a younger age than otherwise would be the case. This includes better job security and the right to return to a job after child birth. Attitudinal change will be part of the solution.