Very Low Fertility
Consequences, Causes and Policy Approaches

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Introduction

This paper addresses the issue of very low fertility in countries with advanced economies including its consequences and its causes. It ends with a discussion of policy approaches to reverse very low fertility. Very low fertility is defined as being fertility sustained for a long period below 1.5 births per woman. It is recognized that annual fertility rates are affected by changes in the timing of births (tempo effects) and may fall temporarily below 1.5 births per woman. It is important to recognize tempo effects but it is difficult to estimate their impact on lifetime fertility because, where births are delayed, many may never occur even though there was an intention to have these births. Even the strongest intentions can fade with changes in the life circumstances of the woman and her partner.

The consequences of very low fertility

How generation size changes when fertility remains at 1.3 births per woman

In the simplest terms, sustained very low fertility has an impact upon the size of a nation's population. This impact is exceptionally rapid if considered against the full course of human history. This is illustrated in Figure 1. The figure shows the impact on the size of successive generations of fertility sustained at the level of 1.3 birth per woman, the level prevailing in Japan in recent years. The second generation after the present generation would be 40 per cent the size of the present generation and the fourth generation after the present generation would be only 15 per cent the size of the present generation. These impacts are so devastating that it difficult to believe that they would actually happen. Any nation facing this situation is very likely to take action to stop the trend at some time. However, delay of action has important consequences. First, very low fertility substantially reduces the size of the labour force within one generation just as the population is ageing rapidly (see Figure 2). Second, very low fertility almost certainly becomes more difficult to reverse the longer that it has been in place.

The impact of very low fertility on the future labour force

Ogawa et al. (2005) refer to the sharp fall in the future labour force at the same time as the population is ageing as the onset of the demographic onus. Can the Japanese economy sustain a fall in its labour supply in the next 30 years of some 20 million workers?

Increased tax revenue may be required to support the growing older population but there will be fewer workers to provide this revenue. As the labour supply falls, wage inflation can throw the economy into turmoil. Furthermore, with very low fertility, the fall in the labour supply is most severe at the young ages. Young workers are the assimilators of new technology. They dominate a vital group in modern economies referred to as 'complex problem solvers' (McDonald and Temple, 2006). In an

Figure 1. The comparative size of successive generations across time when fertility is constant at 1.3 births per woman

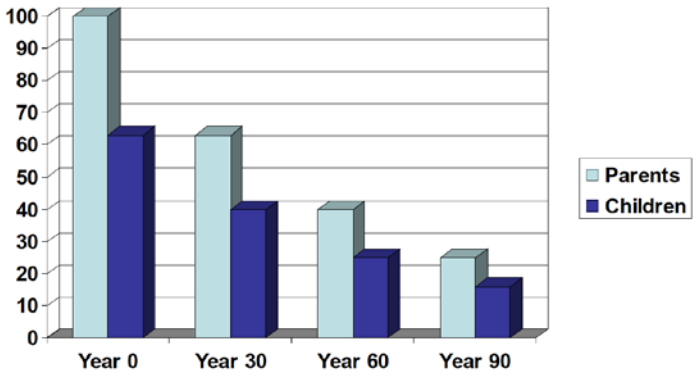
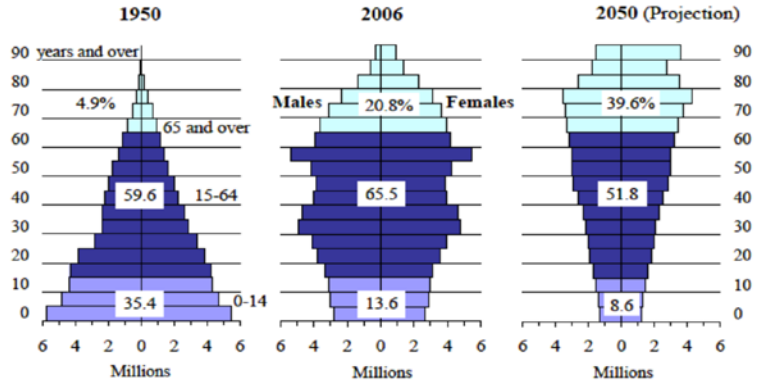


Figure 2. Changes in the population pyramid



Source: Statistics Bureau, MIC; Ministry of Health, Labour and Welfare.

increasingly competitive global economy, countries that have a shortage of young skilled workers will be vulnerable to competition. Their economies will lack the dynamism that will be essential in the competitive world economy. Investment may flow to those countries that are well-endowed with young, technologically skilled workers.

Sustained low fertility may be difficult to reverse

Surveys in low fertility countries indicate that most young people want to marry and have children. For Japan, Suzuki (2006) has reported that the average ideal number of children (for wives aged less than 50) has never fallen below 2.5 in the past 25 years. If the natural desires of young people are frustrated by the ways in which society is organised, they will become disillusioned. As more people do not have children, the economic costs to those who do have children increase producing an increased disincentive to have children. This is known as the low fertility trap (Lutz et al. 2006). Japan may be falling into such a trap. A society like Japan that is organised around the importance of family will disintegrate unless it is able to reverse these conditions.

The causes of very low fertility

Drivers of low fertility

Low fertility in advanced societies today has been an unintended outcome of two major waves of social and economic change, social liberalism and economic restructuring (McDonald 2006a). Both these waves have enhanced individual aspirations in relation to the quality of personal and economic lives. However, in differing cultural and welfare environments, both have brought pressure to bear upon the capacity to form and maintain families. Social liberalism and economic restructuring have given rise to two important changes for individuals:

- the provision of gender equity through an opening up of opportunities for women beyond the household, and
- increasing levels of risk aversion among young people of both sexes in an increasingly competitive labour market.

Gender equity and fertility

Advanced societies today provide considerable freedom and gender equality to women as individuals. However, women are keenly aware that these gains will be distinctly compromised once they have a baby (McDonald 2000). This is especially the case in labour markets where little or no provision is made for the combination of work and family.

The central problem is that family formation involves greater risks for women than for men. Accordingly, women are wary about embarking upon marriage and childbearing if they do not feel confident about their ability to combine family with the other opportunities that have opened up for them, especially through paid employment.

Economic restructuring, risk aversion and fertility

Globalization and sharply rising education levels have created high economic aspirations among young people. At the same time, the competitive nature of labour market deregulation has led to a wider variation in their earnings, career stability and progression. Engagement in the deregulated labour market is now seen as involving greatly increased risk. In these circumstances, most young people become risk-averse, that is, they follow pathways that have lower risk.

Investment in one's own human capital (education and labour market experience) is seen by young people as being the optimal path of risk aversion. This investment involves considerable commitment to self and to one's employer, especially through long work hours, in opposition to a commitment to more altruistic endeavours such as

service to family members and family formation. As a consequence, family formation is put on hold while human capital is accumulated.

Are these causes more acute in East Asia?

There is an argument that these conditions are more acute in the advanced countries of East Asia. First, gender inequity for women as family members is greater in East Asia than elsewhere. Second, today's potential parents in East Asia come from large cohorts with high levels of competition in education and employment. Further, they envisage that the same level of competition will apply to their own children. Third, the transition in labour market conditions has been more extensive in East Asia (often from jobs for life to jobs for three months). Fourth, East Asian economies have had recent economic shocks (the burst of the bubble economy, the 1997 financial crisis) and are based to a large extent on manufacturing where global competition is acute.

The fertility divide among advanced economies

The social forces of gender equity and labour market deregulation have been common to all advanced economies. However, many of these advanced economies do not have very low fertility. Why is this so? Table 1 shows the variation in fertility rates across countries with advanced economies. They can be divided into two distinct groups. Group 1 countries with fertility rates above 1.5 births per woman include all of the Nordic countries, all of the French- and Dutch-speaking Western European countries and all of the English-speaking countries. Group 2 includes all of the Southern European countries, all of the German-speaking Western European countries and all of the advanced East Asia countries. Indeed, except for very brief periods when the fertility rates in Denmark and Canada nosed below 1.5, none of the Group 1 countries have ever had fertility rates below 1.5 and, once fallen below 1.5, none of the Group 2 countries have had fertility rates above 1.5. The cultural conformity of the groups suggests there may be a cultural explanation for the divide between Group 1 and Group 2 countries.

In general, Group 2 countries are countries in which there is a strong, traditional value that family and state are separate entities and that families should support their own members without intervention from the state. Accordingly, states in these regions have been slow to implement broad-based, family assistance measures. The opposite tends to be the case in the Group 1 countries; in general, they are notable for the family-friendly institutional arrangements that they have implemented in the past 20 years. Thus, the argument is that there are universal social and economic trends that draw young people away from family formation but that in Group 1 countries the effect of these trends is less severe because of the family support policies that they have introduced.

Policy matters

Reasonable fertility rates are compatible with advanced economies so long as social institutions are supportive of families with children. It is the business of government, with the cooperation of leaders of other social institutions especially employers, to create this environment for families. An unenlightened business sector in fear of

Table 1. Total Fertility Rates, 2005

Group 1 Countries	TFR	Group 2 Countries	TFR
United States	2.05	Switzerland	1.42
Iceland	2.05	Austria	1.41
New Zealand	2.00	Portugal	1.40
France	1.94	Malta	1.37
Ireland	1.88	Germany	1.34
Norway	1.84	Italy	1.34
Australia	1.82	Spain	1.34
Finland	1.80	Greece	1.28
Denmark	1.80	Japan	1.26
United Kingdom	1.80	Singapore	1.24
Sweden	1.77	Taiwan	1.12
Netherlands	1.73	Republic of Korea	1.08
Belgium	1.72	Hong Kong SAR	0.97
Luxembourg	1.70	Shanghai City	0.60
Canada	1.60		

Source: Eurostat and national statistical offices.

short-term competitive pressures is the largest obstacle to the required reforms. Businesses need to be made aware that they are surely killing themselves in the longer term by not cooperating with governments to reform the institutions of society that support family life. Governments need to reassess their commitment to the traditional family model in which families (essentially the women in families) are expected to support their own members with little or no assistance from the State. East Asian economies have been very quick to adopt new economic models but slow to adopt new social models. Fertility sustained at very low levels is evidence in itself that the old social models are failing. Group 2 countries in Europe are starting to move in this direction and my prediction is that they will be successful in raising their fertility rates to reasonable levels. I am less optimistic about such social reform being successful in East Asia because resistance to the social and economic reforms that are required is more entrenched in East Asia than it is in Europe. The European Union provides Group 2 European countries with a frame of reference beyond the purely national. East Asian countries have no similar frame of reference.

Inappropriate policy approaches

Low fertility has been recognized as a problem in some East Asian countries for some time. Singapore commenced its policy activities in the 1980s. Singapore's first efforts were directed at raising the fertility levels of educated Chinese women. Women in this group were provided with large tax incentives to have children and later were encouraged to marry through the provision of government dating agencies. From time to time, young women have been criticized for not fulfilling their national duty. Today, the fertility rate of Chinese women in Singapore is close to one child per woman and the rate for educated Chinese women would certainly be below one child per woman. Policy has clearly been a failure in Singapore. Japan also has been attempting to raise its fertility rate and, like Singapore, attention has been focused primarily upon increasing the rate of marriage. There has also been some level of vilification of young people in Japan through terms such as 'parasite singles'. Japan's fertility rate also remains low. I would argue that the thrusts of policy in Singapore and Japan have been wrong fro the following reasons.

Low marriage rates are a symptom rather than a cause

It is not simply a matter of increasing the marriage rate. In East Asia, there is considerable pressure upon those who marry to have children. Decisions about marriage and childbearing are concurrently determined: the decision to marry is equivalent to a decision to have a child (Shirahase 2000). Incorrectly, policy makers in Singapore and Japan seem often to consider marriage and fertility within marriage as in some way independent of each other. Most women in Singapore and Japan are married by around age 30. This enables adequate opportunity for them to have two children, even three. They don't. That marriage alone is nit the issue is also evidenced by the fact that there is a high marriage rate in South Korea but the fertility rate in that country is lower than it is in Japan and Singapore. I argue that low marriage rates are a symptom of the same social and economic circumstances that lead to low fertility. Policy needs to address the cause not the symptom.

The causes of low fertility are institutional not individual

The assumption of policy makers in East Asia has been that low fertility can be overcome by dealing with young people as individuals, not through broad social reform. Singapore first attempted to 'buy off' educated young Chinese women, both Japan and Singapore have tried to find ways to encourage individuals to marry. Both countries also have often been critical of the behaviour of young people essentially blaming young people for the problem. Counter to this individual approach, surveys of young people in all East Asian countries continue to show that they would prefer to have more children than they are actually having. This strongly suggests that the problem does not lie with the values or motivations of young people themselves but with the nature of the societies in which they live. Low fertility derives from social and economic institutions that are unfriendly to families with children. Older people control the nature of these institutions.

Appropriate policy directions

Young people need to be confident that, if they have children, they will not be unduly penalised in financial or employment terms. Because of entrenched gender inequities, this applies especially to young women. This means that young people need to have a sense of security about their future employment and income-earning capacity. In particular, young women need to be able to believe that they will be able to pursue their employment goals while still having the number of children they want to have.

Appropriate policy then is work and family policy. This includes income support for families

with children, affordable/quality child care and early childhood education, flexible working hours, parental leave, family leave, part-time work in one's own job with pro-rata entitlements and reasonable working hours. The exact arrangements will be country-specific as countries need to build upon existing institutional arrangements and to make reforms that are broadly acceptable within the particular culture.

There is no 'silver bullet', no single policy that is affordable, politically acceptable and effective. What is required is no less than a comprehensive review and reform of all policies affecting the living standards of families with children. For more detail on the nature of such reviews, see McDonald (2003) and McDonald (2006b).

The review must have leadership at the highest level. It must be a national approach to a national priority. Reform must have the support of the main powerbases in the country including business groups, politicians and women's groups. Reform should be expected to be expensive in fiscal terms. East Asian economies are very ready to invest heavily in advanced economic infrastructure. What is implied here is heavy investment in social infrastructure. Reform can also be expected to involve major reform of work practices. Employers are a vital element of the solution. They must be convinced that it is in their long term interest to take action now to avert future labour shortages that may destroy their businesses.

Symbolic meaning is important

Policy is not only about real benefits; it is also about the symbolic meaning of benefits.

'These policies also exert an effect through their symbolic meaning. The lack of childcare services, low benefit levels, long parental or care leaves, and gender-segregating policies signal to women that it might be difficult, if not impossible, to combine employment and motherhood' (Neyer 2006: p. 16).

The final word

Policy reform is likely 'to be confronting to existing social norms and values and to have potentially major implications for economic relations especially the conditions and costs of employment. These are major obstacles and so it is not surprising that governments have been slow to act. While there is no change, children become scarcer and the society becomes less child-oriented. Young people then become more convinced in their perception that they will be severely penalised (relative to others) if they have children, and that the government has little or no interest in their predicament' (McDonald 2007: p. 27). The longer reform is delayed, the more intractable the problem becomes.

References

Lutz, W., Skirbekk, V. and Testa, M., 'The Low Fertility Trap Hypothesis; Forces that May Lead to Further Postponement and fewer Births in Europe' *Vienna Yearbook of Population Research 2006*: 167-192.

McDonald, P. 2000. "Gender equity, social institutions and the future of fertility," *Journal of Population Research* 17(1): 1–16.

McDonald, P. (2003) Reforming family support policy in Australia, *People and Place*, 11(2): pp. 1-15.

McDonald, P. 2006a. "Low fertility and the state; the efficacy of policy," *Population and Development Review* 32(3).

McDonald, P. (2006b) An assessment of policies that support having children from the perspectives of equity, efficiency and efficacy. *Vienna Demographic Yearbook 2006*: pp. 213-234.

McDonald, P. 2007. 'Low fertility and policy', *Ageing Horizons*, 7: 23-28.

McDonald, P. and Temple, J. 2006. *Immigration and the Supply of Complex Problem Solvers in the Australian Economy*, Canberra: Australian Government, Department of Immigration and Multicultural Affairs.

Neyer, G. (2006) Family policies and fertility in Europe: Fertility policies at the intersection of gender policies, employment policies and care policies, MPIDR Working Paper WP 2006-010, Rostock: Max Planck Institute for Demographic Research.

Ogawa, N., Kondo, M. and Matsukura, R. 2005. "Japan's transition from the demographic bonus to the demographic onus," *Asian Population Studies*, 1(2): 207-226.

Shirahase, S. 2000.'Women's increased higher education and the declining fertility rate in Japan', *Review of Population and Social Policy* 9: 47-64.

Suzuki, T. 2006. 'Lowest-low fertility and governmental actions in Japan', National Institute of Population and Social Security Research, Tokyo.

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