Policy Responses to Rapidly Population Aging
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Chapter 1

China’s—Long Road Toward Below Replacement Level Fertility
On November 15th, 2013, China announced the beginning of relaxation of its three-decades long one-child policy. The announcement came as a surprise, not the long-awaited policy change itself, for which the pressure has been building up for a decade and the promised relaxation is modest and partial. By allowing couples in which one side is a only child to have two children, the announced change is only a cautious start to phase out a uniquely strict and coercive birth control policy. The surprise came from how the Chinese public reacted to this announcement. In the much-anticipated and once-in-a-decade important Chinese Communist Party document filled with sweeping measures and grand promises for China in the coming decade, this modest gesture made headlines and overshadowed all others both within China and abroad. For a casual observer, it seemed that all the Party plenum was able to accomplish was to start this change, along with abolishing the much despised labor camp system.

Two and half years ago, in April 2011, there was another surprise in Beijing. At the press conference for China’s 2010 census, Chinese officials from its National Bureau of Statistics admitted that they were caught by surprise of the decline in the...
young population, aged 0 to 14, between 2000 and 2010, itself a direct result of declining birth numbers. And Chinese officials were surprised by the rapid speed of population aging, which is also in part an outcome of declining fertility in the proceeding decade and more.

These are not the surprises that they ought to be. Since the early 1980s, when China emerged from the aftermath of the Cultural Revolution and 18 years since China’s previous census conducted in 1964, China has been collecting demographic data regularly and extensively, with population censuses in 1990, 2000 and 2010, and inter-censusal large-scale population surveys of 1/100 of the population in 1995 and 2005. On top of these nationwide censuses and surveys, there have also been other large-scale population surveys, such as the annual population surveys conducted by China’s National Bureau of Statistics and large-scale surveys by China’s State Population and Family Planning Commission. The latter is a ministerial level government agency that until its merge into the Ministry of Health in March 2013, put in charge of population control. With these abundant data sources, and the uniquely political importance the Chinese government has placed on birth control, broad trends and patterns of population, such as growth rate and age structure, should be fairly well if not perfectly known. Yet, it was not until well into the twenty-first century that a clear picture of China’s fertility level began to emerge.
and the severity of China’s population aging began to be appreciated.

How could this have happened? In this paper I trace the understanding of low fertility in China, and examine its likely future trend as well as the underlying forces. I also examine briefly the future trend of population aging, and its economic and social implications. These discussions, together, I hope can help address the surprises in understanding population trends in China, and the recent surprise in reactions to China’s recent relaxation of the one-child policy. I will discuss the possible policy changes in the coming years and their likely effect on demographic trends in China.

1. The Long Road Toward Low Fertility

China’s realization of its below replacement has been a long and complicated process. Statistical problems and political interferences combined made this process particularly long.

Most of China’s modern fertility decline was completed in one decade in the 1970s, more than 30 years ago (Wang 2011). In the 1970s, with a “later (marriage), longer (birth interval), and fewer (births)” birth control policy nationwide, China’s fertility level was reduced by more than half in one decade, from 5.8 in 1970 to 2.7 in 1979. Intensification of the birth control campaign, with the formulation and the announcement of the
draconian one-child policy, brought fertility level further down to 2.3 in 1980, not much above the replacement level.

It took a full decade of fertility fluctuation, in the decade of the 1980s, before fertility dropped to the below the replacement level in China. During the 1980s, fertility level in China hovered slightly over the replacement level, affected in part by several government policy shifts. There was first a change in the late marriage policy at the start of the decade, implemented simultaneously as the one-child policy was rolled out. With a new marriage law passed in the 1980 that effectively replaced the earlier late marriage policy, mean age at first marriage dropped by as much as two years. Shifts to earlier marriage age nationwide pushed up fertility level temporarily, from 2.3 in 1980 to 2.9 in 1982 (Coale and Chen 1987; Feeney et al. 1989; Coale et al. 1991; Feeney and Wang 1993). A forceful abortion and sterilization campaign quickly followed in 1982 and 1983, with abortion numbers shooting up from 8.69 million cases in 1981 to 12.42 million in 1982 and 14.37 million in 1983. Female sterilization operations went from 1.59 million in 1981, 3.9 million in 1982 to 16.39 million cases in 1983 (China Health Statistics Yearbook 2012, Table 7-6-1). Fertility level temporarily dipped, to 2.4 in 1983 and 2.2 in 1985. Then, between 1984 and 1986, against the backlash of the enforcement of the one-child policy the excesses during the sterilization and abortion campaigns earlier in the decade, the Chinese government
implemented a series of birth control policy adjustments, mostly allowing rural couples with a female first birth to have a second child (Greenhalgh 1986, Hardee-Cleveland and Banister 1988). That policy change apparently also created a crowding effect, pushing fertility level up again to 2.6 in 1987. That year, 1987, was China’s last fertility peak above replacement level fertility.

Whereas it is a widely accepted fact that fertility in China first dropped to the below replacement level full two decades ago, it took scholars almost a decade to realize and to confirm this fact and the government another decade. Two important events marked this long process of learning for scholars. The first is the national survey of fertility and birth control in 1992 that reported China’s fertility level for the first time in history being below the replacement level (Figure 1-1, fertility series from the 1992 survey). The survey, conducted by China’s National Family Planning Commission in 1992, had a national sample size of 380,000 and followed its successful 1982 and 1987 surveys. Both the 1982 one-per-thousand survey and the 1987 two-per-thousand survey were well-received and provided important basis for demographic research in China. The 1992 survey, however, did not meet the same good fate. With the lone exception of one published article by two distinguished demographic experts (Feeney and Yuan 1994), results from that survey were quickly dismissed and ignored by
scholars and observers alike. This unexpected result, that fertility in China was below the replacement level, was deemed so incredible that after 1992 Chinese official statistical agencies stopped publishing total fertility rate for an extended number of years.

[Figure 1–1] China’s Route to Low Fertility(Various Estimates)

Data: Guo 2011.

Two important forces resulting from such a rapid economic change contributed to China’s renewed fertility decline: a complete shift of the cost of childbearing from the collective to the family, and the pressure of “getting ahead” generated by the opportunities and uncertainties during this period of fast economic growth. Beginning first in the early 1980s in rural areas
and then in the late 1980s in urban areas, the socialist planned economy system that previously supplied much support for child rearing started to disappear. The state and the collective are no longer responsible for food, housing and employment. In rural areas in particular, public education and health care systems experienced a period of deterioration, which shifted costs of education and health care from the collective to individual families. The unprecedented economic opportunities attracted massive numbers of rural youth to cities and propelled urban youth as well to spend more time in school and to move around for better jobs and better pay. Urban housing reforms from the late 1990s have resulted not only a construction boom and a housing bubble, but also sent housing price, especially in China’s major cities, to skyrocketing levels. The arrival of the Internet age connected Chinese youth to each other within China and beyond. Suddenly, young parents who grew up in China’s post-Mao era realized that having children is truly expensive, both in monetary terms and in terms of their time.

Studies of China’s low fertility in recent years confirm the role of socioeconomic changes, independent of the policy’s role, and of a new calculus of childbearing. Using aggregate data for 151 counties in the provinces of Jiangsu and Zhejiang and with measures of both birth control policy and levels of economic and social development, Cai (2010) reports that variations in fertility level among these local areas in 2000 are
predominantly an outcome of variations in development measures, not policy variations. As he concludes: "A key finding from this exercise is that these development factors are so powerful that, combined, they explain a much larger proportion of fertility variation in Jiangsu and Zhejiang than do the policy factors" (2010, 433).

Studies based on individual level data report similar results. In another study, also in China’s more developed Jiangsu province but with individual level data, results show that one-child has become a new norm of childbearing and cost has become the top concern. Among over 4,000 women who were eligible to have two children under the birth control policy, 55% reported one child as their ideal number of children. Among all reasons given for their choices, “cost too much to raise a child” and “one child is enough” topped the list, with over 70% respondents choosing. In comparison, less than half of that, 32%, cited “following the government’s call (of birth control)” as a reason for wanting only one child. Moreover, the cost of raising children, in these respondents’ minds, is not providing food and clothing, but the more general cost, as only 33% reported “current economic status not good,” which is an indicator of economic difficulty, as a reason (Zheng et al. 2009). These concerns and constraints in childbearing among Chinese couples are highly similar to those offered for young people in other low fertility Asian settings (Jones et al. 2009).
Shifts in other demographic behaviors, not affected directly by China’s birth control policy, offer further evidence to the roles of economic and social change in changing social behaviors. First, over the last three, especially the last one decade, there has been a clear trend toward later marriage, and second and correspondingly, there has been a clear change in the age pattern of fertility. Both changes are accelerating in more recent years and are beyond the requirement of the one child birth control policy. Mean age at first marriage among females, as shown in Table 1-1, has risen from 22 in 1990 and to 23.9 in 2010, by nearly two years. Proportion of women never married at 25-29, as shown in Figure 1-2, rose from 5% in 1982, to 9% in 2000, and to 22% in 2010, with the most pronounced change occurring in the decade between 2000 and 2010 (Figure 1-2). In urban China, the share of never-married women aged 25 to 29 reached 30% in 2010 (not shown in the figure). Comparisons among patterns of age-specific fertility rates show a similar trend. Following an initial shift to an earlier age after 1980, a direct and immediate result of the marriage law change in 1980, peak age of fertility continued to move to later ages and to a much lower level. The changes are especially profound after 1990 (Figure 1-3). Delaying marriage and childbearing, as also shown by other studies (e.g. Morgan et al. 2009), have been major factors in China’s below replacement fertility.
### Table 1-1: Major Demographic and Socioeconomic Indicators, China, 1990–2010

<table>
<thead>
<tr>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>1,135,185,000</td>
<td>1,204,855,000</td>
<td>1,262,645,000</td>
<td>1,303,720,000</td>
<td>1,337,705,000</td>
</tr>
<tr>
<td>Birth Rate</td>
<td>1.4673</td>
<td>1.0865</td>
<td>0.7880</td>
<td>0.5881</td>
<td>0.4830</td>
</tr>
<tr>
<td>Life Expectancy</td>
<td>69.47</td>
<td>70.33</td>
<td>72.14</td>
<td>74.05</td>
<td>74.89</td>
</tr>
<tr>
<td>Total Fertility</td>
<td>2.5</td>
<td>1.75</td>
<td>1.51</td>
<td>1.59</td>
<td>1.65</td>
</tr>
<tr>
<td>Female Mean Age at Marriage</td>
<td>22</td>
<td>22.9</td>
<td>23.2</td>
<td>23.5</td>
<td>23.9</td>
</tr>
<tr>
<td>GNI/Per capita, ppP(curren t INT)</td>
<td>800</td>
<td>1480</td>
<td>2340</td>
<td>4090</td>
<td>7510</td>
</tr>
<tr>
<td>% Urban</td>
<td>26.4</td>
<td>31</td>
<td>35.9</td>
<td>42.5</td>
<td>49.2</td>
</tr>
<tr>
<td>Second School Enrollment (%)</td>
<td>37.65</td>
<td>52.24</td>
<td>62.09</td>
<td></td>
<td>80.05</td>
</tr>
<tr>
<td>Tertiary School Enrollment (%)</td>
<td>3.04</td>
<td>3.67</td>
<td>6.75</td>
<td>17.74</td>
<td>24.34</td>
</tr>
<tr>
<td>Mobile Phone Subscribers ('1000)</td>
<td>0.0016</td>
<td>0.2989</td>
<td>6.72</td>
<td>30.09</td>
<td>65.04</td>
</tr>
<tr>
<td>Internet Subscribers ('1000)</td>
<td>0</td>
<td>0.0049</td>
<td>1.78</td>
<td>8.52</td>
<td>34.3</td>
</tr>
</tbody>
</table>

Data: Mean age at marriage calculated from China’s censuses. All others World Bank: World Bank Indicators.
[Figure 1-2] Changing Pattern of Marriage, China, 1982~2010

Data: Author’s calculations from Chinese census data.

[Figure 1-3] Changing Patterns of Fertility, China, 1980~2010

China has now begun to feel the mounting pressure of its accelerated aging process. The prolonged period of below replacement fertility of the last two decades will only make China’s aging a longer and less irreversible process. China’s latest census reported that the share of elderly population aged 60 and over reached nearly 14% and aged 65 and over to nearly 9% in 2010. Assuming a fertility level of 1.47, which is very close to the current observed level, the percentage of elderly Chinese aged 60 and over will rise to 25 or one in four persons, by 2030, in a not distant future. The number of elderly at such ages will also rise from about 180 million now to over 350 million (Figure 1-4). Moreover, the number of the oldest old, aged 80 and above, will rise from the current less than 20 million to over 30 million. In China, the time it will take for the elderly population aged 65 and over to increase from 9%, China’s current level, to 25%, will only take less than 30 years. By comparison, the same process took and will take western industrialized societies from 70 years to more than 100 years. China, in the company of South Korea and Taiwan, and to some extent Japan, is among the fastest aging societies in the world.
Compressed demographic transition and rapid population aging pose challenges to all societies undergoing these processes. For China, sustained low fertility in the last two decades have already set in motion a drastic change in the ratio between working age population and the elderly dependent population. If one uses population aged 20 to 59 as working age, or tax paying age population (China’s current retirement age does not go above 60), and those aged 60 and over as benefit receiving age, the ratio between these two population groups will be more than halved in the next 20 years, from almost 5 back in 2010 to 2 in 2030 (Figure 1-4). Such a major change is driven by the continued decline in the young labor force, and at the
same time, it drastically increases the tax burden of the working age population. The economic ramifications are many, ranging from labor force supply, savings, investment, tax burden, to consumption patterns.

Due to China’s three-decades long enforcement of the one-child policy, China’s below replacement fertility regime also carries a special feature in comparison to other low fertility countries. That is the large share of Chinese families with only one child. China now has over 150 million families with only one child, accounting for one in every three households. Among couples who have recently completed their childbearing, the share is over 40%. In half of China’s provinces, the share is over 50%, with the highest up to 80%. Among China’s urban areas, the share is even higher, with an average of over 90% families with only one child (Figure 1-5, Wang et al. 2012). The only children in these families will face the need to contribute economically to their elderly parents’ support, either through the society or within the family, or both. More importantly, they will face the demand for their time to provide irreplaceable physical and emotional support when their parents need them.
2. Protracted and Slow Policy Responses

China’s policy response to below replacement fertility and to rapid population aging has been extraordinarily slow. Countries in East and Southeast Asia that experienced rapid fertility decline all had a time lag between the time when their fertility level dipped to below the replacement level, and when their government began to change their birth control policy (Choe 2008; Jones 2007; Jones et al. 2009; Frejka et al. 2010). In South
Korea, the time lag was a decade. In Singapore, it was 12 years, and in Taiwan, it took 15 years. In China, the time interval between the onset of below replacement fertility and the start of a pro-natal policy (which has not happened yet) could be 25 years if not longer, hence exceeding other East Asian societies by 10 years or more.

China’s unique demographic, social, and political contexts help explain its unusually slow policy response to below replacement fertility. China’s large population and its fast growth in the late twentieth century have casted a long Malthusian dark shadow over its society with concerns of overpopulation. Chinese leadership’s political mandate to increase per capita income level has tied birth control to its political legitimacy. The Chinese style of non-democratic, opaque, and closed-door policy making, backed by a statist view that treated people like numbers to be planned, has made policy makers indifferent to public criticism and made them to some extent non-accountable. These characteristics combined led to the launch of an extreme version of birth control more than three decades ago, when much of China’s fertility decline was already accomplished (Wang et al. 2012).

The same set of social and political factors have continued to contribute to the leadership’s slow reaction to policy change, against the repeated advice and appeals from the public. While almost all academic population experts in China and many for-
mer government officials in the birth control apparatus joined forces to call for relaxing the one child policy, the Chinese government waited for almost a full decade after receiving the first collective policy change proposal to act (Gu and Li 2010). Moreover, instead of entertaining suggestions from scholars, the government relied on its control over official media and other channels to silence the voices of scholars, and to produce false information to confuse the public view and to obstruct policy change. It was the confusion created by government sponsored propaganda, the silencing of scholars’ independent voice, and the obstruction to policy change that led to the surprise, when the latest Chinese census in 2010 reported China’s decline in the share of the young population and the rapid increase in its elderly population.

The extent to which Chinese policy makers are so out of touch with the Chinese public explains the other surprise, namely that the Chinese public welcomed the relaxation of the one-child policy, as announced in mid November 2013 following the plenum of the Chinese Communist Party National Congress. The leadership perhaps did not expect such a small policy change, affecting only a very small proportion of all Chinese couples, would receive such a broad and overwhelming support and praise from the public.

With the recent decision and announcement to begin phasing out the one-child policy, China has made a historical shift in
its response to below replacement fertility and population aging. In addition to allowing couples with one side being an only child to have two children, the same document also announced that China would study and implement gradually postponing retirement age, which is now 55 for females and 60 for males. After years of resistance and denial, the Chinese government seems to have finally come to terms with a new reality and will revise its birth control policy, and will design policies to face population aging.

The next one to three years will be crucial to see how quickly and completely China can leave its one-child birth control policy behind, and can follow its neighbors and other societies with policies dealing with below replacement level fertility. The clear signal we see now to relax the one-child policy could be a decisive moment that paves the road of a quick abandonment of the one-child policy within three years, thus allowing more couples to have two children. Or, it can be made by some a stalling strategy, to buy time for bureaucrats to maintain their status quo in face of public criticism. Given how unwilling and protracted the process of policy change has been so far, the likelihood of the second scenario, namely a further delay, is not an unlikely one.

Chinese public’s initial reaction to the recent government announcement of policy relaxation has been a one-sided message: it is too costly to have children. Online surveys and media
interviews of young people have all converged on one set of numbers, that only about 60% of couples with one child are considering having a second child. A recent survey in Shanghai by Fudan University of over 2,000 young respondents born in the 1980s provides similar results: about 60% of respondents consider two or more children as an ideal number of children for a family, but only 45% stated that they themselves wanted to have two children (among 873 respondents with one child already, the average number wanted is 1.46, and among 1,364 childless, presumably also younger respondents, the average number is only 1.38). Should these preferences turn into reality, China will be in a below replacement fertility territory for a long time to come.

With sustained low fertility and the prospect of a prolonged and accelerating aging process, China faces critical challenges in public policy making in the coming three to five years. Swiftly and completely phasing out the outdated one-child policy is only the first and the easiest step. The more daunting tasks lie in the areas of social security and health care system reforms. China’s social security system is currently highly inadequate and unequal. In 2010, only about 30% of the Chinese elderly relied on public transfer, such as pension, as their major source of income, and almost all of those receiving pension are urban Chinese residents. The same is true for China’s health care system. While coverage has been extended in re-
cent years to all residents, the level of coverage varies greatly among different segments of the society. With costs rising at a rate much faster than that of income increase, the current system is not only inadequate and unfair, but also unsustainable.

In addition to these areas of policy making, China will also need to learn from its neighbors to make the society more “children friendly” and more “family friendly,” as childcare and balancing work and family are becoming two major factors affecting fertility. All these reforms and policy changes will get harder to initiate and to implement than in the past, as China’s hyper growth period has come to an end, and the growth rate of government revenue slows down, and as the demand for old age support rises with China’s rapidly expanding number of the elderly population.

Contrary to the title of this paper, it did not take a long time for China to reach the low level of below replacement fertility. Compared with Japan, Taiwan, and South Korea, for instance, it only took China a decade to bring fertility level down from over 5 to close to 2, and only another decade of fluctuation around the replacement level before fertility dipping below the replacement level. What took China a long time is its slow recognition of the low fertility regime, and its unusually slow policy response. As a result of such delayed policy responses to the arrival of below replacement fertility, China has lost time to prepare for population aging, both in the short and long terms.
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Chapter 2

Variation in U.S. Fertility: Low and the Not-So-Low, But No Lowest-Low
In a discussion of low fertility and population aging, the U.S. stands out with a level of fertility hovering around the replacement level (substantially higher than most developing countries) and a corresponding, modest pace of aging. Thus, the most relevant questions are: what accounts for the relatively robust U.S. fertility rate? And how do these answers contribute to our understanding of the determinants of low fertility. We address these questions by describing fertility level and variation in the U.S. For some groups fertility is quite low, well below replacement. Other groups have fertility well above the replacement level. In order to understand this variation, we begin by introducing two compatible theoretical frameworks. The first posits a set of intermediate variables: the level of desired/intended fertility and factors that constrain (e.g., sub- or infecundity) or augment (e.g., unwanted fertility) fertility relative to these intentions. Second, these “intermediate” variables (that characterize a “fertility regime”) are anchored in culture and social structure; we also offer a conceptualization of these more distal causes. Both frameworks aid discussions of low fertility in the U.S. and, we argue, provide frameworks for thinking about low fertility and policy options in all contexts.
1. Conceptual and theoretical frameworks

The usefulness of intermediate variable frameworks for the study of fertility is unquestioned. The Davis and Blake (1956) framework and the Bongaarts and Potter (1983; Bongaarts 1978) proximate determinant framework have proved valuable for conceptualizing and empirically decomposing the causes of high fertility and the fertility transition. However, once fertility falls to moderate and low levels, these models are much less useful. The reason: in low fertility contexts the fundamentally important proximate determinants are always contraception and abortion. In such contexts, low fertility is the result of persons’ desires to have small families and thus the use of contraception and abortion. Moreover, other aspects of the Bongaarts/Potter model become largely irrelevant (such as the biological maximum fertility level and length of breastfeeding).

Bongaarts (2001) proposed an alternative model that we have found very useful for studying low fertility and its variation. This "low fertility model" has two broad components: i) the desired family size characterizing a population and ii) the factors that either enhance or reduce fertility relative to these fertility preferences. As described by Bongaarts (2001: see Figure 4 and discussion) this model could be useful at various stages of the fertility transition. For instance, Bongaarts points out that in early stages of the fertility transition, fertility often
exceeds desired family sizes. Once fertility fall to low levels, the opposite is often the case. We argue that this model is most useful once the fertility transition is well underway, individuals are explicitly strategizing about appropriate family size, and birth control is widespread. Specifically, this low fertility model has proven useful as a conceptual model (for instance, many articles have focused on single components of this model - the effects of tempo, desired family size, or unwanted fertility) and occasionally as a general framework for studying low fertility (see Morgan, Guo and Hayford 2009; Morgan and Rackin 2010; Dharmalingam, Rajan and Morgan 2014).

As noted above, the low fertility model has at its core the incongruence between population level stated preferences and actual observed fertility (Bongaarts 2001; Morgan and Taylor 2006). The framework can be represented as in equation 1):

$$\text{TFR} = \text{DFS} \times (F_U \times F_R \times F_{SP}) \times (F_t \times F_i \times F_C)$$

Aggregate period fertility, the total fertility rate (TFR), equals women’s desired family size (DFS) that is increased or decreased by factors and circumstances that are not or cannot be incorporated when women report their childbearing desires. If all women realized their DFS (and if tempo distortions were eliminated, see Bongaarts and Feeney 1998), then period fertility would equal DFS. Notably, the factors that increase fertility relative to desires are: unwanted fertility($F_U$), replacement of
child deaths ($F_R$), and gender preference ($F_{SP}$), which in the case of the United States is a preference for a son and a daughter. The effects of these factors in equation 1) would be greater than 1.0 and thus they increase fertility relative to desires (Hagewen and Morgan 2005; Dharmalingam, Rajan and Morgan 2014). The factors that decrease fertility relative to desires are the tempo effect of fertility postponement to later years: ages ($F_T$), sub-or infecundity ($F_I$) and competing preferences for children ($F_C$) (Bongaarts 2001).

These factors would be expected to have values of less than 1.0 (in equation 1) and thus they decrease fertility compared to intentions. In the United States aggregate intentions approximate the TFR and both are near replacement. This is because factors that increase and decrease fertility relative to intentions are largely offsetting, not because most women individually realize their family size. In most developed countries, intentions approximate replacement but actual fertility falls far short of the TFR and replacement (Bongaarts 2001; Hagewen and Morgan 2005). This is true because factors reducing fertility relative to intentions are stronger than factors having the opposite effect.

Equation 1 can be used to capture the “fertility regime” in a particular population (see Morgan 2004; Dharmalingam e.al. 2014). The TFR captures the level of actual fertility and, on the right hand side, are intermediate variables that produce this
level. The fertility regime in the U.S. as a whole: replacement level fertility is produced by preferences for small family sizes with a general reluctance to be childless or to have only one child. These preferences, modestly above the replacement level, are augmented by i) high levels of unplanned pregnancies and unwanted births (i.e., they increase the TFR by 10-15%) and ii) very modest effects additional births to balance the gender composition of offspring (having an additional child to have a daughter or son increase fertility by about 2%).

Opposing forces reduce fertility relative to intentions. The timing of childbearing is relatively young (compared to many European countries) but it has been increasing steadily for over three decades. This fertility postponement has lowered the TFR by about 10% over the period of this increasing age at childbearing. Later ages at childbearing lead to “fertility foregone” due to sub- and infecundity (reduces the TFR by 2-4%). But it also leads to fertility foregone because of competition between valued activities that become more intense or more visible as persons age. This factor is difficult to estimate but the “residual” produced by assuming that this factor equals 1.0 (no effect) implies an effect on the order of a 10-15% reduction in the TFR over the last few decades. This pattern of intermediate factors, this fertility regime, has been in place for over three decades1).

1) If one combines the estimated effects of the factors (F_U, F_R, F_SP and F_T, F_{i.}
There is no reason to believe it is not sustainable in the future\textsuperscript{2}). Of course, this is not to say that it will be sustained!

The weakness of intermediate variable explanations: they beg questions about the more fundamental causes of fertility: e.g., Why are fertility intentions clustered at two children per woman? Why have they remained stable? Why is unwanted fertility so high in the U.S. and why hasn’t it declined? What causes fertility postponement? Answers to these questions require consideration of more distal/fundamental causes. Asking these questions take us to the aggregate level and focus attention on social structure - Are there regularities at this level? Can we identify the mechanisms that produce them? In looking for explanations that explain aggregate differences, we are not denying micro-level variation or decision making; we view macro-level dynamics as a product of the interaction of micro- and macro-level processes (Johnson-Hanks et al. 2011). However, we assert that major influences on aggregate fertility levels/dif-

\textsuperscript{2} An exception is \( F_t \). Logically, the postponement of fertility cannot be maintained forever. Over the past few decades ages at first and second birth have increased by approximately .1 year. This increase could easily be maintained for several more decades. Other parameters are often expected to change. \( F_u \), the level of unwanted births, is often assumed to be anachronistic in a context of wide availability of effective contraceptives. But this parameter is largely unchanged over the last three decades and is thus not driven by availability of contraception but rather its effective use and the acceptability of abortion should it fail. See discussion in 2011 Technical Panel on Assumptions and Methods.
ferences should be conceptualized and operationalized at the aggregate level. Thus, emphasis moves away from individual decision, what happens in the brain, to the structures in the world that motivate and constrain behavior (Bachrach and Morgan 2011).

Relying on a Theory of Constructural Action (TCA, see Johnson-Hanks, Bachrach, Morgan and Kohler 2011), we define social structures as durable forms of organization, patterns of behavior, or systems of social relations (Greenhalgh 1990; see also, e.g., McNicoll 1980). The fertility regime, its fertility level and a set of intermediate variables, is one such social structure. Social structures are dual in nature (Sewell, 1992, 2005; Johnson-Hanks et al. 2011) and they emerge from the interplay of observable material structures on the one hand (e.g., objects, speech, observable behaviors, and built environments) and the schematic meanings that material forms instantiate on the other (e.g., values, beliefs, norms, scripts, and ways of categorizing). Thus, low fertility regimes are produced by schemas that legitimate small families as “good” and fertility control as “appropriate for responsible parents”, as well as material aspects of the environment that make small families advantageous, e.g. the expense of childcare for working mothers and the “second shift” of housework and childcare that women often disproportionally assume (see Johnson-Hanks et.al. 2011: Chapter 4). While the aggregate measurement of DFS oper-
ationalized above as the mean of individual responses, the concept we seek to measure is the DFS that is “in the world”. What family size is judged as most desirable and appropriate in a particular population? Aggregate family size desires are strongly correlated with observed fertility in many contexts (Bongaarts 1992; Morgan 2001). We are interested in factors that can account for observed differences between the mean desired family size and observed fertility and in locating the more distal causes of these factors. For instance, in the U.S. there is a well-documented stated preference for couples to have both a son and a daughter. Couples without this balance are more likely to have an additional child. These regularities reflect the import of the institution of gender and the different roles expected of sons/daughters (or boys/girls). In situations where the sex of children cannot be controlled, this preference leads some persons to revise their fertility desires upward based on their fertility history, and to have more children than previously intended. More generally, all of the intermediate variables, like gender composition of current children, are anchored in aspects of the social structure (in its virtual/schematic and/or material components).

Social structure influences behaviors “one at a time” as persons live their lives. Situations (or conjunctures) require action and this action may include active decision making. Variation in behavior among individuals and across groups reflects not
only variation in structure (schemas and materials) but varia-
tion in the social ecology (both experienced and observed).
Different social niches (e.g., those with more or less poverty
and insecurity) make some conjunctures much more likely than
others. Social policy should be designed to influence actions in
particular situations (or conjunctures).

2. U.S. Fertility Variation

How useful are these layered frameworks for understanding
variation across and within populations? The more useful they
are for understanding observed variation, the more confident
we can be in using them to pose counterfactuals linked to poli-
cy interventions or to make predictions about the fertility re-
gimes of the future. In other papers, we have examined
cross-country variation (Morgan 2003, Morgan et.al. 2010) and
within country variation elsewhere (Dharmalingam et.al. 2014).
Here we examine the substantial fertility variation within the
U.S. using the intermediate variables and TCA frameworks.
Fertility regimes vary considerably across subsets of the U.S.
population as do their more distal determinants.

1) Regional fertility variation

U.S. regional fertility variation is substantial. Vital registra-
tion data for 2011 show total fertility rates (TFR) for U.S. states as low as 1.6 (Massachusetts, Maine, Rhode Island and Vermont) and as high as 2.3 (Alaska, south Dakota) and 2.4 (Utah). Given an aggregate TFR of 2.0 variation on the order of .5-.7 is substantial (.7/2.0 =.35).

Lesthaeghe and Neidert (2006, 2009) examine this contemporary U.S. regional (state) variation and have linked it to voting/political partisanship. Specifically, they use state level data (N=50) and show a correlation of .78 between the percent voting for George Bush (versus Kerry) in the 2004 presidential election and the TFR for white non-Hispanics (Lesthaeghe and Neidert 2006: Figure 8). This finding tops my list for most interesting facts about U.S. fertility in the last few decades. Lesthaeghe and Neidert’s (2006:695 & 696) interpretation of this fact is that it is a “textbook example” of the second demographic transition. They say it is “abundantly clear that the United States is a heterogeneous country, with even more variation within its borders than within the EU-25” (p.671). Further they document a clear “family/fertility regime” that they refer to as “the second demographic transition” (that includes low fertility, fertility and marriage postponement, substantial non-marital childbearing, etc.) that characterizes some states (and counties) and not others. Lesthaeghe and van de Kaa who coined and developed the concept of the Second Demographic Transition (van de Kaa 2001) see the driving force of the tran-
sition as “postmodernist” values of self-expression, self-fulfill-
ment, and self-actualization. The term “transition” implies a
secular change in the direction of these values and that demo-
graphic change reflects/responds to these changes. In short,
postmodernist values and a package of family/fertility behav-
iors are the future. In both Europe and the U.S., they predict
that there will be populations that are leaders and laggards.
But the end result, eventually (an undefined time frame) will be
the same. In the terms of the structural theory we propose,
these postmodernist values are incorporated into schemas
(frames) that are certainly visible in contemporary society.
However, we think that Lesthaeghe has fallen victim to “reading
history sideways” (see Thornton (2001; 2005) and the oft made
mistake of thinking the most socioeconomically advanced pop-
ulations reveal the future of less developed populations.

We do not deny the visibility of postmodern values in the U.S.,
as noted above they are components of many contemporary
schemas in the United States. But a key part of our TCA theory
is that schemas are “multiple” and that they can be used se-
lectively in different situations. But they are not selected
randomly. A person’s identity provides consistency to the sche-
mas that they employ. Regional and political identities are in-
tertwined in the U.S., captured by the terminology of “Red
States” and “Blue States”. Note Lesthaeghe and Neidert’s
(2006:694) attempt to project the second demographic tran-
position on the U.S.:

Yes, there is an "American exceptionalism" among a non-negligible section of the population. That section is mainly located in the Midwest, the Great Plains, and the South. It is on average much more rural than metropolitan, less well educated, adheres more to Evangelical Christianity or Mormonism… No, there is little or no "American exceptionalism" in the remainder of the United States.

The characterization of the Midwest, the Great Plains, and the South in terms of lower development and less secularization make them sound as if they are simply laggards in the long slog toward postmodernism and lowest-low fertility. But in concluding paragraphs Lesthaeghe and Neidert (2006:694) give some ground and propose an “American bipolarity” (as opposed to an American exceptionalism) and say:

What makes the United States particularly interesting in the overall Western context is that the conservative and religious right is openly and vocally trying to fight back (e.g., with amendments seeking to ban same sex marriage, closure of abortion clinics). This has not happened in Europe, Canada, or Australia.

Lesthaeghe believes that this “fighting back” is a rear-guard, last gasp. In our TCA frame this fighting back reflects different schemas and identities and structures that support them. These elements of structure have shown substantial vitality on a
decadal time scale. The link to elections is interesting; few in the U.S. see the Red/Blue divide as a thing of the past, for instance.

The Lesthaeghe and Neidert (2006, 2009) work does not provide the details of the regional regime/intermediate variables. We expect that the higher fertility in the Red (versus Blue) States is a combination of factors: higher intended fertility, higher unwanted fertility, less fertility postponement and less “competition” (in terms of revising intentions downward in the face of nonfamilial opportunities). Lesthaeghe and Neidert provide evidence of less postponement in Red (versus Blue) States; but are silent on the remaining intervening variables.

2) Religious Fertility Variation.

Hayford and Morgan (2008: Table 2) show that contemporary U.S. fertility variation is primarily traced to religiosity, not to a particular religion or denomination. A simple question asked in the 2002 NSFG (National Survey of Family Growth) captures substantial fertility variation: How important is religion in your life? Responses are: very important, somewhat important and not important: the TFRs estimated for those giving these responses (in the 5 years prior to the 2002 survey) were 2.3, 2.1 and 1.8 respectively. Hayford and Morgan use the low fertility intermediate variable framework to examine this variation.
They find clear evidence that fertility intentions were higher for the more religious but similar levels for the other intermediate variables (including unwanted fertility and fertility postponement). Hayford and Morgan then turned to items in the NSFG that measured respondent’s attitudes toward various aspects of family formation and sexuality. Attitude variables were included in their analyses by constructing an additive index representing traditional family ideology. They show that the higher intentions of the more religious disappear if one controls for traditional family ideology. Thus this paper identifies both the key intermediate variable (higher intentions) and its origin in more distal social structure (the schemas and materials of religious and family life). As Hayford and Morgan (2008:1180) say:

Religious and family values are conjoined by the “culture wars” of the past few decades. There are numerous schemas at play in American society and many are widely shared, suggesting that “culture war” is less apt than terms like cultural “battles” or “skirmishes.” Nevertheless, these skirmishes have received great media attention and constitute historical “events” that have impacted the social landscape and individual identities. This social history produces the new structure (i.e., patterned behavior) observed. The higher fertility of those for whom religion is an important aspect of identity flows from these forces and helps to perpetuate them. The longevity of this new structure depends upon the micro-macro dynamics at
the intersection of contemporary ideology, politics, religion and the family. The outcomes will be visible in institutional change, in important sources of contemporary identity, and in behavior such as fertility.

Thus religiosity (measured at the individual level) shows a differential fertility pattern similar to the aggregate, state-level variation that was discussed above. To amplify on the Hayford and Morgan statement above: religious values, family values and political conservatism have been conjoined as a powerful force in contemporary American society. To a large extent, being conservative means being religious. And being conservative and religious means supporting family values that include placing a high value on children and parenthood. Thus individuals are “Red” or “Blue” and tend to reside in communities (and states) that include similar minded persons. This partisan “color” is amplified and reified by material symbols in places more deeply “Red” of “Blue”.

3) Educational Fertility Differences

Morgan and Rackin (2010) used data from the 1979 National Longitudinal Survey of Youth (NLSY-79) that follows women (and men) throughout the childbearing years. Results we discuss compare intended parity3) at age 20-24 with completed

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3) Intended parity is the sum of children one has and the number of additional
parity at age 40-44 (in 2006, see Morgan and Racking 2010:Table4). Those with less education at age 22-24 had a mean completed fertility of 2.55 and those with college educations only 1.67. Thus, there is a clear negative gradient with more education at age 22-24 associated with lower completed fertility. But this difference is not due to different levels of fertility intentions at ages 22-24. Rather, the more educated “miss their fertility target” on average by over one-half a birth (−.54). In contrast, the least educated exceed their fertility target slightly (by .09 births). The intended parity of high school and college graduates (at ages 22-24) is estimated to be exactly the same (2.2 children per woman). But the former have completed fertility of 2.05 compared to 1.67 for the later.

Educational attainment can be thought of as a proxy for the types of jobs available to young women and men and the corresponding workplace environments that they will occupy during their childbearing years. These workplace demands and norms shape both fertility intentions and fertility decisions over time and thus influence whether an individual will achieve her/his fertility intentions. Postponement of fertility is the hypothesized way in which highly educated women deal with long and demanding work schedules and a normative environment less supportive of childbearing. Once Morgan and Rackin include variables that measure postponement—childlessness and mar-

children intended.
ital status, both at age 24—the effects of education are sharply attenuated. Thus much of the educational effect on under-achieving fertility intentions is explained by the continued postponement of births: apparently many of these postponed births become fertility forgone.

In sharp contrast, more-educated men and those currently enrolled in school at age 24 are not more likely to under-achieve their fertility intentions compared to the less-educated. Once postponement is taken into account, highly educated men (compared to the least educated) are actually less likely to under-achieve their fertility intentions. For instance, college-educated men are only one-half (a factor of 0.50) as likely to under-achieve intentions compared to men with the least education. Morgan and Rackin attribute these different effects to the gender-based division of labor with respect to children. Men can combine enrollment in higher education or demanding careers with having children because they bear less of the responsibilities and time demands of caring for them.

The Morgan and Rackin paper shows the import of postponement as a strategy of dealing with the competition (Fc) that arises between valued roles and opportunities. Again a “demographic regime” anchored in distal structural determinants (conceptualized as in the TCA) framework provide a useful explanatory framework for low fertility variation.
4) Race-Ethnic fertility differences

A common claim is that the higher fertility of U.S. racial/ethnic minorities explains its robust fertility rate. The historically higher fertility of African Americans (AA) is now a modest difference. For cohorts recently completing childbearing (using estimates from Morgan Rackin (2010) discussed above), Whites had 1.93 children and AA 2.18. AA have a much earlier pattern of childbearing and were both more likely to have fewer and more children than intended (versus the exact number) compared to whites. Using 2010 vital registration estimates, the rates for all whites and blacks were 1.91 and 1.92, respectively. If we focus on non-Hispanic whites and blacks the TFR’s are 1.77 and 1.92. This difference 8% (1.77/1.92=1.92) could be largely accounted for by differing levels of unwanted fertility (F_u)4).

The 2010 Hispanic TFR was estimated as 2.24 but was as high as 2.86 in 20065). The Mexican origin population’s 2010 TFR was 2.14 but was as high as 3.00 in 2006. Both these higher rates and their dramatic decline can be explained by immigration and the timing of fertility vis-à-vis migration (see Parrado

4) Mosher et.al. (2012: Table 1) show the percentage of births unwanted for nonHispanic whites and black as 6.4 and 11.7. This is a difference of 5.3%. Black fertility is 8% higher than whites. Thus, unwanted fertility can account for 66% of the higher black TFR.

5) To illustrate the diversity within the Hispanic population, Cuban Hispanics’ 2010 TFR was only 1.43 and that for “other Hispanics” was 2.87.
2011; Parrado and Morgan 2008). Immigrants tend to be young adults; they partner and have children soon after arrival in the U.S. This makes their fertility appear to be quite high when measured on a period basis. The lifetime fertility of most immigrant groups, and especially among the native born, is unlikely to be much above replacement. The recent dramatic decline in Hispanic (and especially Mexican fertility) is due to the dramatic decline in immigration resulting from the Great Recession.

The Asian or Pacific Islander population has a 1.71 TFR. Some groups (American born Korean, Japanese and Chinese) have fertility that is lower. This section to be developed in the next draft. I will argue this lower fertility is linked to less use of abortion and a greater willingness to stop childbearing after having one child.

5) Discussion

When we introduced the (low fertility) intermediate variable framework above, we identified the parameters (the fertility regime) that lead to replacement level fertility in the U.S. In our discussion of fertility differentials, we identified the most likely intermediate variables responsible for variation. Table 1 below summarizes our claims about variation. For instance, variation by state is caused by different levels of desired fertility (DFS) that are altered by differential levels of unwanted fertility ($F_u$)
and postponement/competition ($F_t$ and $F_c$). Education differentials can be accounted for by variation in postponement/competition ($F_t$ and $F_c$) alone.

| Table 1. Intermediate variables responsible for fertility variation in the United States |
|-----------------------------------------------|------|-----|-----|-----|
| Variation by:                                  | DFS  | $F_{dp}$ | $F_t$ | $F_c$ |
| State                                         | x    | x       | x    | x    |
| Religiosity                                   | x    |         |      |      |
| Education                                     | x    | x       |      |      |
| Race/Ethnicity                                |     |         |      |      |
| Black/White                                   | x    |         |      |      |
| Hispanic/Non-Hispanic                         |     |         |      | x    |
| Asian/White                                   | x    | x       | x    | x    |

DFS: Desired family size  
$F_{dp}$: Level of unmet need  
$F_t$: Effect of sex preference  
$F_c$: Effect of fertility postponement  
$F_{dp}$: Effect of competition with other desires/intentions that reduces intentions over the life course

Identifying the demographic regime and variations in it is only the first step. Documenting the difference in, for instance, unwanted fertility begs the question: why do these levels of unwanted fertility vary? Answering these questions requires attention to fundamental/distal causes embedded in social structure. In our (TCA) conceptualization of social structure, one looks to key conjunctures, the situations where actions occur. What are the materials available to realize action or to suggest it? What are the nature of the available schemas? We will provide two examples of the kind of analysis we propose.

**Unplanned pregnancies.** The first conjuncture is an unplanned pregnancy. Unplanned pregnancy is common in the U.S. Roughly 50% of pregnancies are unintended, as are 37% of
all births (Mosher, Jones and Abama 2012). Unplanned pregnancies drive the level of the intermediate variable, unwanted births ($F_w$).

Unintended pregnancy is a classic conjuncture: It is a situation that must be resolved: the schemas for construing the situation are well known by all in the U.S. These schemas are highly politicized -- they are “in the world”. There is a pro-choice schema that stresses the importance of planned pregnancies. One should be ready, economically and emotionally, to have children. This schema accepts postponement of childbearing as a way to meet these goals. This pro-choice schema legitimates the option of ending an unplanned pregnancy. An opposing, anti-abortion schema views life as beginning at conception and views abortion as morally problematic. Further, this schema valorizes those that “do the right thing” and have the child. This schema holds that such choices bring maturity and that being a parent brings stability and order to otherwise chaotic lives. How one construes their situation (the schema they use to motivate/justify their decision) may be contested. It is influenced by significant others (including parents, friends and romantic partners) and by the availability of materials (including abortion services and information) that make enacting one decision easier/more difficult than the other. Edin and Kefalas (2005) describe impoverished environments where many of the role models and many
of the stories told embody the anti-abortion schema. Having children early (even if unintended) does not ruin lives: these children bring order, meaning and stability. These mothers, even the economically disadvantaged, can provide children what they most need—love and support. These mothers say that the make “promises I can keep” to “be there” for their children. This pro-life schema is not embraced only by the poor. Sara Palin’s daughter much discussed pregnancy and her decision to have the child received widespread media attention in 2007. Conservative political views and many religious leaders valorized her and her family’s choice (see Morgan 2011:61-63).

Of course, there are many abortions in the U.S. as well. Edin and Kefalas’ sample was all young mothers. Abortion was common within these same communities and presumably those choosing not to have children at young ages would justify their decisions using the opposing schema. But in other communities, among the more wealth and better educated segments of the population, early and unintended childbearing is less common. In these settings abortions are justified in terms of allowing persons to fulfill their goals/dreams and or to advantage existing children or potential future ones.

The contested nature of this conjuncture in the U.S. explains the high level of unplanned/unwanted births in the U.S. Variation in the construal of this conjuncture across physical
and social space explain variation in this intermediate variable (across these same dimension). Contrasts with East Asia and with South Korea are noteworthy. The anti-abortion schemas are not legitimated there, and the dominant concern is with not diluting the resources that would allow existing children to thrive. This conjuncture would be consistently construed in favor of abortion in East Asia. Unwanted fertility is rare in East Asia compared to the United States. Rare enough that measurement of the phenomena is not even attempted.

**Planned pregnancies.** Since births are sequential, persons can make decisions to have or not have an additional birth. A key conjuncture, and one that we will discuss here, is the decision/intent to have a second birth. The schemas that are “in the world” and thus accessible by women are many. Having a second child is often justified/rationalized as providing a sibling for the first born. Having a sibling is argued to be advantageous in terms of the first child’s development and as providing an important relative throughout life. Some parents are also concerned that having a single child puts them at risk of having no children given the small chance that something happens to the first born. Finally, with one child already born the “marginal cost” of a second is reduced in several ways: some toys/clothes are already purchased; the parents already have experience with children, etc. Alternative schemas in the U.S. (reasons to stop at one child) are less visible. Having a difficult or disabled
child is a possible reason and implies that the investment in the first child (because of these unusual circumstances) limits the couples' ability to have a second child. Other reasons include union dissolution, again a factor that limits resources (such that the second child would threaten the ability to care for the first).

The progression to second birth is high in the United States across time and social space; one child families are relatively rare. Again the contrast with East Asia is informative. Concerns about the cost of education and the competitive nature of admission to the best schools, legitimates rationales that postpone or forego the second child in order to advantage the first born. In the East Asian context, good parents are expected to provide "intensive parenting" (e.g., cram course after school in English and math). These courses matter for admission to the best schools.

3. Conclusion

According to Lesthaeghe and Neidert (2006), the U.S. has more internal fertility variation than the EU-25. We have examined this variation and identified important intermediate variables responsible. These intermediate variable levels are anchored in social structure that makes them sustainable. Thus, very low fertility is a possibility in the U.S. but the more likely scenario is fertility slightly to modestly below replacement
level. The U.S. case does not provide strong or clear lessons for those with much lower fertility. The fertility regime in the U.S. produces replacement level fertility but these intermediate variables are not sustained by explicit policy. Rather they are sustained by historical and cultural continuity. We do argue that the approach to explaining fertility levels and variation in the U.S. is transportable. That is, a first step is to identify the “fertility regime” – what is it that needs to be explained? Second, locate the origins of these intermediate variables in social structure and examine the conjunctures in which this structure is reproduced. The examples above of conjunctures focusing on abortion and having a second child provide examples.

Understanding the social structures that determine the intermediate variables (that, in turn, determine the level of fertility) requires imagining the conjunctures that individuals face. This includes consideration of the materials that suggest an enable course of actions and the “local logics” (the schemas available to actors). Effective policy must be designed to alter the way conjunctures are construed. Social scientists often see policy as altering the materials present in a conjuncture. But altering the ways people think about their options is also a plausible strategy. Considering policy that provide innovative ways of thinking about a situation (conjuncture) and providing resources that enable new choices provides a roadmap to new social structures.
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Chapter 3

The Evolution of Population and Family Policy in Australia
Population growth was a prominent focus for policy debate from the beginning of the settlements in the new-world countries, the United States, Canada and Australia. All saw themselves as creating a new society which would be superior to the first world (Europe) from which they had come. Healthy population growth often was used as evidence of the success of the new societies. In the United States, these views were expressed by prominent people in the independence movement, such as Benjamin Franklin and John Adams, and the rapid growth of America’s population is said to have contributed to the onset of the revolution (Hoff 2012, Chapter 1). In the 19th century, Malthusian theory was often debated in the United States, with advocates on both sides of the debate. According to Hoff (2012, Chapter 2), population again played a role in the civil war between North and South. In the 19th century, the United States population grew rapidly through largely unrestricted migration but also through high rates of fertility associated with early marriage.

As early as the 1830s, Britain and the colonies of Australia
and Canada came to an agreement that the excess poor populations of Britain would be provided with assisted passages so as to boost labor supply in the colonies, while at the same time relieving poverty in Britain (Robinson 2002). Since the 1830s, migration to Australia has always been policy-driven, with the single exception of the spontaneous wave of migration in the 1850s stimulated by the discovery of gold in Victoria. Labor demand has always been the most important determinant of migration to Australia, and successive governments have ramped up or curtailed immigration according to the perceived level of labor demand at the time. When the Australian federation was created in 1901, one of the first acts of the new parliament was to close the border to free movement as was done in the United States at the same time. This was not designed to limit population growth which, at the time, was seen to be unacceptably low. Instead, border closure was essentially a move to prevent Asian migration, a policy which, in the Australian case, became known as the White Australia Policy. In general, migration to Australia was low in the first half of the 20th century except for surges immediately before and after the First World War (Figure 3-1).

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6) Many of the author’s ancestors arrived in Australia as poverty-stricken assisted-passage immigrants between 1839 and 1854.
7) Australia’s population trebled in the single decade, 1850-1860, as a result of the Victorian gold rush.
As in the United States, fertility in mid-19th century Australia was very high, at around eight births per married woman who completed the childbearing ages. However, Australia participated fully in the decline in fertility that swept across the English-speaking countries in the latter part of the 19th century (Ruzicka and Caldwell 1977), and the decline was expertly documented in an important early study by Timothy Coghlan (1903), who had been appointed in the mid-1880s as the Government Statistician of New South Wales. Coghlan was not a Malthusian and was a strong advocate of the theory that population growth was a reflection of prosperity (Hicks 1981). Coghlan’s observations on the decline of fertility led to the setting up of the Royal Commission on the Decline of the
Birth-Rate and on the Mortality of Infants in New South Wales, the first major enquiry into falling birth rates held anywhere in the world. The Commissioners concluded that the decline had been due to an outbreak of materialism (couples preferring to accumulate the good things of life rather than to provide more children for the nation) and to the selfishness of women wanting to avoid the “discomforts” of frequent pregnancies. There were also references to the recourse to immoral and illegal means of preventing births (viz. contraception). Despite the call of the all-male Commissioners for citizens to end these deviant behaviours and contribute to nation building, the birth rate continued to fall. By the early 1930s, with the country in deep depression, the Australian fertility rate had fallen to replacement level (Figure 3-2). Throughout the 1930s and the years of the Second World War, net migration was close to zero. In the period, 1930-45, Australian population growth averaged 0.85 percent per annum, the only sustained period in Australian history when the growth rate has been lower than one percent per annum.
2. Family support policy, 1907–1945

The genesis of family policy in Australia was the Basic Wage Case (the Harvester Judgement) in 1907, in which Justice Higgins established a basic wage that was sufficient for a man to support a wife and three dependent children at a modest but adequate level. Higgins had drawn his inspiration from the study of adequate wages conducted by Seebohm Rowntree in York, England, in the late 19th century. Thereafter, wage negotiations in the various awards for different adult male workers took the basic wage as their starting point. The basic wage applied to all adult males irrespective of their family circumstances on the assumption that all males were potentially husbands with a dependent wife and three children. Wages for
women and for minors were set at much lower levels on the basis that they were not husbands with a wife and three children— even if they were women with an unemployed husband and three children. Thus, the origins of family policy were in the legal system, the industrial courts, not in government. The basic wage continued as the foundation of wages policy in Australia until it was abolished in the early 1970s, when it was replaced by a system of equal pay for equal work.

With some memory of the 1903 Royal Commission in mind but with a much greater emphasis on the wellbeing of families with children, the Labor Government of New South Wales in the late 1920s introduced a range of policies that were supportive of families with children. These included a cash payment made to the mother for each child, known as child endowment, abolition of fees for students in government secondary schools, workers’ compensation for injury sustained at work, reduction of the standard working week from 48 hours to 40 hours, and a pension for widows with children under the age of 15 years. A Commonwealth Royal Commission on Child Endowment was set up in 1927 but, at its conclusion in 1929, three out of the five Commissioners recommended that the child endowment should not be introduced at the national level.

In 1935, the Commonwealth Minister for Health, William

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8) In the minority, John Curtin, later war-time Prime Minister of Australia, supported the introduction of child endowment, along with the only female commissioner, Mildred Muncio.
Morris Hughes, concerned about the low level of fertility in Australia, made a speech in which he used a phrase that has reverberated in Australian policy debate ever since. In the speech, he drew linkages between population and defence, saying that Australia must “populate or perish”. In campaigning against the falling birth rate, Hughes became known informally as “the minister for motherhood”. Partly in response, in 1941, the Commonwealth Government led by Prime Minister Robert Menzies extended child endowment to all children in a family beyond the first child and, as in New South Wales, the payment was made to the mother of the child. While under the Australian constitution, children are the responsibility of the state governments, the transfer of the income tax power to the federal government during World War Two meant that control of the funding of cash transfers or tax allowances related to children has remained with the federal government ever since.


By the end of the Second World War, the “populate or perish” imperative had taken on increased force. A population projection made in 1947 indicated that, with zero net migration, Australia’s population would rise from 7.7 million in 1950 to only 8 million by the year, 2000 (Kippen and McDonald 2000). This was a frightening prospect for those concerned with
post-war reconstruction. From that point, Australia embarked upon its post-war migration program that aimed to sustain the rate of net migration at one percent of population per annum. When to the surprise of most contemporary demographers, the fertility rate began to rise on its way to creating the post-war baby boom (Figure 3-2), an informal target population growth rate of 2 percent per annum, one percent from natural increase and one percent from net migration, became the basis of the population policy underpinning reconstruction of Australia. While the 2 percent target disappeared long ago from policy rhetoric, the reality in the 67 years from 1946 to 2012 has not been far away from the early post-war target level. The average annual rate of population growth in Australia in that 67-year period has been 1.62 percent, 0.97 percent from natural increase and 0.65 percent from net migration.

Despite the high average rate of population growth across this time period, all three demographic parameters underwent significant changes in trend or approach. The first and most obvious was the movement from comparatively high fertility during the baby-boom years to below replacement fertility (Figure 3-2)\textsuperscript{9).}

This change happened in the 1970s. The baby boom was driven to a large extent by a tempo effect resulting from in-

\textsuperscript{9) Fertility reached a peak of 3.55 births per woman in 1961 and a trough of 1.73 in 2001.
creasingly earlier marriage and earlier childbearing (McDonald and Kippen 2011). Under the influence of higher education levels for women, higher female laborforce participation, and better access to reliable contraception, the pattern of early childbearing reversed rapidly in the 1970s, with marriages and childbearing being substantially delayed. This trend produced a tempo effect on fertility in the opposite direction, with cross-sectional fertility being lower than the underlying cohort fertility until about 2006. By the early 2000s, the slow but persistent decline of fertility in the 1990s had created a concern that Australian fertility might continue to fall to very low levels that were then evident in several European countries. Certain policy initiatives were undertaken in part to halt this decline, while at the same time supporting mothers to combine work and childbearing (see below). The total fertility rate rose after these policy initiatives were introduced in 2004, but McDonald and Kippen (2011) have demonstrated that this rise was due to the cessation of the tempo effect on fertility, that is, to the end of further delay of childbearing and the occurrence of births at older ages that had been previously delayed. Today, the cross-sectional rate is in accord with the underlying completed cohort fertility at around 1.9 births per woman. In the past 35 years, Australian fertility has fluctuated in a relatively narrow band between a low of 1.73 births per woman in 2001 and a high of 1.96 in 2008. Policy interest in measures to support fer-
tility has almost disappeared as a result of the recent relatively high fertility.

The second change of trend relates to mortality. As in other developed countries, the rate of improvement in Australian mortality levelled off during the 1960s, and there was a sense that further improvements in mortality would be small. However, since 1970, improvements in mortality rates, especially at older ages, have been substantial and continuous. Today, Australia has one of the highest expectations of life of any country.

The third major change was in the approaches to overseas migration. The many changes are described in detail in Markus, Jupp, and McDonald (2009). Following the Second World War, Australia accepted a very large number of displaced persons, especially from East and Central European countries. Then, from the 1950s, international migration to Australia was founded upon an assisted-passage scheme where migrants, particularly migrants from the United Kingdom but including migrants from many European countries especially Southern Europe countries, received highly subsidized passages to settle in Australia. This approach was brought to an end in 1982, and, from that time onwards, travel to Australia for migration has been funded by the immigrants themselves. In the earlier period, it was necessary to provide incentives for people to move to Australia from other countries. However, from 1982 onwards, reflecting Australia’s continually increasing attractiveness as a
destination country for migrants, it has not been necessary to provide subsidies. Also, in 1982, the Trans-Tasman Travel Agreement was signed with New Zealand, an agreement that enables free and open movement between the two countries. Today, some 20 percent of all New Zealand citizens live in Australia.

The attractiveness of Australia as a migrant destination enabled Australia from the mid-1990s to select its new settlers on the basis of their ages and their skills. Family migration has been restricted so that its ratio to skilled migration is one to two. Today, most new settlers are skilled persons under the age of 40. Furthermore, most family migrants are the spouses/partners of Australian citizens and permanent residents, and they themselves tend to be relatively highly skilled on average (McDonald et al. 2013). The mid-1990s also ushered in a new approach to migration that transformed the nature of settler migration to Australia in the 2000s. Migrants were permitted to enter Australia on a temporary basis and later to convert to permanent residence on-shore. Today, almost two thirds of all new skilled permanent residents are already working in Australia when their permanent residence is granted. They are recruited from among temporary residents who entered Australia on long-stay business visas, international student visas, or working holiday-maker visas. The system is designed to be responsive to labor demand in Australia. From 2006 on-
wards, net migration to Australia has been running at an average of 230,000 persons per annum, a numerical level that far exceeds any other period in Australian history.


1) Child endowment, tax deductions, and family allowance

Robert Menzies, Prime Minister of Australia from 1949 to 1963, saw himself as a champion of government support for families with children. In the early 1950s, the Menzies Government extended the child-endowment payment to the first child, meaning that it covered all children. Later in the 1950s, motivated by a strong belief in tax equity for families with children, Menzies introduced generous tax deductions for children and for certain child-related expenses such as education and health. As tax deductions, the benefits were largely in the hands of fathers. This was in harmony with the reassertion of the male breadwinner ideology of the family in the 1950s, and Menzies was a great believer in this ideology. The Menzies tax deductions also included a deduction for a dependent spouse, again in accord with the male breadwinner ideology. Because the benefits took the form of tax deductions in a progressive income-tax system, these measures valued children and wives in wealthier families at a higher absolute level than
children and wives in poorer families. As such, they violated
the principle of vertical equity, which specifies that the
tax-transfer system should be used as an instrument to narrow
differences in disposable incomes across the community. Indeed,
it was quite inconsistent to combine tax schedules that sup-
ported the principle of vertical equity with child- and
spouse-related deductions that violated this principle. This
anomalous situation continued until 1975 when, for one year,
the tax deductions were converted to tax rebates.

Throughout this era, child endowment continued to be paid,
but its value was allowed to languish. It had been “grandfathered”
rather than abolished and was popularly regarded as “pin mon-
ey” for mothers. In 1975, the year before they were abolished,
child endowment payments had fallen to the grand amounts of
50 cents per week for the first child, $1 for the second, and $2
for the third and subsequent children. The $3.50 per week for a
three-child family contrasted poorly with the tax deductions
provided for a dependent spouse and three children of $20 per
week, leaving aside the deductions that were available for the
education and health costs of children (McDonald et al. 1989).

By the end of the 1960s, Australian family policy consisted of
the basic wage, child endowment, and the Menzies tax deductions.
They had been introduced on top of each other with little con-
sideration for their consistency, a “bolt-on” approach that has
characterized Australian family policy ever since. From the
1980s onwards, the bolt-ons continued, becoming progressively smaller and more complex in their design, but this was after major reforms in the 1970s. By the end of the 1960s, it was evident that the basic wage had lost its family-support origins and had become simply a wages policy for men. This made the injustice of the unequal wages of women for equal work with men very evident. In a case beginning in 1969 and ending in 1972, the industrial court declared the basic wage to be anachronistic and introduced equal pay for equal work. The industrial court was thus finally freed from its responsibility to consider the adequacy of family income, leaving it more open to shift its attention in subsequent years to the working conditions of workers with family responsibilities. Around the same time, all restrictions upon the employment of married women (the hallmark of male-breadwinner policy) were removed.

A radical change to the family-support system was made by the conservative Coalition parties in 1976, when the tax deductions for children and child-endowment payments were abolished simultaneously and replaced with a universal per-child cash payment to the mother (or principal carer) of the child called family allowance. The introduction of the family allowance was a strong endorsement of the principal of horizontal equity. The payment was made in equal measure to families irrespective of the level of family income. This meant also that the family allowance was worth more to lower-income families
than to higher-income families, and so it had a moderately positive effect upon vertical equity, unlike the tax deductions that it replaced. This was one of the few moments of clear-headed rationalization of family policy in Australian history. The inconsistencies and inefficiencies of the basic wage, child endowment, and tax deductions for children were swept away in one bold move.

To this point, the central theme of the formulation of family-support policy had been equity, both horizontal and vertical. The ending of bans on the employment of women, the introduction of equal pay, the demands of the feminist movement, the control over fertility provided by modern contraception, the increased emphasis on the education of women, and labor shortages all contributed to the emergence of a new policy direction, the balancing of work and family responsibilities. There were small but promising beginnings in the 1970s with the introduction of operating subsidies for community-based childcare centers (1975), paid maternity leave in the public sector (1973), and one year of unpaid maternity leave for permanent workers who had worked for an enterprise for at least 12 months (1979). The dependent-spouse rebate continued throughout this period of change in the 1970s, but, in the 1980s, its role as a work disincentive for women in couple families began to be considered. This gave rise to a new political battleground that has continued through the 1980s to the early 2000s, the
battle between those who argued for family policies that enabled mothers to stay at home and those who argued for policies that supported the combination of paid work with family responsibilities. Before detailing the elements of this battle, another debate that has continued from the 1980s onwards, that between vertical and horizontal equity, is discussed.

2) Vertical and horizontal equity in family payments

After the introduction of the family allowance in 1976, there was a two-tiered child payments system in Australia: the high child-related payments made to government income-support recipients and the lower family-allowance payments made to all other parents. The payments made to government income-support recipients were income tested when a person moved off income support. It was argued that the loss of this child supplement operated as a work disincentive for government income recipients, and, in 1982, a new, income-tested supplement for low-income working families with children was introduced, the Family Income Supplement (FIS). In 1987, FIS was replaced by a more generous payment, Family Allowance Supplement (FAS), which was also income tested but had the same rationale as FIS, a work incentive for low-income people.

At the same time, the payment of the original (base-rate) family allowance to high-income parents was questioned by
the then Labor Government, and the policy decision was taken that the base-level family allowance should be removed from families above a specified income level. At the time, this led to around 10 percent of high-income families losing the base-rate family allowance. These changes transformed the family allowance from a payment that was largely invariable as parental income changed to one that varied over a considerable range of incomes. In other words, what had been consolidated as a horizontal equity program in 1976 had become largely a vertical equity program by 1990. This trend was reinforced by the failure over most of the 1980s to index family-allowance payments to changes in prices or incomes. By 1989, family allowances had lost 43 percent of their 1976 value in real terms. In contrast, between 1983 and 1989, the payments to low-income families increased in real terms by 45 percent for children less than 13 years of age and by 86 percent for children aged 13–15 years (McDonald et al. 1989). The large relative shifts in the value of the payments to low-income families and the payments to middle-income families meant that the FAS payment, originally introduced as a work-incentive payment for low-income families, was converted into a large work disincentive. Subsequently, FAS and family allowance (and their successor, Family Tax Benefit Part A) and their thresholds have been indexed to changes in the Consumer Price Index, but, because family incomes have risen faster than prices, the percentage of
families who receive no child payments has increased from 10 percent in 1989 to 25 percent today, and this percentage continues to increase. Almost as a formalization of the demise of horizontal equity, FAS and family allowance are now combined into a single payment called Family Tax Benefit Part A (FTBA) that is income tested over most of the range of family incomes.

A small but meaningful shift in the opposite direction occurred in 1995, when a flat, lump-sum Maternity Allowance was introduced to cover the costs of having a baby. Initially, this payment was not income tested, but a few years later, with a change of government, it was tested at the same point at which people lose FTBA.

The introduction of a 10 percent goods and services tax (GST) in 2000 provided a further blow to the horizontal equity of child payments. Families with children were compensated for the additional costs of children through a ten percent increase in FTBA. For low-income families, this meant a 10 percent increase in the maximum rate of FTBA (formerly FAS) and was a relatively sizeable amount of money compared to the additional expenditure that parents incurred as a result of the GST. However, for families receiving the base rate of FTBA, it meant an increase of just 90 cents per child per week.

Effectively, the policy makers had assumed that the base rate of FTBA was the total money that parents spent on their children. Of course, the 25 percent of families who received no
FTBA received no compensation at all for the increased costs of their children due to the introduction of the GST. As all other sections of the community received much larger compensation through the reduction of the taxes they paid or increases in the levels of the government pensions or benefits that they received, the totally inadequate compensation for middle- and high-income families for the increased costs of their children with the imposition of the GST was yet another blow to the principle of horizontal equity. In effect, the GST returned most of the child payments made to middle-income families to the government in the form of increased consumption tax.

3) Family support policy and women’s roles

The Labor Government in the 1980s made several reforms to support the laborforce participation of women with children. The central policy area for this support was childcare. In 1983, an income-tested Child Care Allowance was introduced to help working families pay for the costs of childcare in recognized community-based centers (essentially those that had been in receipt of federal-government operational subsidies) or by registered family daycare workers. The industrial court made a return to family policy when the government included the addition of newly approved childcare places as part of the wage–tax trade-off agreements that were made through the centralized
wage fixing process. Later, the income thresholds for the withdrawal of Child Care Assistance were extended such that this form of support was available to more middle-income families. Because community-based childcare centers were few and far between, many parents used private-for-profit childcare centers and consequently were ineligible for Child Care Assistance. This anomalous situation was ended in 1990 when eligibility for receipt of Child Care Assistance was extended to parents using private centers. This was accompanied by a new system of quality accreditation for centers. However, community-based centers continued to receive the operational subsidies that had been introduced in the 1970s. These subsidies were not extended to private centers.

There were also some notable changes in industrial conditions for families with children. The year of unpaid leave for mothers following the birth of a child was extended to fathers, and parents became eligible for up to five days’ family-carers leave each year. Firms were also encouraged to implement their own “family-friendly” policies, and a system of national awards was introduced for the family-friendliest firms.

These changes were accompanied by considerable increases in the laborforce participation rates of mothers during the 1980s. The participation rate for mothers with a child aged less than five rose from around 30 percent in 1981 to around 50 percent in 1991, but the increased participation was almost ex-
clusively in part-time work.

The centralized wage-fixing system was brought to an end in 1993, effectively introducing labor-market deregulation. This meant that it was no longer possible to tie advances in family-support arrangements for workers to changes in wages as had been the case in the 1980s. As a consequence, most work-family arrangements became negotiable only at the enterprise or individual levels rather than at the national level. Nevertheless, the industrial court still retained powers to implement broad-based work-family benefits through test cases. For example, the right to 12 months’ unpaid parental leave was extended by the court to casual workers, with the support of the employer organizations.

In 1995, the then Labor Government introduced a new payment for low-income, single-income families with children called Parenting Allowance. This payment was introduced as part of a package to help get unemployed families back into work, but it had the effect of providing an incentive for women with low-income husbands to reduce their laborforce participation, and they did.

With the election of the Howard coalition government in 1996, conservative forces had a ready ear for the view that the changes during the previous 13 years of government by Labor had favoured work-oriented mothers at the expense of home-oriented mothers. In opposition, Howard had espoused
the virtues of a family taxation system that involved the splitting of income for tax purposes between husbands and wives. The central argument used by the reformers was that two-income couples received two tax-free thresholds, while single-income couples received only one such threshold. In fact, the tax threshold had been introduced in recognition of the standard minimum costs of working and because it made the administration of the tax system considerably simpler since most workers would not have to claim the costs of working as tax deductions. In any case, the Dependent Spouse Rebate, the last remnant of the Menzies family tax deductions, remained in place, effectively providing a second tax-free threshold for single-income families.

Nevertheless, the argument that “stay-at-home” mothers had been disadvantaged carried the day, and in 1999, all previous single-income family payments were rationalized into a single, larger payment that was not contingent upon the income of the primary earner but heavily contingent upon the income of the secondary earner. This payment is known as Family Tax Benefit Part B (FTBB).

Tipping the balance even further away from mothers who worked, the Howard government abolished the operating grants made to community-based childcare centers on the grounds that these grants were not made to private centers and there should be a competitive, level playing field in the
industry. Child Care Assistance also became more difficult to obtain, through the introduction of a more stringent income test and a freezing of the values of the assistance. It was not recognized that childcare demand was very price sensitive, and these changes had the effect of sending many centers into liquidation, creating a crisis in the availability of center-based childcare. Many workers left the industry. The government was eventually forced to act through the creation of a new and better Child Care Benefit (CCB) that remains in place today.

As another gesture to “stay-at-home” mothers, the Howard government introduced a new payment during the 2001 election campaign, known as the Baby Bonus, that is tested away as the mother increases her workforce participation. It is also notable in that it is not gender-neutral as is the case with FTBA and FTBB. The entitlement is determined by the amount of tax paid by the mother in the year prior to having the baby. The payment fell into disrepute because of its complexity and its high administrative costs. Information suggests that only about 60 percent of people who were eligible for this payment had actually taken it up. As part of the 2004 reforms (see below), the Baby Bonus was abolished. It is unheard of that a government introduces a policy that is so bad that it is abolished in the same term of parliament that it was introduced.
5. Family policy, 2004-2013

Late in 2002, the Australian conservative Prime Minister, John Howard, by then a convert to the work-family perspective, created an Inter-Departmental Task Force on Work and Family Policy to report on “all of the options that might better facilitate choice for parents in balancing their work and family lives” (Heard 2006).

At its May 2004 budget, the Howard government announced major changes to the family payments system. Most significant was the abolition of the means-tested Baby Bonus and its replacement with a large and universal payment at each birth, initially called the Maternity Payment but which in time also became known as the Baby Bonus. The Baby Bonus was introduced at a value of $3,000 per annum with a rise over a few years to $5,000. It was not taxable. Subsequently, it was to be indexed by the Consumer Price Index, as is the case with all family payments but later, indexation of the payment was ended and its value pegged at $5,000. In 2010, an income test was applied by the Labor Government to the Baby Bonus\(^{10}\) meaning that it was no longer a universal payment, and from July 2013, the Labor Government reduced its value from $5,000 to $3,000 for all but the first child. Initially, the Baby Bonus was

\(^{10}\) Those with a family taxable income of $75,000 or more in the six months following the birth of the child do not receive the payment.
paid as a lump-sum payment. This was later changed to 13 fortnightly instalments. Its receipt was also affected by the introduction of universal paid parental leave in 2012 (see below).

The Baby Bonus was introduced with overtones of pronatalism. The initiative for the payment came from the Prime Minister but was announced by the Treasurer who had opposed the payment. He did so jocularly saying that parents should have three children: one for the father, one for the mother, and one for the country. He was then famously photographed surrounded by babies. Later, when the birth rate rose, the Treasurer was inclined to take the credit. All of this made the payment an object of ridicule and, besides its cost, helped to explain its later trimming.

In addition, in the 2004 Howard government reforms, Family Tax Benefit Part A, the per-child payment, was increased by more than 50 percent. This increase essentially restored the value of this payment to what it had been when it was first introduced in 1976 as the Family Allowance and, belatedly, partly compensated middle-income families for the increased costs of children that they had incurred with the introduction of the Goods and Services Tax. By increasing the threshold at which the payment begins to be taken away, the single-income family

11) A few weeks previously, the payment had been announced as an opposition policy initiative.
payment, Family Tax Benefit Part B, was changed so that its maximum benefit was extended to an 80/20 split of income between partners in two-parent families with children rather than a 100/0 split. Also, the rates at which FTBA and FTBB were tested away were lowered so that the benefits extended over a wider range of middle incomes. Although reduced somewhat, the work disincentive effects of Family Tax Benefit Part B remained.

Until 2012, there had been no universal paid parental leave scheme in Australia. However, many employers provided paid parental leave for various periods of time as a benefit to their employees. Public employers and most large firms provided this benefit as it was seen as a means by which firms were able to attract and retain the best workers. However, in 2012, the then Labor Government introduced a new, universal, paid parental-leave scheme consisting of 18 weeks of leave paid at the rate of the minimum wage ($622.10 per week from 1 July 2013 or $11,197.80 for 18 weeks). Those already receiving paid parental leave from their employers were permitted to continue to receive the employer entitlement without penalty except for the fact that the benefit from the new scheme was taxable. Those giving birth were provided with the option of taking either the new paid parental leave or the pre-existing Baby Bonus. Obviously those not eligible for paid parental leave (because of their employment history) would opt to take the
Baby Bonus. The availability of government-funded paid parental leave has shifted the balance in family payments a long way in the direction of employed mothers compared with those who are not employed, especially for those receiving a parental-leave payment from their employers as well. From 1 January 2013, a new payment entitled Dad and Partner Pay has been introduced for fathers or for the partner in same-sex relationships. The payment is two weeks at the minimum wage, but is only paid to those who are on unpaid leave or not working when they take the payment.

The parental-leave story is not over yet as the recently elected Abbott conservative government has promised to abolish the former Labor Government’s paid parental leave scheme and replace it with a new scheme that provides six months’ leave on full pay. The details of this scheme are yet to be determined.

Returning to the 2004 Howard government reforms, a new Child Care Tax Rebate was introduced that operates in association with the pre-existing Child Care Benefit. The Child Care Benefit is a payment tested on family income that meets as much as 90 percent of the costs of childcare for those on a low income but only a small fraction of the costs of those on high incomes. The Child Care Tax Rebate then provided a tax rebate of 30 percent of the costs of childcare that have not been met already by the Child Care Benefit. The 30 percent rebate was later increased to 50 percent by the Rudd Labor Government. A
maximum value is attached to the rebate (presently $7,500 per child per annum). In combination, the two payments mean that all families using approved forms of childcare get a return from government of 55–90 percent of their childcare costs if the costs are at a standard level. Childcare provided by employers to their employees was deemed to be exempt from fringe-benefit tax. As childcare workers are poorly paid and there is a high staff turnover, there are problems in the viability of the childcare industry from the perspectives of both quality and cost. The largest private childcare provider in Australia has been forced to cease operations due to bankruptcy. Reportedly, there are supply problems in the industry. This is the area of Australian family-support policy that is most in need of repair.

The details of all Commonwealth Government family-support schemes can be found at www.familyassist.gov.au. This includes a calculator to enable families to estimate the benefits to which they are entitled.

At the 2007 election, the Rudd Labor Party that won government promised a program of free and universal early-childhood education for all four-year olds. Labor had taken a similar promise to the 2004 election, which it lost. As early childhood education involves negotiation between the Commonwealth and the State and Territory governments, its implementation has been problematic. At the 2013 election, the Abbott-led opposition that won the election made a commitment to provide
15 hours of preschool for all four-year-olds at no extra cost to parents, for a minimum of 40 weeks per year and delivered by four-year degree-qualified early-childhood teachers. Supported by both sides of the federal parliament, this is an extremely important area of reform, but it has been on the policy agenda for 10 years with little progress.

There are other policy approaches that are supportive of workers with family responsibilities. For example, all workers are eligible for 10 days of family carer’s leave per annum for use when children or other relatives are sick or to attend school functions. So-called “flexitime” is also widely available in Australia. By working longer hours (without pay), workers can build up future leave credits. Women often use flexitime credits to cover longer leave required during school holidays. More broadly again, it has been common in Australia for decades that workers, especially parents, have been able to negotiate with their employers about their specific work hours on an individual basis (Gray and McDonald 2002). Finally, like other English-speaking liberal democracies, Australia has relatively low income-tax rates that have the effect of placing money in the hands of parents to apply to the costs of their children (see McDonald and Moyle 2010).
6. Contemporary population debate and policy in Australia

The publication, in February 2010, by the Department of the Treasury of the periodic Intergenerational Report (Department of the Treasury 2010) gave rise to an intense debate about Australian population growth and the need for an Australian population policy. This was in large part generated by a statement by the then Prime Minister, Kevin Rudd, that he supported a “big Australia”. This was criticized by lobby groups in Australia who are opposed to further population growth for environmental reasons. The debate heated up during 2010 and was very hot by the time of the 2010 federal election. The new Prime Minister, Julia Gillard, having deposed Kevin Rudd prior to the 2010 election, argued that population growth needed to be slowed down and that she did not agree with Rudd’s “big Australia”. The then Opposition, wishing to avoid making population an issue that differentiated the two sides of politics, also made statements that were in opposition to population growth. Nevertheless, in the details of their immigration policy, both the government and the opposition proposed levels of migration that were consistent with the status quo of relatively high levels of migration.

Wishing to take the heat out of this debate, the Gillard government set up an enquiry into sustainable population growth in Australia. The report was published in the first part of 2012.
as: Sustainable Australia—Sustainable Communities: A Sustainable Population Strategy for Australia (Department of Sustainability, Environment, Water, Population, and Communities). Rejecting any notion of an “optimum” population level, the key conclusion of the report was the following:

It is more useful for governments, businesses and communities to focus on ways of improving our wellbeing, protecting our environment and making better use of the resources we have, rather than trying to determine an absolute limit to our population and focussing efforts on restricting growth in order to not exceed this ‘limit’ (Department of Sustainability, Environment, Water, Population and Communities 2011, p. 25).

With the prior stabilization of Australian fertility at a moderately high level (1.8-1.9 births per woman), the level of fertility was hardly mentioned in the enquiry report, and certainly there was no evidence of pronatalism. And the level of fertility largely has remained off the political agenda ever since. The one exception was the creation of the Stable Population Party that ran candidates at the 2013 federal election. Along with zero net migration, this party advocated the limitation of government birth payments to each woman’s first two children. The party was almost totally ignored by the electorate, achieving just 3,954 primary votes (0.0%) in the House of Representatives election, and 12,687 primary votes, with an average party ranking of 24 out of 28 parties, in the Senate where it fielded a candidate in ev-
ery state and territory. Compared to the 2010 election, there was little public interest in population policy during the 2013 election.

Today, as in most past years in Australia’s history, population policy effectively is policy about the size and nature of the migration program.
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Chapter 4

Policy Response to Rapidly Aging Populations: Hong Kong SAR
1. Introduction

By traditional definitions, Hong Kong has all the characteristics of an extremely rapidly aging population. The territory has one of the best mortality rates in the world, with extremely high (relative) rates of life expectancy. Furthermore, Hong Kong has to regularly compete with Taiwan, Macau and Singapore for the ignominious honour of having the lowest fertility rate of a global territory recognised (and projected) by the United Nations. But this clumsy phrase as used in the previous sentence to try to describe Hong Kong as a territorial unit goes to the heart of the difficulties in understanding and planning for population policy issues there. Since 1997, Hong Kong has been a Special Administrative Region [SAR] of the People’s Republic of China [PRC]. Under the “one country, two systems” rule, Hong Kong has had – and continues to have – a high degree of autonomy from the Beijing Government as enshrined in the so-called ‘Basic Law’. However, to examine Hong Kong as an independent unit apart from China would be a fundamental error. Demographically, the border with Guangdong Province has – as we shall see – shaped marriage patterns, the number of
births in recent years and is, of course, hugely important for both long-term migration and commuting. Furthermore in terms of ageing, large number of elderly Hong Kong residents are choosing to retire in the cheaper mainland, thus potentially ‘outsourcing’ an element of elder care. Economically, the territory is becoming ever more closely linked to the Mainland both institutionally and physically. Finally, while the Hong Kong Government does have a high degree of autonomy, it would be a mistake to ignore the influence of broader Mainland political and economic influence in policy formation.

Despite this caveat, Hong Kong SAR (hereafter Hong Kong) is clearly an important unit to consider in the understanding of policy responses to rapidly aging populations in East and South-east Asia. With a population of 7.15 million, Hong Kong has a larger population than other Sovereign states in the region such as Singapore, Mongolia, Laos, Brunei and Timor Leste (UNPD, 2013). Furthermore, Hong Kong holds a particular interest for being at the forefront of many of the economic, social, and demographic changes seen in East Asia. As such, understanding dynamics in Hong Kong could show some indications of the future in other settings. However, this point should certainly not be overstated. As well as the relationship with the Chinese Mainland mentioned above, Hong Kong has a particular historical legacy which has placed an unusually strong emphasis on the Capitalist ethos and related to this, a
limited view towards social welfare and the role of social policy. While this is certainly not unique in East Asia, Hong Kong could be considered to be at the ‘far end’ of the so-called developmentalist systems of social welfare.

As already noted, Hong Kong has seen a precipitous fertility decline since the mid-twentieth century. In Section Two we explore this more deeply in terms of deconstructing the decline by tempo and cohort as well as suggesting some of the causal influences at work in driving Hong Kong’s fertility down to such ultra-low levels. Having identified such low fertility, in Section Three we move to a more holistic exploration of population ageing in Hong Kong both through traditional and alternative measurements and interpretations.

In Section Four we present what is necessarily a cursory account of the past and proposed policy interventions seen in Hong Kong concerning low fertility and ageing. The discussion of past and current interventions are brief simply because of the social policy context in Hong Kong which takes a decidedly non-interventionist, laissez faire approach to welfare and social support. Despite this, the Government is currently in the middle of a public consultation period which is eliciting views on the creation of a territory-wide comprehensive Population Policy. As such in Section Five we outline the rationale and parameters of the consultation. In a later version of this paper, produced at the end of this joint EWC-KIHASA project, it will
be possible to report back on the results of the consultation. Finally, we conclude with some remarks concerning the likely success of different elements of the proposed population policy areas which are under discussion.

2. Fertility decline in Hong Kong

1) Trends in period and quantum fertility

As with most settings in Asia, mid-twentieth century Hong Kong was characterised by high fertility rates, with TFRs of above 4.0 until the late-1950s, or crude birth rates of around 35 to 39 per thousand (Tu, Xin, & Xia, 2007). As Figure 4-1 below shows, since the 1960s Hong Kong has seen a dramatic decline in its’ period total fertility rate [pTFR], reaching a nadir of 0.901 in 2003.

[Figure 4-1] Trends in period Total Fertility Rate, Hong Kong SAR 1950-2012

Data: HKCSD, 2012a; UNPD, 2013
As one can see from the inset in Figure 4-1, there has been a notable increase in pTFR in the period since 2003. Like many settings both across East Asia and Europe, there has been a significant increase in the postponement of childbearing in Hong Kong. The mean age of childbearing for parity one has increased from 25.45 in 1976 to 28.68 in 2001, and for parity two from 27.79 to 31.39 over the same period (Tu et al., 2007). Crucially, the marital fertility rates for women aged 30-49 increased from 28.3 per 1000 in 2001 to 43.8 in 2011 (HKCSD, 2012a). This has clearly played an important role in shaping the recent upturn in period total fertility rates.

There has been a clear shift away from the absolute primacy of the two-child family in Hong Kong. From the cohorts born in the mid-1950s through to those born in the mid- to late-1960s, the share of two-child families has declined from 45% to 35% (Frejka, Jones, & Sardon, 2010). As Figure 4-2 below demonstrates, concomitant of this has been the inexorable rise of the childlessness (see below) and of the one-child family. The number of high parity births has all but disappeared. Of the 865,224 births registered in Hong Kong between 1995 and 2009 66,924 (7.7%) were parity three; 12,464 (1.4%) parity four and 3,898 (0.4%) parity 5 and above.

A further consequence of these declines in first-parity fertility rates is a significant concomitant increase in the number of people aged 50 or above without any children at all. For the
cohort born in 1946, the childless rate was just 2.6% of females. This had risen to 9.3% and 16.6% for the 1951 and 1956 cohort respectively. Tu et al. (2007) estimate that the childless rate for the 1961 birth cohort may reach 20%, while Frejka et al. (2010) estimate childlessness among the cohorts born in the mid- to late-1960s to be as high as 35%. These figures are substantially higher than elsewhere in East Asia (Frejka et al., 2010).

[Figure 4–2] Proportion of women with x children by birth cohort, Hong Kong SAR

Within a familial reductionist social policy context where filial obligation still underpins notions of care for the elderly, this
childless cohort presents a serious challenge for the future ahead. Furthermore, a number of recent studies have identified a series of negative outcomes for childless Hong Kong populations, such as increased tendency to depression and loneliness (Cheng, Chan, Li, & Leung, 2013; Chou & Chi, 2004). We will return to this later on.

However, we should also pause to consider the implications of a qualitative shift towards a growing number of (voluntarily chosen) one-child families. Firstly, it is possible to learn from the Chinese so-called ‘4-2-1 issue’, where a couple made up of only children have to bear the responsibility for both of their sets of parents (in the absence of any kin support) as well as their children. Of course, the burden of care would be likely to disproportionately fall on the female. This has been cited as a reason for possible long-term malaise in fertility in Mainland China (Basten & Gu, 2013). Given the rise in the number of singletons present in the current marriage market, as well as an increased preference for only having one child as reported by current younger people in Hong Kong (Basten 2013a), this has the potential to be a significant drag on future trends of fertility – especially in the absence of significant future improvements in the availability of adequate public and (affordable) private assistance for the elderly.
2) Recent rises in number of live births

Of course, the relationship between Hong Kong and Mainland China is absolutely instrumental in shaping the population dynamics of the territory. Indeed, during the period 1981-2001 – an era of very low fertility rates in Hong Kong – the increase in population seen in the territory from 5.18 million to 6.27 million was primarily driven by the high number of entrants from mainland China, rather than by natural growth (HKCSD, 2001). Indeed, it is this dynamic which has largely shaped the recent trend in live births in the territory (see Figures 4-3 and 4-4 below). As Basten & Verropoulou (2012, 2013) have observed, this increase in live births has been largely driven by an increase in what they term ‘maternity migration’. In July 2001, the Court of Final Appeal ruled that babies born in Hong Kong to Chinese nationals had the right of abode in Hong Kong. In 2001, just 620 babies were born to Mainland women whose spouses were not Hong Kong Permanent Residents. By 2011, this figure had risen to 35,736 and had, as such, become a policy priority for the Hong Kong Government (HKCSD, 2012a).
Figure 4-4 serves as a decomposition of the recent trend shown in Figure 4-3, and shows the increasing proportion of births ascribed to what the registers term ‘Transient’ mothers from the Mainland. Basten & Verropoulou (2012, 2013) observe that there are a number of ‘push and pull’ factors in defining this increase. As well as the right of abode bringing certain key privileges such as enhanced access to the territory’s educational system and visa-free travel to many more countries than granted for Mainland PRC citizens, Basten & Verropoulou (2013) were able to demonstrate that Hong Kong was serving as an outlet allowing Mainland couples to evade the PRC’s family planning restrictions – erroneously known as the ‘One Child Policy’. Upon closer inspection of the Hong Kong microdata,
the vast majority of such mothers, it transpires, were giving birth to their second child in the territory. Furthermore, these second (and third) children were strongly disproportionately male. This had the effect of creating a highly skewed sex ratio at birth – something which, historically, was generally absent in Hong Kong. Finally, the average educational attainment level of such ‘transient’ mothers was generally high, indicating a higher level of income.

[Figure 4–4] Percentage distribution of births by immigrant status of mother in Hong Kong SAR, 1995–2009

Data: reproduced from (Basten & Verropoulou, 2013)
It should be noted, however, that only births to Mainland women whose partners are Hong Kong Permanent Residents (so-called ‘Type I’ babies) are counted included in the calculation of the pTFR by the Hong Kong Census and Statistics Department. Compared to ‘Type II’ children (born to Mainland women whose partners are not Hong Kong Permanent Residents), such births increased only from 7,190 to 9,879 in 2005 before falling back to 6,110 in 2011 (HKCSD, 2012a). As such, while the growth of maternity migration has been critical in shaping the number of births in Hong Kong, it has had relatively little effect on the fertility rate. However, that is not to say that it is irrelevant to a policy discussion of population in Hong Kong. As Basten & Verropoulou (2013) observe, while almost all ‘Type II’ babies return to the Mainland with their mother immediately after birth, it is almost impossible to identify the point at which they may return - if at all. This means that planning for future provision of public services, housing and, indeed, forecasts of labour force both in its own right and in relation to support for an increasing aged population, must take into account the temporal uncertainty of ‘return’ migration. As we will mention later, this situation forms part of the broader difficulty in forecasting population dynamics for Hong Kong because of the policy uncertainty surrounding its border with the Mainland.
3) Causes for fertility decline

In order to understand the reasons for the precipitous fertility decline in Hong Kong, it is perhaps useful to differentiate between what might be termed the proximate, or demographic reasons, and the cultural-social reasons.

3.1) Later and less marriage

Much of what might be termed as the ‘retreat from motherhood’ might be better linked to a notion of a ‘retreat from marriage’. Firstly, age at first marriage has been postponed. The median age of marriage for women rose from 23.9 in 1981 to 28.9 in 2011. Meanwhile, while 69% of women aged 25-29 in 1981 were married, this figure had declined to just 27% by 2011. A corollary of this is a significant increase in the crude divorce rate, which has risen from 0.40 per 1000 population in 1981 to 2.77 in 2011 (HKCSD, 2012a). Although Basten (2012) has identified a growing trend towards pre-nuptial pregnancy in Hong Kong as well as relative increases in births outside of marriage, the absolute numbers of extra-marital births are still low – as in other settings across East Asia. As such, the transition to marriage is extremely important. In this context, later marriages combined with higher divorce rates generally serve to shorten the childbearing exposure period for women.
Finally, a growing number of women have eschewed marriage altogether. The percentage of never married women in the age group 40-44 increased from 3% in 1981 to 17% in 2011. Clearly, in the context of low rates of births outside of marriage and co-habitation, there is a strong link between the increased prevalence of spinsterhood and childlessness.

A final feature of the Hong Kong marriage market, again, relates to the proximity of the territory to the Mainland and the economically dynamic province of Guangzhou. While much attention has been focussed on alleged polygynous behaviour of Hong Kong men (Lang & Smart, 2006), it is important to consider the role of cross-border marriages. According to a recent study, more than 388,000 cross-border couples have married in either Hong Kong or on the mainland, accounting for around 16% of the total number of households in Hong Kong (reported in Chen, 2013).

The underlying reasons for this ‘retreat from marriage and motherhood’ have been elucidated at length elsewhere (see, among many examples, Basten, 2013a; Chang, 2003; Frejka et al., 2010; Song, Chang, & Sylvian, 2013; Straughan, Chan, & Jones, 2008; Sun, 2012). Briefly, these could be considered as follows:

The public roles of women have been revolutionised in advanced Asian economies to the extent that in many areas
younger women are, indeed, better educated than men, thus increasing – and enhancing the quality of – female labour force participation (Esping-Andersen, 2009; MacDonald, 2000). However, developments in the private sphere have been much slower and resistant to change. In a society where births outside of marriage are still relatively rare, entry into a married relationship where the onus is still frequently firmly placed upon the woman for caring for children, parents/parents-in-law as well as looking after the household is often unappetising given the extraordinarily high opportunity costs. This so-called ‘Incomplete Gender Revolution’ is held to be a key element if the avoidance of this ‘marriage package’ of home and children.

Related to this – and intimated earlier – is a squeeze in the marriage market. Again, as female public sphere roles have changed dramatically, the extent to which systems of marital hypergamy have broken down could be argued as less so (Jones & Gubhaju, 2009). As such, increasingly educated women find themselves squeezed out of a marriage market which privileges males ‘marrying downwards. The corollary of this, of course, is that many lower-educated males also struggle to find partners. This has been cited as a major cause of the increase of cross-border marriages elsewhere in East Asia (Jones & Shen, 2008; So, 2003).
3.2) Relatively weak policy provision

While many Asian countries have developed wide ranging policy responses to ultra-low fertility, these need to be placed into the context of the developmental welfare state which, in these cases, are characterised by low rates of tax and, hence, relatively little absolute expenditure – compared, for example, to spending on family policy in some European settings. This characteristic of such developmental welfare states in East Asia does little to offset the high direct costs associated with childbearing. We will return to this point later in our discussion of the potential role of social policy in shaping future trends in population in Hong Kong.

The system of social security in Hong Kong has been covered in depth by Chan (2011) and will only be very briefly outlined here. As in other East Asian settings, the social welfare system in Hong Kong is characterised by a ‘developmentalist’ approach to the relationship between social support and economic growth; and a reliance upon the family as the core element of support (Hong, 2008; Shik & Wong, 2012; Song et al., 2013). Both in colonial times and after reunification with the PRC, the Hong Kong Government has sought to minimise taxation and, as such, can be described as having a minimal state-driven social security system. This means that current family policy provision is negligible and filial obligation regarding care for the
elderly has become, de facto, institutionalised. In other words, the space for policies which may have a direct or indirect impact upon fertility is relatively slight. A further element which provides something of a potential limiter on this policy space is the overwhelming dominance of Small and Medium Enterprises [SMEs] in the economy of the territory. This has the double effect of generally increasing resistance to business taxes (which often double in many SMEs as personal taxes) and preventing wide-scale private sector driven social policy initiatives such as have been seen, for example, regarding childcare in Europe and Japan. We shall, however, return to these issues in greater depth in Section 4.

3.3) Direct costs of raising a child

Raising a child is ‘expensive’ anywhere in almost all societies. However, in East Asia the high cost of childcare relative to incomes, combined with the high costs of housing means the costs are often deemed prohibited – especially if offset a growing world of other consumption opportunities and where the burden of care for aged relatives is most often placed on the shoulders of an increasingly small set of children. For example, the expectations regarding children in advanced Asian economies is exceptionally high and could be a key force in pushing down the number of children which people realistically assume
they can raise (Chang, 2011; Choe & Retherford, 2009; Lee, 2005; Ogawa, Mason, Chawla, Matsukura, & Tung, 2009). Private tutoring and ‘cram schools’ are a very familiar scene in Hong Kong. These appear to operate primarily as a result of a mismatch between the extremely high expectations placed upon children to achieve educationally and get the best college places and the prevailing view of an unreformed public education sector. In Hong Kong in 2004, 47% of children of school-age receive private tuition at home or at educational institutions outside school hours, each for an average time of around 4.8 hours per week. In 2007, it was estimated that households with students taking private tuition spend on average HK$1,150\(^{12}\) per month (Chan, 2010). Indeed, it is common for Hong Kong parents preparing to send their children to kindergarten to prepare a ‘portfolio’ of their toddler’s ‘skills’.

In this context, it should of course be noted that housing in Hong Kong is exceptionally expensive. A recent commercial survey of 30- to 40- year old middle-class families found that the high cost of property had an effect on personal decisions, with 53 per cent of the single respondents saying they would delay their marriage plans to buy time to save more. Nearly half of those who were married also chose to delay having children, or to have no children, so they could boost their savings.

\(^{12}\) Note that throughout this paper we employ the Hong Kong dollar (HK$) as the unit of currency. For the reader’s reference, as of November 2013, US$1 = HK$7.75; €1 = HK$10.54; and GB£1 = HK$12.65
Tellingly, the survey found that ‘property purchase remained the top reason for savings, followed by travel, having children and further education’ (reported in Chen, 2013a).

4) Anticipating the future of fertility in Hong Kong

Yip, Li, Xie, & Lam (2006) concluded their 2006 discussion of the impact of fertility decline in Hong Kong by declaring that ‘the fertility rate will neither go back to 1.0 in the short or medium term nor rise considerably above 1.0 in the long term unless there is a significant fertility rebound, or a substantial increase in the number of births out of wedlock, or a consistent rise in the married proportion of females…Judging by the past reproductive behaviours and marriage habits, these pre-requisite conditions will be most unlikely to occur’ (emphasis added).

Furthermore, the Hong Kong Census and Statistics Department are pessimistic about a medium-term increase in period Total Fertility Rates in the territory. Critically, this is in stark contrast to the medium fertility assumptions generated by the model employed in the UN’s 2010 and 2012 World Population Prospects (Basten, 2013a; UNPD, 2011, 2013). In their latest round of population projections, the HKCSD assume that fertility will decrease from the 2011 figure of 1.204 to 1.177 by 2016, then fluctuate around 1.190 until 2031 before falling to 1.164 by 2036 and 1.151 in 2041 (HKCSD, 2012b). Of course such tiny
changes in fertility are, fundamentally, irrelevant – but the key message is one of assumed stagnation (see Basten (2013b) for a further discussion of locally defined future fertility assumptions). Unlike many other local statistical offices, the process of formulating the Hong Kong Census and Statistics Department’s fertility assumptions ‘is not strictly a mechanical one that follows the extrapolated trends’ (HKCSD, 2012b). The overall pattern of marital fertility is projected to stay relatively constant to the end of the projection period (2041). (An exception to this is a short-term rise in the marital fertility of women in their late twenties as a consequence of postponement). Most significantly, however, they assume a continuing pattern of later and fewer marriages. The HKCSD project that around one-third of all women will remain never married at the end of their childbearing period, compared to around one-eighth in 2012. If the link between marriage and childbearing stays strong this would, be necessity, have a negative impact upon both the tempo and quantum of childbearing.

Finally, it is important to return to the number of births in Hong Kong, which have been significantly affected in recent years by ‘maternity migration’ from Mainland China and the prevalence of so-called ‘Type II’ babies (Basten & Verropoulou, 2013). However, a series of ‘administrative and operational measures’ have been implemented in order to enforce the new ‘zero quota’ for such babies born to Mainland mothers whose
partners are not Hong Kong Permanent Residents. Briefly, these include the banning of public hospitals from accepting booking for delivery among non-local pregnant women and preventing the issuance of “Confirmation of Delivery Booking” to non-local Mainland women by the Department of Health. In addition to this, the Hospital Authority has raised the fees of emergency delivery to HK$90,000 in order to deter ‘Type II’ mothers circumventing the booking system and arriving to deliver at Accident and Emergency Departments. The Hong Kong Private Hospital Association has indicated that a consensus has been reached not to accept any further deliveries to ‘Type II’ babies. Furthermore, specific immigration measures have been introduced to prevent such pregnant women arriving into Hong Kong. These include increased surveillance and removal actions and steeping up prosecution against individuals and ‘corporate intermediaries’ who are found guilty of infringing the regulations. Finally, ‘the Home Affairs Department has stepped up inspection and enforcement efforts against unlicensed guesthouses’ in order to catch women who arrive early to avoid the surveillance at the border will be tracked (HKCSD, 2012b, pp. 27–28).

All of this implies that the number of births in Hong Kong could decline dramatically as a consequence of the government’s stated desire to see the number of ‘Type II’ babies decline to zero. The extent to which these measures will be suc-
cessful, however, will be shaped by a consensus between the private and public sector, as well as implicit support from Mainland authorities.

5) Patterns of fertility decline in Hong Kong SAR – some conclusions

In this section we have demonstrated the significant fall in fertility in Hong Kong since the middle of the twentieth-century to one of the lowest currently reported anywhere in the world. The recent minor increases in pTFR, which have been primarily driven by postponement, should not detract from the fact the fertility rates in Hong Kong are still exceptionally low – even by East Asian standards. This decline appears to be strongly linked to a ‘less and later’ marriage, which in turn can be linked to the ‘incomplete gender revolution’ of differing female domestic expectations and public sphere roles and a marriage market squeeze. Furthermore, such drivers of low fertility which can be seen elsewhere in East Asia – such as housing costs; expectations of investment in education; female caregiver roles – can also be seen for Hong Kong too.

The ‘Type II’ babies issue is a pertinent reminder of the centrality of the Mainland ‘border’ to understanding the population dynamics of Hong Kong and, indeed, of the difficulty in defining the territory as a unified political, demographic unit.
Indeed, the border plays a key role in shaping the marriage market as well as labour flows.

In the previous section we presented some of the ‘expectations’ of the HKCSD with regard to future assumptions of fertility. These seem to square with the general view of scholars that an immediate, significant and sustained upturn in fertility is unlikely because of such structural factors listed above (Basten, 2013a). However, to what extent can these drivers towards low fertility become self-reinforcing?

The ‘Low Fertility Trap’ hypothesis is a formulation of such potential negative feedback effects (Lutz, Skirbekk, & Testa, 2006). The theory suggests that such negative growth could operate through three mechanisms. The first, a demographic one, is related to negative population growth leading to fewer women of reproductive age and, hence, fewer births. The second concerns economic reasoning and, in particular, the impact of ageing societies on pessimism among the young regarding their own economic opportunities and chance for receipt of limited state funds. This, combined with overall improvements in standard of living and widening consumption opportunities can lead to an ever greater gap between aspirations and income – a gap which childbearing would only further exacerbate, net of emotional gains. In the context of extremely high inputs to the development of personal human capital, it is possible that such expectations in an increasingly crowded out, aging labour mar-
ket could be difficult to meet. Finally, the third mechanism concerns social norms relating to ideal family size and fertility intentions. This assumes that, through socialisation and social learning, family size ideals are influenced by the experiences of younger people. Hence in an environment with few children (e.g. siblings, larger families), children will figure less prominently in their own image of a desirable life. In this regard, we know that reported ideal family sizes among young people in Hong Kong are, indeed, well below replacement levels. Basten (2013a), for example, using the Hong Kong Youth Sexuality Survey, finds that ‘ideal parity for females aged 18-27 has declined from 1.8 in 1991 to just 1.5 in 2011.

It appears that the context for each of these elements is, therefore, indeed being played out in Hong Kong. Birth numbers are lower in real terms once ‘Type II babies are excluded’. Fertility intentions are, indeed, declining and show little sign of turning around. Finally, Hong Kong combines a very rapidly ageing populations with some of the highest consumption opportunities in the world coupled with extremely high expectations regarding education. Under these circumstances, we cannot ignore the idea that Hong Kong could, indeed, fall into the ‘Low Fertility Trap’ through the normalisation of small family sizes.

In the next section, however, we consider the extent to which Hong Kong is ageing in a more holistic sense – i.e. by
briefly examining recent patterns in mortality as well as traditional, and alternative, measurements of old age dependency.

3. Population aging in Hong Kong SAR

1) Improvements in mortality

In Section 2 we considered the process by which societies ‘age from below’ through fertility decline; while in this section we briefly examine patterns of ‘ageing from above’ through improvements in life expectancy and the increasing rectangularisation of the mortality curves. In the next section, we try to piece these two elements together in order to identify recent (and possible future) trends in how we might measure the extent to which Hong Kong has an ‘aged population.’

Life expectancy at birth increased by more than 10 years between 1971 and 2006, reaching 79.5 years for men and 85.6 for women—values that are among the highest in the world (HKCSD, 2013a). However, it is necessary to look beyond maximum life expectancy and see improvement in mortality at all ages. Figure 4-5 shows the number of (female) survivors at age $x$ [in demographic notation, $l_x$] from past, present and projected Hong Kong life tables (HKCSD, 2013a, 2013b) and demonstrates a clear trend towards the rectangularisation of the age structure. We see significant improvements in mortality at
Chapter 4 Policy Responses to Rapidly Aging Populations: Hong Kong SAR

‘young-old’ ages, i.e. in the 60s and early 70s. Indeed, it is only in the mid-70s that survivorship starts to tumble. Finally, the projected $l_x$ also demonstrates a strong trend toward an increasing number of ‘oldest-old’ in the population, replete with the high levels of investment in care that will necessarily be required.

2) Population ageing in Hong Kong

In terms of conventional boundaries of age distribution, Hong Kong certainly is ‘ageing rapidly.’ In 1980, just one in fifteen of the population was above age 65. In 2006, this ratio increased to one in eight. By 2040, over a quarter of the population – 26 per cent – will be age 65 and above; more than
double the current level of 12 per cent. Conventional thinking would therefore state that this means that the working population of the future will have a much larger number of retirees to support – as measured by the Old Age Dependency Ratio (see Figure 4-6). It is, perhaps, unsurprising that these dramatic increases in the Old Age Dependency Ratio cause great alarm among local policymakers – especially given the degree of prevailing pessimism regarding and imminent upturn in period TFR (see (Basten, 2013a).

[Figure 4-6] Old Age Dependency Ratio of Selected Advanced Asian Economies (Age 65+, Age 20-64, based upon UNPD 2012 data, medium estimate)

Data: (UNPD 2012). Note: *Taiwan denoted as ‘Other non-specified areas’ in (UNPD, 2013)
Numerous scholars, however, have emphasized the inadequacy of measuring population ageing through the use of the traditional old age dependency ratio (OADR) employed above. They state that the OADR, as measured as the relationship between the population with a lower bound of 15/18/20 and an upper bound of 65 and those aged above it is profoundly unhelpful for a number of reasons. Firstly, it assumes that all those of ‘working age’ actually do work; as well as that all those aged over 65 are ‘dependent’. As Bongaarts (2004) suggests, in this context it is more meaningful to measure the relationship between workers and pensioners.

As Basten (2013) observes, the social policy system prevalent in East Asia means that the ‘watershed age’ of 65 is of less primary importance in that region compared to, say, Europe where many state pension systems begin to pay out at 65. Basten (2013) draws heavily on the perspectives of Sanderson and Scherbov (e.g. 2007, 2010) who suggest in their pathbreaking work on remeasuring ageing, that these age-specific boundaries which were defined in the early twentieth-century do not take into account improvements in life expectancy and health in older age. As such, they propose an alternative set of measurements which take account of such changes and utilise projected further improvements in life expectancy and health.

13) Of course, there is significant controversy regarding the likely continuation of improvements in mortality and morbidity - but this is beyond the scope of this paper (see, for example, Carnes & Olshansky, 2007; Olshansky, Hayflick, & Carnes, 2002).
Rather than being based on the number of years which a 'dependent' person has lived for, these measurements are instead based upon the likely number of years that such a person will live for—a more dynamic measurement. As such, these are termed 'Prospective Old Age Dependency Ratios'. The first, POADR1, takes 65 as a 'base' age and simply inflates this year-by-year to take into account expected improvements in life expectancy. POADR2, meanwhile, applies an assumption that the majority of chronic ill-health—or when an individual is truly 'dependent' on others and unable to work at all—is concentrated in the last 15 years of life. This assumption has been expressed by Sanderson and Scherbov (2007, 2010) as well as other scholars (e.g. Fuchs, 1984).

In a recent paper, Basten, Yip, & Chui (2013) applied these alternative means of measuring ageing to Hong Kong, utilising projected 1x1 life tables for the territory. As Figure 4-7 demonstrates, by simply holding the 2011 remaining life expectancy at 65 constant and increasing the age of onset of 'old age' in line with expected increases in RLE, the dependency ratio changes markedly. By 2041, the POADR 1 is 42.6 (or 42.6 'dependents' per 100 aged between 20-64), compared to an OADR of 53.1. In other words, this simple readjustment of the OADR to include changes in RLE causes a 19.8% decrease in the size of the 'dependency ratio'. Again, however, the validity of using age 65 as a 'base measurement' is questionable (Basten, 2013c).
As noted above POADR2 reflects a scenario where the ‘dependent’ population is defined as one with a remaining life expectancy [RLE] of 15 years. Improvements in mortality in Hong Kong have been dramatic, such that the age at which the population has a remaining life expectancy of 15 years [RLE15] for men in 1971 was 60.59 compared to 70.36 in 2011 and is projected to be 73.19 by 2041. For women, the age at RLE15 has risen from 67.24 in 1971 to 75.63 by 2011, with a projection of 78.61 by 2041(HKCSD, 2012c). As Figure 4-7 demonstrates, under these conditions of ‘prospective measurement’, not only is the ‘dependent ratio’ barely half of the traditionally
measured OADR, the projected improvements in life expectancy are such that the increases to 2031 are only marginal, with a 2041 POADR 2 of just over 20.

Of course, as Basten et al. (2013) conclude, the most ‘optimistic’ measurement – the POADR 2 – should really only be interpreted as an ‘outside boundary’ of the ‘potential release of human capital by optimising the experiences of the population aged above 65 with a remaining life expectancy of greater than 15 years which is currently – and incorrectly – described as ‘old’ and ‘dependent.’ In other words, Hong Kong’s population will age rapidly in the sense that the age structure will become increasingly ‘top heavy’, but there is a degree of flexibility as to the extent to which this can be mitigated. Indeed, as we shall discuss below, it could be argued that some East Asian settings are perhaps better placed to tackle these issues related to what might be termed the ‘boundaries of dependency’ as their pensions/retirement systems are far less developed (and, therefore, entrenched) than their European counterparts (see, for example, Holzmann, MacArthur, & Sin, 2000).

Furthermore, the alternative OADRs calculated above do not take into account shifting patterns in the denominator, or the working age population. They do not, for example, factor in labour force participation ratios, and shifting mean age of entering the workforce as a consequence of ever expanding educational opportunities. Furthermore, another critical element of
the ‘border issue’ needs to be considered, namely the extent to which Hong Kong can regulate formal and informal / resident and non-resident migration flows into the labour force from Mainland China. A further corollary of this is the expanding market for the Hong Kong elderly to move to the Mainland to take advantage of significantly lower care and housing costs (Basten & Verropoulou, 2013). As we will see, these are key elements in the 2012-13 population policy consultation.

4. Towards a holistic population policy for Hong Kong?

1) Introduction

As indicated earlier, the social policy framework of Hong Kong is generally limited, and concentrated on social investment in health and education rather than large scale social protection in terms of generous elder care and welfare support. Despite this there have been some developments towards developing an integrated population policy which concerns trends in fertility and ageing.

There is much debate in low fertility settings about the efficacy of policy in increasing fertility – so much so that it is impossible to provide even a brief overview here (see Y.-H. Chen 2012; Song, Chang, and Sylvian 2013; Sun 2012; Thévenon 2011; Gauthier 2007). Part of this debate has often revolved
around a difficult distinction between explicitly pro-natalist policies which directly ‘reward’ childbearing and broader ‘family-friendly’ policies which seek to support parents to cope more easily with the number of children which they currently have and/or to allow them to actualise their stated intention/preference of the number of children they would like to have. In reality, these two suites of policies often form two sides of the same coin. In this section we examine the development of population policy in Hong Kong, with a special focus on those policies which can be defined as ‘family friendly/pro-natalist’ and/or those which focus on social investment and have an impact upon family expenditure.

2) A brief history of Hong Kong’s Population Policy

2.1) The Taskforce on Population Policy

In September 2002, a Taskforce on Population Policy was set up, which reported back in February 2003. This report set out some basic principles to develop Hong Kong as a ‘knowledge-based economy’ and, as such, was primarily based around ‘education, manpower development, training for new arrivals and attracting talents and quality immigrants to Hong Kong’ (HK Legislative Council, 2013).
2.2) Steering Committee on Population Policy and Policies Effective from 2008-08

In 2007, meanwhile, the Steering Committee on Population Policy was set up by the Chief Executive (Hong Kong’s de facto executive leader). This was comprised of officials from relevant Government departments such as the Financial Secretary, Secretary for Education, Secretary for Home Affairs and so on (HK Legislative Council, 2013). A number of policies were introduced or extended in 2007-2008 which could be described as family-friendly or impacting upon family expenditure.

In terms of an explicitly pro-natalist policy, the ‘child allowance under salaries tax’ was increased from HK$40,000 to HK$50,000 per child. However, this allowance was only applicable to the third to the ninth child and, as such, was primarily designed to increase higher order births. Furthermore, it reflects what has been termed as the ‘piecemeal’ approach to population policy in Hong Kong over the last decade, in that the number of such births in the territory are very few. Yet, this policy was used in the 2013 Population Policy Statement as evidence that the Government is supporting childbearing in the territory. However, as demonstrated in Section Two above, the number of women of reproductive age (with three or more children) is extremely limited.

In order to examine the extent to which this policy could be
effective, we turn to examine evidence from the 2007 Hong Kong (Family Planning) 'Knowledge and Practice Survey' [KAP] – a representative sample survey of women of reproductive age performed by the Hong Kong Family Planning Association. The 2007 round of the survey was taken after this enhanced policy of 'baby bonuses' for higher parities was announced. Part of the survey asked women whether or not they intended to have further children, and recorded their parity to date. In the survey, only 2.43% (N14) of women with two children stated an intention to have another child against 95.49% (N551) who said they did not. This indicates that the 'appetite' for having more than two children in Hong Kong is, as one would expect from the low fertility rates, very limited. Furthermore, only 2.08% (N12) stated that they were either 'undecided' or 'unsure'. Taken together, this strongly suggests that the enhanced baby bonus is unlikely to have any significant effect in increasing higher order births in the territory. This finding squares with evidence from both Europe and elsewhere in East Asia that such baby bonuses are not an especially effective means of increasing quantum fertility (though they have been shown to affect the timing of births in some settings) (Gauthier, 2007; Thévenon, 2011).

Indeed, in the 2007 KAP survey, only 11.84% (N56) were unsure about their intention of having a second child, which suggests policy space for extending this policy to women at Parity
One may be relatively limited. This suggests the relatively slight potential for success for the policy to be able to increase the number of higher order births anyway.

A second policy made effective concerns further investment in social investment which would impact upon familial expenditures. From 2007-08 the government provided direct fee subsidies towards school fees for pre-primary education in eligible kindergartens. Furthermore, from the 2008-09 school year senior secondary education was made free of charge for all students in public sector schools (Hong Kong Government, 2009).

In addition to these two policy shifts, a number of smaller, piecemeal initiatives were set in place in the late 2000s (Hong Kong Government, 2009):

- The Labour Department began to organise promotional activities (such as ‘roving exhibitions’ and through its network of Human Resources Managers Clubs) designed to ‘disseminate information on good family-friendly employment practices
- The Civil Service Training and Development Institute were to continue the promotion of better work-life balance among civil servants through seminars, workshops and online resources
- The Women’s Commission co-organised a seminar in 2007
on family-friendly employment practices and issued a promotional leaflet which was widely distributed to business

- The Social Welfare Department would ‘step up efforts’ to promote more responsive neighbourhood mutual help childcare services and, from October 2007, to subsidize foster homes to provide non-residential day care services

- Encouragement of neighbourhood support projects which have a child care element through the Community Investment and Inclusion Fund [CIIF]

- Setting up of a ‘Family Council’ to advise the Government on ‘the formulation of policies and strategies for supporting and strengthening the family and development of related programmes/activities.

- Finally, with regard to ageing a number of initiatives designed to enhance active ageing (for example through enhanced civic participation and the foundation of 32 ‘Elder Academies’), improve elder health education and home visits, and the commission of three studies on the adequacy of present arrangements for finances in retirement.

2.3) Reform of the Steering Committee on Population Policy[SCpp]

In November 2012, 11 non-official members from the academic, HR management, business, social service, healthcare
and education sectors were appointed to the SCpp for a two-year term (HK Legislative Council, 2013). This allowed for greater interaction with academic, civic and business stakeholders and allowed for a more critical approach to population policy formation. Indeed, as we shall see these external members have been vocal in their roles on the SCpp.

As well as examining perennial issues such as manpower, skills and training, and attract high talent migrants, in response to the 2010–11 Chief Executive’s Policy Address, the so-called ‘revamped’ SCpp concentrated upon two core issues: namely the ramifications of the large number of children born to Mainland women travelling to Hong Kong (see Basten and Verropoulou (2013)) and tackling the consequences of rapid ageing. The former issue has been discussed earlier, and further discussion is beyond the remit of this paper, as it deals primarily with future demand for public services from returning migration of such children – although this may, in the future, impact upon the distribution of resources to other policy initiatives. In the next section, however, we examine issues relating to the management of the elderly population before a discussion of the (relative absence) of family-friendly/pro-natalist policies.
2.4) Managing the elderly population

Hong Kong is currently characterised by a three-tier retirement protection system: non-contributory social security; Mandatory Provident Fund; and voluntary personal savings.

Under the ‘Comprehensive Social Security Assistance’ [CSSA] scheme, single persons aged 60 and over (from February 2013) are entitled to HK$2,935 per month if they are ‘able-bodied/50% disabled’, HK$3,550 per month if they are ‘100% disabled’ and HK$5,000 per month if they are ‘requiring constant attendance’. Furthermore, citizens aged 70 or above are entitled to the ‘Old Age Allowance [OAA], currently set at HK$1,135 per month. Finally, there is a so-called ‘Old Age Living Allowance’ [OALA] of HK$2,200 designed for citizens aged 65 or above having an income and assets not exceeding the prescribed limits (HK Social Welfare Department, 2013a, 2013b).

Crucially, however, there are strict capital asset limits for both single persons and families. Currently (i.e. in 2013) these are set at HK$39,500 (or US$5,095) for elderly and/or disabled persons. As such, these allowances are far from providing universal social protection benefits for the elder population either within, or outside, of Hong Kong. This has led members of the SCpp to observe that ‘while the nature of the OAA was a token

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14) Including land/properties, cash, bank savings, cash value of insurance policy, investments in stocks and shares, and other readily realisable assets
of respect to the senior citizens, the benefit has in effect turned into a form of relief money for poor elders who lacked family support or retirement protection’ (HK Legislative Council, 2013, p. 11). Indeed, the expectations of citizens visiting the Government’s OALA websites are clearly managed – the subtitle of the page is ‘Helping the Elderly in Need within our Financial Means’ (HK Social Welfare Department, 2013b).

The Hong Kong Mandatory Provident Fund [MPF], implemented in 2000, is characterised by mandatory contributions, near universal coverage (with the critical exception of self-employed which is around 68%), preservation/portability of benefits, the possibility to contribute more and tax deductions (Hong Kong Government, 2013a). The scheme has been studied at length in both the scholarly and policy literature, and as such even a cursory review is beyond the scope of this paper (see, for example, Cheng, Lum, et al. 2013; C. K. Chan 2011; C. K. Chan 2003; Siu 2002). However, the MPF ‘has consolidated the foundation of Hong Kong’s capitalism by socialising and incorporating the whole working population in the market economy but has provided little protection for their old age’ and, that the primary beneficiaries are the financial services sector whose scope for engagement with public finances has increased (C. K. Chan, 2003).

Finally, in common with elsewhere in East Asia, Hong Kong is characterised by strong investment in individual savings for re-
tirement and intergenerational transfers from children. Again, this has been covered in depth elsewhere and will not be examined in depth here—suffice to say that this again affords limited social protection to the poor in their elder years and adds a further burden to the young when choosing how to spend their resources (Chou, 2010; Choua, Chow, & Chi, 2004).

Furthermore, in the context of increased childlessness and smaller family sizes, such financial (and instrumental support) from children could become squeezed (Chou & Chi, 2004; Chou, 2010).

Following the 2010-11 Chief Executive’s Policy Address, the SCPP sought ‘ways to facilitate and support elderly people to settle on the Mainland’ (HK Legislative Council, 2013). The latter, termed the ‘Guangdong Scheme’ represented an innovative means of dealing with the territory’s ageing population—namely to effective ‘outsource’ the problem to the neighbouring problem. This meant that elderly Hong Kong residents were able to take their Old Age Allowance [OAA] and reside in Guangdong. In essence, this policy was an extension of the 1997 ‘Portable Comprehensive Social Security Assistance’ [PSSA] scheme which allowed Hong Kong citizens aged 60 and above to continue to receive their CSSA if they took up permanent residence in Guangdong Province (HK Social Welfare Department, 2013c). (In 2005 this was further extended to cover citizens who took up residence in Fujian Province). The 2011-12 reforms further allowed citizens entitled to the OAA—
i.e. aged 70 or above — to draw this allowance to draw this while resident in Guangdong (with a further eligibility criterion of residency in either Hong Kong or Guangdong for at least 60 days per year.)

To conclude, some members of the SCpp recently observed that Hong Kong has ‘no comprehensive retirement protection programme’ (HK Legislative Council, 2013). Indeed, as Cheng, Lum, et al. (2013) observe in their important paper on the state of elder welfare in Hong Kong, ‘With a noninterventionist government and an ideology emphasizing family self-reliance, yet one of the oldest populations around the world, Hong Kong faces many unresolved policy issues in aging, including public financial support, long-term care, and the lack of health or mental health care policies for older people.’

2.5) Lack of scope in family friendly policies and the current public consultation

As noted earlier, the main remit of the post-2012 SCpp was to concentrate on provision for elderly care and planning future demand for public services emanating from return migration of children born to Mainland mothers. Relatively little attention was focussed on fertility and family issues. Indeed, in response to the 2012 ‘SCpp Progress Report’, some members claimed that it was ‘not comprehensive enough and lacking ini-
tiatives to boost up the fertility rate.’ Furthermore, some members stated that much of the population policy initiatives to date had been ‘piecemeal and lacked long-term vision.’ Examples of this are the tax allowances discussed above. As such, the Government was strongly recommended to ‘adopt a holistic approach, set clear directions and goals for the population policy and map out appropriate measures in the Policy Address and the Budget to achieve the goals’ (HK Legislative Council, 2013, p. 7).

In partial response to this, on October 24th 2013 the Government launched its largest ever public consultation exercise on defining a future, more holistic population policy (Hong Kong Government, 2013b). The consultation period is due to run until February 23rd 2014 and is based around eliciting responses to an extensive consultation document (Hong Kong SCpp, 2013a). The consultation process will consist of citizens being able to attend public forums to discuss population issues, but also to send in suggestions and responses via a dedicated website replete with many resources (Hong Kong SCpp, 2013b). A summary leaflet (available in Chinese, English, Indonesian, Filipino, Nepalese and other languages) is reproduced in Figure 4-8. As well as pervious emphases on skills development, migration and support for the elderly, as Figure 4-8 shows the consultation document also includes some features—which have been relatively little explored in the discourse to
date. These include developing an environment which fosters active ageing (Basten et al., 2013a; Cheng, Lum, et al., 2013), increasing labour force participation among ‘female homemakers, early retirees and the disabled’ and through enhancing and improving education, training, vocational skills and continuing learning. Indeed, the work of Basten, Yip, and Chui (2013a), as discussed above, strongly suggests that a more holistic approach to ageing could indeed unleash the human and social capital potential from an ever increasing, but ever more healthy, older population.

[Figure 4-8] Summary leaflet of Hong Kong Population Policy Public Consultation Exercise
Crucially, though, there is an entire section of the consultation document which is devoted to ‘Fostering a Supportive Environment for our People to Form and Raise Families’ (Hong Kong SCpp, 2013a). Apart from statements regarding family values, this section of the document gives a useful overview of...
the challenges of childbearing in Hong Kong and, in particular, the issues relating to cost of living of other burdens. Within the consultation paper, there is a response to the question of ‘Should Governments do more to raise birth rates? If so, what? The text is worth quoting at length here as it as close as one can get to something of a statement by the SCpp on the issue (emphasis added):

5.7 To some people, the question of childbirth is a family matter that should not involve government intervention. Some also consider that child caring is a family responsibility and the burden should not be shifted to taxpayers or employers. Others doubt the effectiveness of pro-birth policies or family support measures in raising fertility, in view of the mixed results achieved elsewhere. There are also questions on the relevance of overseas measures in Hong Kong’s context. Public views are bound to be diverse as to whether we should spend substantial resources on measures to raise fertility in light of other competing policy and livelihood issues.

5.8 The SCpp agrees that the Government should not interfere with the childbearing decisions of individuals. Noting from the KAP Survey 2012 that significantly more respondents than before considered that financial incentives and family-friendly measures would increase their desire to have children, the SCpp considers that a more supportive environment for forming and raising families should be explored. But this should be balanced against the additional financial burden on taxpayers and employers, the Government’s other more pressing spending priorities due to ageing population, and the need to maintain a low tax regime. (Hong Kong SCpp, 2013a).

This statement clearly emphasises the ‘slow-burn’ nature of very low fertility which is considered to be secondary to ‘other more pressing spending priorities...and the need to maintain a low tax regime.’ While we must wait for the outcome of the consultation process – an updated version of this paper will be written in 2014 – it is hard not to conclude that radical family-friendly policies will be unlikely in the light of this statement.
5. Conclusions: the future and the bigger picture

Family friendly policies, particularly where they have been evoked as a means of increasing fertility, have been seen as a means – particularly in the European policy discourse – of 'bridging the gap' between intentions and reality (Philipov, Thévenon, Klobas, Bernardi, & Liefbroer, 2009). In Europe, there has generally been a sizeable gap between fertility intentions (higher) and reality (lower) which has been interpreted as presenting a policy space for initiatives to work to help couples to realise their stated preferences (Philipov, 2009; Testa, 2007). In Europe, for example, this has been generally characterised by a tendency for couples to state an overall preference for two or more children (cf Goldstein, Lutz, and Testa 2003) – even in the face of the recent economic crisis (Testa & Basten, 2012) – even though period TFRs fall well below this number. Recent research, however, suggests that fertility preferences in Hong Kong measured through ideal family sizes and intended future fertility at low parities actually falls well below those generally reported for Europe – even compared to settings in those settings in Southern, Eastern and Central Europe which reported the lowest period TFR rates in the 1990s and 2000s (Basten, 2013a). Returning to the Hong Kong KAP survey, we can examine lifetime fertility ideals through the question "If you could start all over again, how many children would you
like to have in your life time?” As Table 4-1 demonstrates, a majority of women desired two or fewer children (88.4%), with around half (49.7%) stating a preference for two children (HKFPA, 2007). Regression analysis on the data performed by the Hong Kong Family Planning Association on six rounds of the survey over 25 years demonstrates that an ever increasing number of women present a stated preference for zero or only one child, while the proportion desiring 3 or 4 children has been significantly decreasing. This evidence of aggregate fertility ideals well below two represents a paradigm shift from that seen in Europe.

(Table 4-1) Distribution of respondents by ideal parity, 1982~2007

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<tbody>
<tr>
<td>0</td>
<td>2.1</td>
<td>4.8</td>
<td>5.1</td>
<td>10.9</td>
<td>15.2</td>
<td>12.5</td>
<td>↑↑</td>
</tr>
<tr>
<td>1</td>
<td>7.5</td>
<td>10.1</td>
<td>10.8</td>
<td>13.7</td>
<td>16.6</td>
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<td>↑↑</td>
</tr>
<tr>
<td>2</td>
<td>53.7</td>
<td>58.4</td>
<td>59.0</td>
<td>52.9</td>
<td>51.2</td>
<td>49.7</td>
<td>NS</td>
</tr>
<tr>
<td>3</td>
<td>18.9</td>
<td>16.1</td>
<td>11.4</td>
<td>8.1</td>
<td>5.0</td>
<td>6.1</td>
<td>↓↓</td>
</tr>
<tr>
<td>4</td>
<td>11.2</td>
<td>7.3</td>
<td>4.5</td>
<td>3.4</td>
<td>2.1</td>
<td>1.3</td>
<td>↓↓</td>
</tr>
<tr>
<td>5 or more</td>
<td>1.9</td>
<td>0.8</td>
<td>0.3</td>
<td>0.2</td>
<td>0.3</td>
<td>0.9</td>
<td>NS</td>
</tr>
<tr>
<td>Number immaterial, depends on God’s will</td>
<td>1.5</td>
<td>1.3</td>
<td>0.9</td>
<td>2.4</td>
<td>2.4</td>
<td>¾</td>
<td>NS</td>
</tr>
<tr>
<td>Don’t know / Never thought about it</td>
<td>2.9</td>
<td>0.9</td>
<td>3.7</td>
<td>5.0</td>
<td>3.9</td>
<td>3.3</td>
<td>NS</td>
</tr>
<tr>
<td>No response</td>
<td>0.4</td>
<td>0.1</td>
<td>2.3</td>
<td>1.4</td>
<td>0.0</td>
<td>¾</td>
<td>NS</td>
</tr>
<tr>
<td>Not applicable</td>
<td>0.0</td>
<td>0.3</td>
<td>2.0</td>
<td>1.9</td>
<td>0.2</td>
<td>¾</td>
<td>NS</td>
</tr>
<tr>
<td>Mean ideal parity</td>
<td>2.4</td>
<td>2.1</td>
<td>2.0</td>
<td>1.8</td>
<td>1.6</td>
<td>1.6</td>
<td>↓↓</td>
</tr>
<tr>
<td>Total %</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>↑↑</td>
</tr>
<tr>
<td>Total respondents</td>
<td>1,403</td>
<td>1,511</td>
<td>1,681</td>
<td>1,511</td>
<td>1,607</td>
<td>1,437</td>
<td></td>
</tr>
</tbody>
</table>

Base: (1982 – 2002) All female respondents
(2007) Those female respondents who were fertile (including pregnant women)
↑↑: Significant increasing trend for the period 1982 – 2007; p < .01
↓↓: Significant decreasing trend for the period 1982 – 2007; p < .01
NS: Insignificant increasing or decreasing trend for the period 1982 – 2007
Of course, these stated ideals are, themselves, highly likely to be an over-estimate for two reasons. Firstly, they include the preferences of women who already have (or have already had) two or more children who are unlikely to state a preference below the total number of children they have borne. Secondly, fertility ideals are precisely that – the number of children which an individual would like to have. Under the given economic, social and cultural constraints of a particular setting, there may be a notable difference between the number of children which an individual would like to have and those which the respondent realistically intends to have. As we have already seen, among those at Parity One in 2007, only a tiny fraction (2.43%) of women of reproductive age state an intention to have a further child. Tellingly, however, the vast majority of women of reproductive age at Parity One state an intention to have no further children. As Basten and Verropoulou (2014), in the context of more couples with only one child, such fertility preferences are becoming increasingly important in determining overall trends in how many more children we can expect current incomplete cohorts to bear. They conclude that while this is relevant in terms of the disparity in gender roles indicated earlier in terms of women seeking to minimise the opportunity cost of childbearing, it also provides evidence of the strength of other structural constraints on childbearing such as cost of living, high levels of investment in education, lack of adequate
state support, working hours and so on. In sum, this provides further evidence of the closing gap between fertility preferences as indicated through intentions and reality and the relatively limited capacity for policy initiatives which follow the recent line of piecemeal, small-scale typology to succeed.

Finally, it is necessary to consider the parameters of any possible pro-natalist/family-friendly policy initiatives in Hong Kong in order to gauge their possible chances of success. Firstly, as intimated in the earlier discussion of Hong Kong’s social policy and social security framework, the territory has been committed to being a regime characterised by low rates of both individual and corporate taxation. This lack of receipts necessarily limits the scope of the government to be able to implement generous pro-natalist/family-friendly policies – for example of the type seen in Singapore (Chuan, 2010; Jones, 2012; Sun, 2012). Indeed, this is already in evidence in the current formulations of one of the government’s key pillars of its strategy of dealing with elder care, namely to effectively ‘outsource’ care by subsidising pensioners to relocate to neighbouring Guangdong Province. Secondly, and profoundly related to the first, is that in the absence of wide reaching state-driven pro-natalist/family-friendly policies, the private sector may be able to ‘step in’ and act as provider in lieu of the public sector. However, as noted early, despite the visual spectacle which is the skyscrapers of Central, business in the territory is more
generally characterised by small- and medium-sized enterprises [SMEs] who are, by their very nature, less able to offer generous packages to support their workers’ familial needs. As such, this combination of a (deliberately) weak social policy capability and an economy characterised by the predominance of SMEs suggests that the policy space for successful ‘top-down’ pro-natalist/family-friendly policy initiatives is relatively slight.

Of course, it is necessary to wait for the outcome of the current population policy consultation period and the ensuring deliberations of the legislature and executive branch before pronouncing on possible future initiatives. However, it is hard to disagree with Frejka, Jones, and Sardon (2010) that because ‘patriarchal customs and attitudes in the family, the workplace, and the political domain are deeply engrained changing the patriarchal social environment will require special focus on policies to increase male involvement in the household and in the upbringing of children and to change the attitudes of employers.’ In this context, ‘unless current conditions are radically changed and child- and family-friendly environments are fostered, it is difficult to believe that fertility patterns will change’ (Frejka et al., 2010). Policies, therefore, need to be directed towards ‘broad social change supportive of children and parenting.’ By necessity, these policies will require a complete change in the cultural approach to gender roles, working hours and educational performance—as well as a new strategies to
tackle pressures on the cost of living. The extent to which these policies can be driven by the state or the corporate sector is, in the context of Hong Kong, highly questionable. Indeed, the statement of the SCpp above on prioritising more ‘pressing needs’ and a ‘low tax regime’ hardly gives much hope (Hong Kong SCpp, 2013a). Rather, it may be necessary for a ‘bottom-up’ revolution in the way in which citizens of Hong Kong see the relationship between family and work for these changes to occur. While there is certainly evidence that some of the views regarding work and family are changing – for example in terms of views of gender roles among the younger generation – it is difficult not to presume that such seismic change in fertility will happen any time soon. Indeed, it is even possible to conclude that it may not happen at all.
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Chapter 5

Singapore’s pronatalist policies: to what extent have they worked?
1. Introduction

Singapore is a pioneer in the Asian region, in terms of both the timing of its fertility decline to ultra-low levels, and the timing of doing something to counter it. While nobody would argue that its policy responses have done all that could be done to counter very low fertility, Singapore is also unique in the Asian region in terms of the range and scope of its pro-natalist policies.

This paper outlines the fertility trends in Singapore in comparison with other Asian countries currently facing ultra-low fertility, the evolution of pro-natalist polices over the past three decades, and the possible relationship between the policies and the trend of Singapore’s fertility. The paper attempts to compare the timing and scope of pro-natalist policies in Singapore in comparison of those in other low-fertility Asian countries (in particular Korea and Taiwan), and to draw some tentative conclusions about the relationship of policy to fertility in Singapore.
2. Fertility decline among the Asian tigers

Like other developing countries, in 1960 South Korea, Taiwan and Singapore had very high levels of fertility, the highest of all being Korea. Japan was in a different league. Its fertility had fallen to low levels far earlier than in any of the other Asian tigers, reaching replacement level in the mid-1950s, while the rest of the Asian tigers were still experiencing very high levels (Frejka et al., 2010: 581). Though Japanese TFR remained low, it was above replacement for a period, and then fell below replacement level in 1973. Aside from Japan, Singapore was the Asian pioneer in reaching below-replacement fertility levels, in 1975. As shown in Figure 5-1, it had a head start of a few years on Hong Kong and of almost a decade on South Korea and Taiwan in this respect. (Both Taiwan and South Korea reached replacement level fertility in 1983). From the mid-1980s, though, Hong Kong has been the clear leader in ultra-low fertility.

Figure 5-2 and Table 5-1 shows the more detailed trends over the past 15 years. If we smooth over the "blip" in TFRs in 2000 due to the Dragon year effect, Singapore, Korea and Taiwan all experienced considerable fertility decline over the 1997-2003 period, reaching Japanese levels and even going below them. From this 2003 nadir (2005 in the case of Japan), most of them have shown relatively little change, remaining through and beyond the first decade of the 21st century at lev-
els referred to as “ultra-low” by Jones, Straughan and Chan (2009) - the very lowest level of the world’s countries, though showing a slight tendency for TFR to rise. The latest (2012) figures are of course influenced by the latest Dragon year. Too much should not be made of slight year-to-year fluctuations in TFR at these levels, and of course tempo and cohort effects need to be isolated.

3. Trend in singlehood

To understand low-fertility in East Asian countries we need to understand the changing economic and social conditions in these countries and the way they influence the perceived desirability and feasibility of building a family. The focus is typically on the pressures on married couples, with insufficient attention given to the factors influencing whether people marry in the first place. It is essential to understand the reasons behind the marriage trends, as marriage is essentially the gatekeeper to childbirth in East Asia, where fewer than 2 per cent of children are born outside marriage (Frejka et al., 2010, fn. 10)15).

15) The 2% figure is in some ways misleading, however, as a considerably higher proportion of births are conceived outside marriage, and the pregnancy precipitates the marriage. These should not necessarily be understood as “shotgun marriages” according to the traditional understanding of this term, as there is evidence, at least from Japan, that many unmarried couples are fairly relaxed about the possibility of becoming pregnant, and are ready to marry should this happen [SOURCE?]
And in all of these Asian tigers, singlehood has been sharply on the rise over the period of declining and low fertility. It has been estimated that in Singapore, declines in proportions married were responsible for one-third of the decline to ultra-low levels of fertility in the period 1990-2005 (Koh, 2011).

Figure 5-3 illustrates the rising trend of singlehood at ages 30-34 among these Asian tigers. The trends in this age group are consistent with evidence for other age groups (e.g. 35-39) and from the singulate mean age at marriage (SMAM). Singapore stands out from the other countries in that while its proportion of singles has been increasing, the rise has been much more modest than in South Korea or Taiwan. In the year 2010, Singapore had the lowest proportion of singles among these countries, for both women and men, a notable reversal of the situation two decades earlier. At ages 30-34, the proportion of single women in Singapore was 25.1 percent while the proportion of single men was 37.1 per cent. Hong Kong and Taiwan are leading the trend in rising singlehood for both men and women. Both South Korea and Taiwan experienced a rapid increase within the ten years from 2000 to 2010.

4. What is driving trends in fertility?

In order to assess the likely impact of pronatalist policy, it is necessary to understand the reasons why fertility has reached
such a low level. There is a considerable literature on this, which we will not attempt to summarize in detail here, but simply to note what appear to be the key reasons\textsuperscript{16), in dot point-form, in the countries under discussion:

- Consumerist society, stressing achievement above all else
- Strong familism and a patriarchal society; economic development and social modernization clash with traditionalism in the household.
- Resultant conflicting roles for women in balancing work and family life.
- Marriage market issues – hypergamy, marriage squeeze for certain groups, inadequate replacement of traditional matchmaking methods
- Enormous pressure on parents for their children to succeed in education
- Costs of raising children – both financial and opportunity costs
- Housing costs and shortages

The combination of a rise in age at marriage, and (probably within 10 years) a situation where 15 per cent of women will be permanently removed from the reproductive population by

\textsuperscript{16) For more detailed discussions, see Tsuya et al, 2009; Suzuki, 2008; 2009; Eun, 2007; Jones, 2007, Frejka et al, 2010.}
non-marriage, along with continuing high levels of divorce, bodes ill for any substantial rise in fertility. Furthermore, there is little indication of trends towards more cohabitation, and even less so of acceptance of childbearing in cohabiting relationships – trends which have propped up fertility rates in many Western countries.

5. **Singapore’s switch from anti-natalist to pro-natalist policy**

   Post-independent Singapore was experiencing very high fertility amidst uncertainties over the political and economic future of what was considered to be an over populated island. Hence the government introduced a national population control programme, passing the Singapore Family Planning and Population Act in 1965 and establishing the Singapore Family Planning and Population Board in 1966. A series of anti-natalist measures were introduced, including the Voluntary Sterilization Act in 1969, and a set of incentives and disincentives to encourage small families in 1972. Some of the measures introduced and implemented during the anti-natalist period included the reduction of Income tax relief to cover only three children, lowering of priority for primary school admission for fourth order and above children, elimination of housing subsidy for large families and limitation of paid maternity leave to two children (Sun, 2012: 63).
The pace of fertility decline that followed was one of the most rapid in the world, and was widely attributed to the anti-natalist policies, though many other factors were clearly involved as well. Though Singapore’s fertility reached the replacement level in 1975, the anti-natalist policies were kept in place until 1983. Then the state in 1984 implemented a selective pro-natalist policy also known as the ‘eugenic phase’ of Singapore’s population policy, during which educated women were given incentives to reproduce under the ‘Graduate Mother Scheme’, while sterilization cash incentives were offered to less educated women (Straughan et al, 2009: 184; Saw, 2005: 212). This policy proved to be very unpopular with broad sections of the population, and it was abandoned in 1985, followed by the closure of the Singapore Family Planning and Population Board in 1986. It was only in the following year (1987), that the fertility policy in Singapore took on a broadly pro-natalist stance, with the introduction of both slogans and policies to support having three or more children based on afford ability. This stance has shaped Singapore’s fertility policy until the present: over the years the state has introduced and strengthened various policies to increase fertility.

There had been an interval of 15 years between the time fertility first dipped below replacement level and the introduction of pro-natalist policies directed at the population as a whole. As the pioneer in fertility decline in the region, with a history
of strong and effective anti-natalist policies, it is perhaps not surprising that there was hesitation in reversing these policies until it was clear that no resurgence in fertility was in prospect. The subsequent history of policy reversals in other East Asian countries, indeed, shows that Singapore was no exception in delaying its policy reversal (see Table 5-2).

6. The development of Singapore’s pro-natalist policies

Policies emphasising bigger families and early family formation were implemented during the phase of late 1980s to late 1990s. Some of the measures and incentives that were introduced include the subsidisation of childcare, tax rebates for third child, and public housing schemes encouraging early family formation and bigger families, such as the Fiancé/Fiancée and First Timers schemes.

Singapore’s policies were further enhanced during the course of the year 2000, when Singapore introduced a number of new policies and revisions of others. Importantly, the Baby Bonus Scheme was introduced. This two tiered system involved distribution of cash benefits on the birth of second and third child in addition to a co-savings arrangement set up by the government, which was payable over a six year period of maximum contribution capped at $6000 for the second child and $12,000 for the third child. This co-saving could be used for all
children. Tax rebates which were previously offered to only the third child in 1987 and fourth child in 1989 were extended to include the second child. However Singapore’s TFR continued declining from 2001 to 2003 (see Table 5-1), despite the introduction of a variety of incentives aimed at encouraging marriage and raising fertility. The total fertility rate fell from 1.61 in 1997 to 1.25 in 2003\(^\text{17}\).

In the following year, 2004, the Baby Bonus Scheme was extended to include the birth of first and fourth child, where $3000 and $6000 were given to parents. This cash gift was to be distributed in 5 instalments over an 18 month period as opposed to 6 years previously. In 2008, the payout to first and second children was raised from $3,000 to $4000.

Since 2003, the TFR has always been in the 1.2 region with minor changes till 2010, when it fell slightly lower to 1.16. This could be attributed to 2010 being the Year of the Tiger, which is considered to be inauspicious for birth in the Chinese zodiac cycle. The following year, the rate rose marginally to 1.20 and in 2012 – Year of the Dragon, it went up further to 1.29.

Policies were further boosted in January 2013 in the form of the Marriage & Parenthood Package 2013. This package aims to assist Singaporeans ‘to form families and raise children’

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\(^\text{17}\) There was a blip to 1.60 in the Year of the Dragon in 2000 – up from 1.47 in the preceding years of 1998 and 1999. The Year of the Dragon is considered to be the most auspicious zodiac sign of the Chinese twelve animal zodiac cycle (Saw, 1990)
This enhanced package includes a priority housing scheme for newly married couples with children, enhanced Co-funding for Assisted Reproduction Technology (ART) Treatment, waiving of accouchement fees in public hospitals extended to mothers irrespective of the birth order of child, extended paid child care leave, introduction of paid adoption leave, 1 week paid paternity leave and shared parental leave. (See Appendix for details of policy enhancements).

7. Categories of pro-natalist policies in Singapore

McDonald (citing Heitlinger) has categorised fertility policy under:

1) Financial incentives
2) Support for parents to combine work and family
3) Broad social change supportive of children and parenting.

But policy to influence marriage is not specifically included here, and although marriage is affected by fertility desires\(^{18}\), thus being affected by all the above elements of fertility policy, there are other factors influencing whether people marry. One way to think of factors affecting marriage is to divide reasons

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\(^{18}\) Indeed, Raymo (2003) has argued in the case of Japan that changes in the desire for children are more important in understanding marriage behavior than changes in the desirability of marriage itself.
for not marrying into volitional and non-volitional reasons. Singapore has had specific policies to influence marriage, and the government clearly considers marriage policy important in its armoury of policies to influence fertility. Marriage policies will therefore be considered below.

1) **Financial incentives**

Lump sum payments or loans, tax rebates, subsidized or free services and goods for children and housing subsidies fall under the first category of financial incentives. Singapore has implemented policies using all four of these sub-categories. With the introduction of the two-tiered Baby Bonus Scheme in 2000, described in the previous section, the Singapore government began offering cash payment to parents. In 2013, the amount offered has been increased to $6,000 (up from $4,000 previously) for the birth of the 1st and 2nd child, and $8,000 (up from $6,000 previously) for the birth of the 3rd and 4th child. This cash gift will now be fully disbursed earlier, within 12 months of the child’s birth as compared to 18 months previously.

The scheme also involves setting up a Child Development (CDA) account, which is essentially a co-savings arrangement between parents and the Singapore government. When it started in 2000, only the second and third child were eligible. Since 2008, children born regardless of birth order will receive a
matching contribution of up to S$8,000 from the government for their child’s CDA. However the cash grant is given only until the birth of the fourth child. In 2013, the duration of the CDA has been extended for another 6 years, enabling parents to save till the child turns 12 instead of six as previously.

Singapore also offers competitive tax rebates for working mothers. It offers various housing subsidy schemes (see appendix for details). However, it does not have much of MacDonald’s second sub-category of free or subsidized services or goods for children (services include education, dental and medical while goods could include textbooks, leisure and sporting equipment – see McDonald, 2002: 437). Recently (early 2013), Singapore introduced Medisave Grant for newborns. Medisave falls under CPF (Central Provident Fund) savings. Under this scheme, each newborn citizen has a CPF Medisave account opened for him/her, with a Medisave grant of $3,000 deposited. The first $1,500 is deposited after birth registration, and the remaining $1,500 is deposited in the subsequent year, provided that the child remains enrolled in MediShield or a Medisave-approved Integrated Shield Plan.

2) Support for combining work and family

Under the category of support for combining work and family, McDonald (2002: 438-442) listed childcare, flexible working
hours, anti-discrimination legislation and gender equity in employment practices, followed by work hours. Singapore increased paid maternity leave from 8 weeks to 12 weeks in 2004 and from 12 weeks to 16 weeks in 2008. In 2013, it introduced a week long paternity leave, allowing an additional week to be taken by the father from his wife’s 16 weeks maternity leave under a new ‘Shared Parental Leave’ scheme. Paid adoption leave of 4 weeks was also introduced in 2013. In order to facilitate alternative childcare arrangements, it offers grandparent caregiver relief, domestic worker levy relief and child care subsidies. A five day work week was introduced in 2004 for government employed civil servants, though total working hours were held constant, thus requiring extended working hours on the five working days. (See Annex for details of policies.)

3) Broad social change supportive of children and parenting.

Broad social change supportive of children and parenting is the last category of fertility policy. McDonald (2002:440-442) has listed employment initiatives, child-friendly environments, gender equity, marriage, relationship supports followed by development of positive social attitudes towards children and parenting. Singapore introduced the ‘Work-Life works’ fund in 2004, under which private sector firms can apply for grants
from the fund to defray the cost of introducing measures that
would assist employees to achieve better work–life harmony.
Though this was a good introductory move, this scheme is left
to private firms, thus leaving it largely to employers’ discretion
to implement it. It might not necessarily be in the interest of
competitive private companies (especially SMEs) to implement
it, and there may be other opportunity costs and market con-
siderations that may weigh this down.

One point should be made about policy developments in
Singapore. Singapore has consulted widely, particularly in re-
cent years, before introducing changes in family policy. The
National Population and Talent Division, which is now respon-
sible for population policy, had a program of wide community
consultation before introducing the new measures in 2013.
Commenting on these new measures, sociologist Paulin
Straughan, who also served a term as an appointed Member of
Parliament, noted that the new measures gave a message to the
Singapore population that the Government prizes a pro-family
and gender-equal environment as much as it does a com-
petitive, business-friendly climate. One intent of the policies,
she said, “was to set the ideological tone, to say very boldly that
the Government stands behind family formation” (Chang,
2013).
4) **Marriage policy**

Rising singlehood has been one of the major direct causes of fertility decline in Japan, Korea, Taiwan and Singapore. Singlehood is particularly high in the cities, and for well educated women. In the younger adult ages there are now few women with primary school education or less, so the key comparison is between the high school and tertiary educated: in all the countries, delayed and non-marriage is considerably higher for the tertiary educated women. (Jones, 2013 :4-5).

As early as 1984, Singapore had identified rising singlehood, especially among its well educated women, as an issue to be addressed, and began setting up agencies to provide match-making services. Singapore government policies in this regard have been much publicized but it is difficult to assess whether the claims for success of its Social Development Network are well justified. Statistics published to indicate that a substantial number of Singaporeans registered with the SDU married cannot address the counterfactual - how many of these people would have married anyway, in the absence of the government’s programs? (Jones, 2012: 324).

The two other key ways in which Singapore has influenced the incidence of marriage are through housing policy and through policy on accepting people for Permanent Residence (PR) status. Singlehood is discouraged by eligibility rules for
Housing and Development Board (HDB) flats, in which about 85 per cent of Singaporeans live; singles must be over the age of 35 to be eligible to purchase this form of subsidized housing. Also, various housing inducements are offered to Singaporeans planning to marry (for details, see Jones, 2012: 323-4). As for PR status, the proportion of Singapore citizens aged in their 30s who are single is double the proportion of PRs who are single. The government’s criteria for approval of permanent residence applications suggest that raising the proportions married may have been one of the aims of the PR program (Jones, 2012: 325)\textsuperscript{19}).

8. Delays in policy development: comparison between Singapore, Korea and Taiwan

It is interesting to take a cross-sectional snapshot of fertility policies in the region in 1995. Keep in mind that although Singapore reached replacement level fertility first (along with Japan), fertility rates in 1995 were at much the same level in the East Asian countries – well below replacement level, though only in Japan were they at ultra-low levels (TFR below 1.5). However, at that time, Singapore already had more pro-natalist policies in place than the other countries. It had been 8 years

\textsuperscript{19} Citizens and permanent residents together make up the resident population, which is the denominator for Singapore's demographic measures.
since Singapore had introduced its pro-natalist policies offering income tax relief, tax rebates, childcare subsidy and housing subsidies for bigger families to encourage the citizenry to procreate. Since 1987 Singapore had began promoting the formation of families and by the early 1990s there were more housing incentives to encourage early family formation through HDB’s fiancé/fiancée scheme where couples intending to get married could register for a flat together and get married within three months of taking possession of the flat. This scheme aimed to enable couples to have a ready home upon marriage. In 1990, the domestic worker levy relief was also introduced to encourage working mothers to work while having someone to take care of their child. Despite all these pro-family and pro-fertility measures, fertility continued to dip.

In contrast to Singapore, both Taiwan and South Korea reached replacement level fertility in 1984 but by 1995 had no pro-natalist policies in place. (The Taiwanese government had made a pro-natalist statement but had not introduced any policies). It was only in 2006 that both Taiwan and South Korea implemented their respective pro-natalist policies.

The Korean state was very slow to reverse anti-natalist policies and embark on pro-natalist policies. In 2002, the Noh Mu-Hyeon government took a step towards pronatal policy initiation, but it took a few more years to implement the policies. South Korea’s TFR was the lowest in the world, declining to
1.08 in 2005 (Lee, 2009: 57). It was only as late as 2006 that the Korean government announced an integrated package, ‘Saeromaji Plan 2010’ – which included a variety of pro-natal measures (Suzuki, 2008:37). These measures included tax rebates, expansion of maternity and childcare leave and improvement of child care services. However Korea was not able to offer a universal child allowance due to budget constraints.

Taiwan’s TFR started declining gradually from 1995, but in the Year of the Tiger – 1998 – it declined drastically to 1.47 from 1.77 in 1997. Besides the Year of Tiger being inauspicious for birth, the financial crisis of 1997 also contributed to this decline. In the following two years, the TFR rose slightly, then declined sharply again in 2001 to 1.40 from 1.68 in 2000. Following this decline, the TFR has continued declining with the exception of the years 2005-2007 where it remained at 1.12. In the the Year of Tiger – 2010 – Taiwan’s TFR plunged to 0.89, probably the lowest level of fertility ever reached in any country with a population in excess of 10 million. As in South Korea, Taiwan had no pro-natalist policy until 2006, when measures such as maternity and parental leave and child care subsidy system were implemented with the introduction of the ‘Mega Warmth Social Welfare Program’ (Freijka, et al 2009: 599). This was followed by the 2008 White Book of Population Policy. Since the introduction of those measures, the TFR has yet to increase significantly, though the growth in TFR experi-
enced in 2012 – the Year of the Dragon, with TFR 1.26 – raises hope that the subsequent decline will still leave TFR somewhat higher than before.

When Singapore is compared with Taiwan and Korea, then, Singapore was clearly a little faster to react and begin to reverse its fertility policies.

9. Policy similarities and differences between Singapore, Korea and Taiwan

Now that both Korea and Taiwan have had pro-natalist measures in place for some years, it is worth comparing the similarities and differences between their policies and those of Singapore. Singapore’s policy in the category of financial incentives has been beefed up over time and now provides substantial incentives. In the other East Asian countries, under the financial incentives category, on the birth of a child, Japan offers cash payment of 10,000 yen (roughly USD 100) monthly till the child turns three. However it does not offer large tax deductions for children (Frejka et al, 2010: 598). Taiwan and South Korea too do not offer cash payment, the former due to feminist protests and the latter due to budgetary constraints. South Korea has lower taxes for large families or families with young children. Singapore’s policy in the category of financial incentives is clearly more comprehensive in comparison to the
other two countries.

In terms of the second category of support for combining work and family, Taiwan has a provision of paid maternity leave of up to 8 weeks, with 70 percent of cost payable by employers (Frejka et al, 2010: 600) and three days of paternity leave. South Korea on the other hand offers 12 weeks of paid maternity leave and 3 days paternity leave. Paternity leave is not paid by the state in South Korea, but left to the discretion of the companies. Again, Singapore’s policy is more comprehensive, with longer paid maternity leave and (since early 2013) more paternity leave. Both Taiwan and Korea have enhanced their child rearing policies with improved child care subsidies and provision of high quality childcare. Singapore also subsidizes centre-based infant care and childcare, differentially for working and non-working mothers. Its policy is complicated by the fact that “childcare” and “pre-school education” are related but somewhat different goals. Singapore has additional policies in its childcare armoury, in the form of grandparent caregiver relief and reduced maid levy, to encourage reliance by working mothers on grandparents and maids for infant and childcare.

Singaporean families with two or three children can now expect to receive significant financial incentives as a result of the overall package offered by the Singapore government. Indeed, the National Population and Talent Division gave an estimate in early 2013 that a family with two children can enjoy benefits
of about SGD100,000 in baby bonus payments, Medisave grants for newborns, infant care and childcare subsidies and tax savings by the time both children turn 13. If the value of paid maternity and paternity leave and paid childcare leave is added in, the total benefits sum to about $166,000. This estimate excludes housing subsidies and the equivalent of $12,000 in additional tax savings beyond the children’s first 13 years. While substantial, these figures need to be compared with rough estimates that the total financial cost of having a baby and raising it to adulthood is somewhere between SGD 300,000 and 500,000, depending on choices on schooling and life styles – or between SGD 600,000 and SGD one million for two children. Thus the common comment of young Singaporeans that the government support is much appreciated but that it will probably not be a major factor in their decision whether to have children makes sense.

When considering policies under broad social change supportive of children and parenting, Singapore, Taiwan and South Korea could all go further in introducing more flexible working hour schemes and also anti-discrimination legislation and gender equity in employment practices. Japan leads the way in East Asia under employment initiatives. Japan’s New Angel Plan of 1999 stressed the need to improve gender equity and working conditions – which have been improved over the years. Measures to support a mother’s re-entry into the workforce have been in-
troduced and in 2005, the Japanese government introduced child care leave to part-time workers under certain contracts (Frejka et al, 2010: 598). Singapore has taken steps towards this with the introduction of paid paternity leave in 2013.

With regard to marriage and relationship support, Singapore seems to be the only East Asian state actively promoting marriage and early family formation through its subsidized match-making services and various housing subsidies. Finally, with regard to development of positive social attitudes towards children and parenting, all the countries discussed here seem to be promoting this in various ways. The big question is how these East Asian societies will be able to overcome deeply entrenched societal pressures and expectations that work against family formation. One of these is the strong pressure on parents to raise quality children through intensive parenting, supplementing what the school can do through arranging coaching, extra-curricular activities and parental assistance in homework. Awareness of these pressures is leading some people to avoid having children or to have only one or two. (e.g. see Anderson and Kohler, 2013).

10. Has Singapore shown any signs of doing better in fertility recovery than the other countries?

Singapore’s population reached replacement fertility in the mid-1970s, whereas fertility in Hong Kong, South Korea and
Taiwan declined rapidly a number of years later in the 1980s. Singapore led in the implementation of pro-natalist policies in East Asia, and went further in many areas of policy. We might expect, then, to see more impact on fertility. However, fertility recovery has not exceeded that in other countries in this group. Indeed, Singapore has not matched Japan, Hong Kong and Korea in showing slight increases in TFR in recent years.

However, given Singapore’s physical size and bearing in mind that it is a city-state, comparisons with other cities in the region are appropriate. When compared with other cities, Singapore does not fare badly. Singapore’s TFR is roughly 20-30 percent higher than in Seoul, Busan, Taipei, Kaohsiung and Hong Kong (Jones, 2012). The contrast with Beijing and Shanghai, where TFR is well below 1, is even sharper.

Because of the difficulty of testing the impact of the various pro-natalist measures on Singapore’s fertility, two alternative assumptions might be used to set some kind of extremes on their likely impact. The first assumption would be that, because there has been no clear increase in TFR since policy measures were strengthened in 2004 and 2008, the policies have had no impact. The second would be that in the absence of the policies, fertility would have sunk even lower than it did. One hypothesis would be that without the policies, fertility would have been at much the same level as that of other major cities in East Asia – Tokyo, Seoul, Busan, Taipei, Hong Kong (but not
Beijing and Shanghai, since their fertility is strongly influenced by China’s one-child policy). According to this assumption, policy may have resulted in Singapore’s fertility being 20 to 30 percent higher than it would otherwise have been.

Both these assumptions are extremely crude, but at least they provide hypotheses which can guide thinking about demographic impacts. While there are clearly differences in the socio-cultural and economic situation of the different East Asian countries, there are enough similarities to make the comparison at least plausible. However, as we have seen, the specificities in the Singapore case - for example, its multi-ethnic population and its policies toward accepting people for permanent residence - must be kept in mind in any attempt to assess the role policy has played. For example, if only the ethnic Chinese population of Singapore is used in the comparison with other East Asian cities (to control for the effect of other ethnicities, particularly the Malay, in propping up Singapore’s overall fertility), the fertility differential between Singapore and other East Asian cities narrows - to about 10 to 15 per cent higher. Clarity of interpretation is further muddied by the fact that differences in TFR between Hong Kong and Chinese Singaporeans have altered over the past decade. The differential fell steadily from 30 per cent in the Chinese Singaporeans’ favour in 2001 to parity around 2009 and a differential in favour of Hong Kong thereafter (see Table 5-1).
11. What can other countries learn from the Singapore experience?

In attempting to deal with ultra-low fertility, Singapore faces the same key problems as do Japan, South Korea and Taiwan. In the face of remarkable improvements in women’s education, changing labour markets and the economic pressures of a neo-liberal consumerist economy, cultural and social norms have not been adapting rapidly enough, especially as they bear on the situation of increasingly educated women. In general, the problems Singapore faces are as intractable as elsewhere. Unfortunately, despite ongoing attention to population policy issues and considerable modification and tinkering with policies over time, there is no clear evidence that the policies have had much impact on fertility rates.

Perhaps one message to emerge from this is that policies bearing on fertility need to be seen as part of family policy, as they are in most European countries, and whether or not they have much impact on fertility, they can be considered to have had some success if they make life better for families. In this context, some of the proposals from the group AWARE, prepared in advance of the 2013 policy changes, deserve mention. One recommendation of AWARE was to convert paid childcare leave into leave for the care of dependents, who may include older children and elderly parents. Another was to widen access
to childcare subsidies, motherhood benefits and housing benefits to include all parents (eliminating the current discrimination against unwed mothers), and stay-at-home mothers and fathers, whether married or single. AWARE noted that “the current exclusion of unmarried parents from certain housing benefits, parental leave, subsidies and bonuses are not only unfair but they hurt the families who most need the support”. (AWARE, 2012).

The Singapore experience of initiating pro-marriage policies can perhaps be examined by other countries, because extended (and increasingly, permanent) singlehood is a key contributing factor to ‘ultra-low fertility’ in the various East Asian societies, given that marriage is the gatekeeper of childbirth in these societies.

Feedback from research in Singapore (Sun, 2012) has shown that there was a lack of communication and discussion of policies to the citizenry. Over time, however, consultation has increased, particularly in the preparation of the 2013 policy changes20).

Broadening current channels of communication as well as implementing new ways of outreach will enhance policy formulation and implementation.

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20) During a four-month consultation period prior to the announcement of the Enhanced Marriage and Parenthood Package in January 2013, the National Population and Talent Division received more than 800 items of feedback from community organizations, employers and members of the public.
Korea could explore policies beyond tax-rebates to include some universal children’s fund, which would benefit the child more directly. Singapore had implemented this in the form of the Baby Bonus in 2000. Korea has apparently been unable to implement a similar direct cash reward system due to budget constraints (Suzuki, 2008: 38). Measures to ease re-entry to the labour force following periods of leave related to child care (McDonald, 2002: 440) should be considered by all three countries. More research should be done on the provision of child-friendly environments. Japan seems to be the only country in East Asia to have given gender-equity prominence as an area of policy reform (McDonald, 2002: 441).

In all the East Asian countries, insufficient attention has been paid to housing issues as a factor influencing marriage and family building patterns. While only in Singapore does housing policy actively and deliberately foster marriage by discriminating against singles, the housing situation in other large East Asian cities may de facto be encouraging marriage. Singles are discriminated against in housing policy in other cities such as Tokyo. “Within the Japanese housing system, choices for the unmarried are both limited and limiting” (Ronald and Nakano, 2012: 462), with a proliferation of young singles living in capsule-like rental dwellings. But the poor housing choices facing singles has not prevented the further rise of singlehood. Of course, in East Asia, singles are
expected to live in the family home until marriage, but in the past marriage was universal and occurred at much younger ages than at present. The notion that young people will avoid marriage and take advantage of the cultural norm of continued residence with parents was the basis for the term “parasite singles” in Japan. The issue is complex; in a city such as Hong Kong, where the average size of apartments is very small, it is hard to say who is disadvantaged most by the housing situation—singles or families. Certainly, the shortage and cost of housing that can adequately accommodate a family of, say, three children, is evident in all the East Asian cities.

12. Summary and Conclusions

We will briefly summarize the key findings of this paper

- Singapore was slow to move from anti-natalist to pro-natalist policies, but not as slow as Taiwan or Korea.
- Singapore’s fertility decline from 1997 to 2003 was sharp, and fertility has shown no clear sign of recovery since then. Growing concern on the part of government led to various pro-natalist policies being revised and enhanced in 2004, 2008 and 2013.
- Singapore had a two decades start on Taiwan and Korea in adopting pro-natalist policies (Singapore – 1987; Korea –
2006; Taiwan - 2006)
- The fertility rate in Singapore has not risen appreciably following policy modifications. And it is amongst the lowest in the world. The 2013 policies have not had time to bite, but not much is expected of them by most academic experts. The Singapore government appears to have settled on about 1.6 as its most optimistic target for fertility in the next few years.
- Given that Singapore has adopted more comprehensive pro-natalist measures than the other countries, its experience provides little basis for expecting that pronatalist measures will succeed in other East Asian countries.
- But appropriate comparison in some ways is with large cities in other East Asian countries. Compared with Hong Kong, Shanghai, Beijing, Tokyo, Seoul, Busan, and Taipei, Singapore definitely has higher fertility, though Hong Kong now has higher fertility than the Chinese Singaporeans.
- Singapore does seem to have had a degree of success in limiting the trend towards ever-increasing levels of singleness – though the ways it has done this may not be relevant to other countries, and anyway, a levelling off of singleness rates has not led to increase in fertility.
- Date from the Marriage and Parenthood Survey conducted by the National Population and Talent Division in 2012 suggests that financial costs of raising children and prob-
lems in combining family raising and work are the key “crunch points” for fertility decisions. This suggests that considerably higher financial input by government— in raising baby bonus payments and providing universal childcare along the French model may be essential if fertility levels in Singapore are to be substantially raised.
Chapter 5 Singapore’s pronatalist policies: to what extent have they worked?

[Figure 5-1] TFR Trend of Selected East Asian Countries 1970-2010

Data: UN Population Division, CEPD- Council for Economic Planning and Development, Republic of China, Taiwan

[Figure 5-2] Trends in Total Fertility Rates—Selected East Asian Countries, 1995-2012

Data: Jones, 2007, Table 1, updated from official sources for each country
[Figure 5-3] Trends in Proportion Single among Women and Men Aged 30–34, 1970–2010

Data: Statistical Survey Department, Statistical Bureau, Ministry of Internal Affairs and Communications, Japan.
Calculation from Census and Statistic Department, Hong Kong Special Administrative Region.
Ministry of the Interior, Republic of China (Taiwan).
Singapore Department of statistics: Population Trend 2011
UNPD 2012
Chapter 5 Singapore’s pronatalist policies: to what extent have they worked? 193

<table>
<thead>
<tr>
<th>Year</th>
<th>Singapore</th>
<th>(Singapore Chinese)</th>
<th>South Korea</th>
<th>Taiwan</th>
<th>Japan</th>
<th>Hong Kong SAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>1.67</td>
<td>1.60</td>
<td>1.64</td>
<td>1.78</td>
<td>1.42</td>
<td>n.a.</td>
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<td>1.54</td>
<td>1.70</td>
<td>1.76</td>
<td>1.43</td>
<td>1.19</td>
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<tr>
<td>1997</td>
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<td>1.53</td>
<td>1.54</td>
<td>1.77</td>
<td>1.39</td>
<td>1.12</td>
</tr>
<tr>
<td>1998 (tiger)</td>
<td>1.47</td>
<td>1.29</td>
<td>1.47</td>
<td>1.47</td>
<td>1.38</td>
<td>1.02</td>
</tr>
<tr>
<td>1999</td>
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<td>1.30</td>
<td>1.42</td>
<td>1.56</td>
<td>1.34</td>
<td>0.98</td>
</tr>
<tr>
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<td>1.60</td>
<td>1.43</td>
<td>1.47</td>
<td>1.68</td>
<td>1.36</td>
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<td>1.30</td>
<td>1.40</td>
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<td>1.17</td>
<td>1.34</td>
<td>1.32</td>
<td>0.94</td>
</tr>
<tr>
<td>2003</td>
<td>1.25</td>
<td>1.09</td>
<td>1.17</td>
<td>1.24</td>
<td>1.29</td>
<td>0.90</td>
</tr>
<tr>
<td>2004</td>
<td>1.24</td>
<td>1.09</td>
<td>1.16</td>
<td>1.18</td>
<td>1.29</td>
<td>0.93</td>
</tr>
<tr>
<td>2005</td>
<td>1.25</td>
<td>1.10</td>
<td>1.08</td>
<td>1.12</td>
<td>1.25</td>
<td>0.97</td>
</tr>
<tr>
<td>2006</td>
<td>1.26</td>
<td>1.11</td>
<td>1.13</td>
<td>1.12</td>
<td>1.32</td>
<td>0.98</td>
</tr>
<tr>
<td>2007</td>
<td>1.29</td>
<td>1.14</td>
<td>1.26</td>
<td>1.12</td>
<td>1.34</td>
<td>1.02</td>
</tr>
<tr>
<td>2008</td>
<td>1.28</td>
<td>1.14</td>
<td>1.19</td>
<td>1.05</td>
<td>1.37</td>
<td>1.06</td>
</tr>
<tr>
<td>2009</td>
<td>1.22</td>
<td>1.08</td>
<td>1.21</td>
<td>1.03</td>
<td>1.37</td>
<td>1.04</td>
</tr>
<tr>
<td>2010 (tiger)</td>
<td>1.16</td>
<td>1.02</td>
<td>1.22</td>
<td>0.89</td>
<td>1.39</td>
<td>1.10</td>
</tr>
<tr>
<td>2011</td>
<td>1.20</td>
<td>1.08</td>
<td>1.24</td>
<td>1.06</td>
<td>1.39</td>
<td>1.20</td>
</tr>
<tr>
<td>2012 (dragon)</td>
<td>1.29</td>
<td>1.18</td>
<td>1.3</td>
<td>1.26</td>
<td>1.39</td>
<td>1.25</td>
</tr>
</tbody>
</table>

Data: Jones, 2007, Table 1, updated from official sources for each country.
### Table 5-2: Delays in reversing anti-natalist policies, selected East Asian countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Year in which replacement fertility was reached</th>
<th>Year in which anti-natalist policy was reversed</th>
<th>Number of years elapsed</th>
<th>% below replacement when policy reversed</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Korea</td>
<td>1984</td>
<td>1996</td>
<td>12</td>
<td>20</td>
<td>Very mildly pro-natalist policies</td>
</tr>
<tr>
<td>South Korea</td>
<td>1984</td>
<td>2004</td>
<td>20</td>
<td>50</td>
<td>More serious pro-natalist measures</td>
</tr>
<tr>
<td>Taiwan</td>
<td>1984</td>
<td>1992</td>
<td>8</td>
<td>20</td>
<td>Pro-natalist statement but no measures.</td>
</tr>
<tr>
<td>Taiwan</td>
<td>1984</td>
<td>2006</td>
<td>22</td>
<td>47</td>
<td>Specific pro-natalist measures under consideration</td>
</tr>
<tr>
<td>Japan</td>
<td>1973</td>
<td>1994</td>
<td>21</td>
<td>32</td>
<td>Angel plan was introduced in 1994, then revised in 1999 - More forceful pro-natalist measures</td>
</tr>
<tr>
<td>China</td>
<td>1992 (?)</td>
<td>No reversal</td>
<td>21 (+)</td>
<td>25-30% below replacement in 2013; policy</td>
<td></td>
</tr>
</tbody>
</table>
## Singapore’s Pronatalist Policies: To What Extent Have They Worked?

<table>
<thead>
<tr>
<th>Country</th>
<th>Year in which replacement fertility was reached</th>
<th>Year in which anti-natalist policy was reversed</th>
<th>Number of years elapsed</th>
<th>% below replacement when policy reversed</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>modified to allow only child to have 2 children after marrying.</td>
</tr>
</tbody>
</table>

[1] Actually, Japan’s TFR was slightly below replacement level as early as the 1950s, but it hovered around that level for two decades, and did not fall definitively below replacement level until 1973.
References


Chang, Kyung-Sup, 2010, South Korea under compressed modernity: familial political economy in transition. Routledge.


National Population and Talent Division, Prime Minister’s Office, Singapore Department of Statistics, Ministry of Home affairs, and Immigration and Checkpoints Authority, 2013, Population in Brief 2013, Singapore: NPTD.
National Population and Talent Division, Prime Minister’s Office, 2013, Marriage & Parenthood Package 2013, Singapore: NPTD.
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<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>(A) Monetary Incentives</td>
<td>“ Have Three or More if you can Afford it”</td>
<td>“ Singapore. A Great Place For Families ”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A1) Income Tax Relief</td>
<td>a) Income Tax Relief Rebates: introduced in 1988, tax reliefs of $750 for the first two children, and $750 for the third child (increased from $500). With effect from 1989, relief of $1500 for the first, second, third, and fourth child.</td>
<td>Unchanged</td>
<td>Unchanged</td>
<td>Qualifying Child Relief(QCR), and Handicapped Child Relief/(HCR): Replacing Income Tax Relief-working. Relief-working parents can claim $4,000 per child for all children under QCR or $5,500 per child under HCR.</td>
<td>Unchanged</td>
</tr>
<tr>
<td></td>
<td>(b) Enhanced Child Relief Scheme:</td>
<td>Working mother’s Child Relief Replaced</td>
<td>Working Mother’s Child Relief: 15 percent of</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Appendix
<table>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Working mothers can claim relief for the first, second, third child and fourth child of 5 percent, 10 percent, 15 percent and 15 percent of their earned income, subject to S$10,000 cap for each child criterion for eligibility was 5 GCE O-Level passes.</td>
<td>Enhanced Child Relief scheme - Working mothers can claim relief for the first, second, third and fourth child of 5 percent, 15 percent, 20 percent, and 25 percent of their earned income. The maximum for each child is S$25,000.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>The amount was raised in 1989 to 15 percent, 20 percent and 25 percent of earned income. For the second, third and fourth child respectively. The cap was S$3,000.</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>A-2) Tax Rebates</td>
<td>(a) Tax Rebate S$20,000 for the third child in 1987 and extended to the fourth child in 1989.</td>
<td>Second-child Tax Rebate Offered on a sliding scale for second child born to</td>
<td>Parenthood Tax Rebate: S$20,000 for the third and fourth child, and $10,000 for the second child. Age requirement</td>
<td>New Parenthood Tax Rebate: S$5,000 for the first child, S$10,000 for the second child and</td>
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<tr>
<td></td>
<td>(b) Delivery and hospitalization expenses for fourth child offset from Against parents earned income: cap $3,000</td>
<td>mother aged below 31, from $20,000 if child was born before age 28 to $5,000 for birth before age 31. for second birth removed.</td>
<td>S$20,000 per child for all subsequent children.</td>
<td></td>
<td>Families with monthly household incomes of $7,500 and below are eligible for an Additional Subsidy, with lower-income families receiving more. Larger families with many dependents can also choose to have their Additional Subsidy computed on a Per Capita Income (PCI) basis.</td>
</tr>
<tr>
<td>A3) Childcare Subsidy</td>
<td>Childcare Subsidy: for children of working mothers, $100/ month for those children who attend full-day childcare for each of the first three preschool children under age 7. Subsidy paid directly to childcare centre rather than to parents. (a) Infant Care Subsidy: given to working mothers who put their infants aged 2-18 months in childcare centres ($150/month for full-day and $75 for half-day). (b) Childcare Subsidy for Non-working Mothers: $75 subsidy for children of non-working mothers enrolling their children in Childcare centres.</td>
<td>(a) Increased Infant Care Subsidy: Monthly subsidy for infant care increased from $150 to $400 (for full-day). (b) Childcare Subsidy for Non-working Mothers: $75 remains at $75 for non-working mothers who enrol their children.</td>
<td>(a) Increased Infant Care Subsidy: Monthly subsidy for infant care increased from $400 to $600 for all children. (b) Increased Childcare Subsidy (19 months to 7 years old): From $150 to a maximum of $300 per month. For non-working mothers, subsidies increased to $150 Per month.</td>
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</tr>
<tr>
<td>A4) Use of Medisave Account (savings in the medical savings account of provident fund savings)</td>
<td>(a) Medisave for Delivery and Hospitalization Charges: Payment of delivery and hospital charges for the third child can be made from Medisave account: S$3,000 maximum (b) Accouchement Fees for Post-partum Sterilization Lower Wards in Government Hospital: waiver of accouchement fees if postpartum sterilization performed after third or higher order birth.</td>
<td>n.a.</td>
<td>(a) Use of Medisave for maternity purposes extended to fourth child: use for pre-delivery and delivery medical expenses for fifth child onwards provided parents have combined Medisave balance of at least $15,000 at the time of delivery. (b) Medisave can be used to pay for expenses associated with assisted conception procedures. Withdrawal limit raised from $4,000 to $6,000, $5,000 and $4,000 for the first three cycles.</td>
<td>(a) Medisave Maternity Package enables parents to withdraw up to S$450 of Medisave for pre-delivery medical expenses for the first four children.</td>
<td>a) Introduction of Medisave Grant for Newborns: Each citizen newborn has a CPF Medisave account opened for him/her, with a Medisave grant of $3,000 deposited. The first $1,500 is deposited after Birth registration, and the remaining $1,500 is deposited in the subsequent year, provided that the child remains enrolled in MediShield or a Medisave-approved Integrated Shield Plan. b) Introduction of Medishield Coverage for Congenital &amp; Neonatal Conditions: Newborns are covered under</td>
</tr>
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<td>-----------------------</td>
</tr>
<tr>
<td>A5) Maid Levy Relief and Reduction</td>
<td>Foreign-maid Levy: Relief for Working Mothers: Income-tax relief equal for two times annual foreign-maid levy paid, for working mothers only (year 1990).</td>
<td>Unchanged</td>
<td>Maid Levy Concession: Monthly maid levy reduced from S$345 to S$250 per foreign maid for families with children younger than 12 years of age, or elderly persons aged 65 and above. Capped at two foreign domestic maids at any one time.</td>
<td>Foreign Domestic Worker Levy Concession Monthly maid levy reduced to $170 per foreign maid for families with children younger than 12 years of age, or elderly persons aged 65 and above. It was then reduced to $95</td>
<td>MediShield from birth with no underwriting, including for congenital and neonatal conditions, so long as their parents do not opt them out.</td>
</tr>
<tr>
<td>A6) Cash Benefits</td>
<td>n.a.</td>
<td>Baby Bonus scheme: Two-tier system--(a) Cash gift S$3,000 for the first and fourth child; (a) Parents receive Baby Bonus scheme: (a) Payout for the first and second child increased to S$4,000.</td>
<td>Baby Bonus scheme: (a) Payout for the first and second child increased to S$4,000.</td>
<td>Baby Bonus scheme: (a) Payout for the first and second child increased to S$4,000.</td>
<td>Parents can enjoy a $145 foreign domestic worker levy concession (increased from $95 previously) if they have a young child aged below 12 years, an elderly family member, or family members with disabilities staying in the same household.</td>
</tr>
</tbody>
</table>
### Pronatalist Policies

<table>
<thead>
<tr>
<th>Year</th>
<th>Policy Area</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1987</td>
<td>Policy revisions</td>
<td>The Child Development Account (CDA) has been extended by 6 years. The government will now give a matching contribution up to S$6,000 for the second child and $12,000 for the third child.</td>
</tr>
<tr>
<td>1993</td>
<td>Policy revisions</td>
<td>The cash benefit for the third and fourth child remains unchanged at S$6,000. The government’s CDA matching contribution is capped at S$12,000 each for the third and fourth child.</td>
</tr>
<tr>
<td>2000</td>
<td>Policy revisions</td>
<td>The cash gift is now given earlier, within 12 months of the child’s birth. The government will now give a matching contribution up to S$6,000 for the first and second child.</td>
</tr>
<tr>
<td>2004</td>
<td>Policy revisions</td>
<td>The CDA has been extended by 6 years. Therefore children born on or after 1 January 2006 continue to have their CDAs open until 31 December of the year.</td>
</tr>
<tr>
<td>2008</td>
<td>Policy revisions</td>
<td>The government will now give a matching contribution up to S$8,000 for the fifth child and beyond. The cash gift is increased to S$6,000 (up from S$4,000) each for the first and second child, and S$8,000 (up from S$6,000) each for the third and fourth child.</td>
</tr>
<tr>
<td>2013</td>
<td>Policy revisions</td>
<td>The government will now give a matching contribution up to S$8,000 for the fifth child and beyond. The cash gift is increased to S$6,000 (up from S$4,000) each for the first and second child, and S$8,000 (up from S$6,000) each for the third and fourth child.</td>
</tr>
<tr>
<td>2016</td>
<td>Policy revisions</td>
<td>The government will now give a matching contribution up to S$8,000 for the fifth child and beyond. The cash gift is increased to S$6,000 (up from S$4,000) each for the first and second child, and S$8,000 (up from S$6,000) each for the third and fourth child.</td>
</tr>
</tbody>
</table>

(a) Co-savings arrangement:
- Children: Savings may be used for all children.
- Total: S$6,000 for the second child and S$12,000 for the third child.

(b) Children: Savings may be used for all children.
- Total: S$6,000 for the second child and S$12,000 for the third child.
<table>
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</tr>
</thead>
<tbody>
<tr>
<td>A7) Grandparent Caregiver Relief</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>Working mothers claim relief of S$3,000 if their parents or parents-in-law take care of their children below age 12.</td>
<td>Unchanged</td>
</tr>
<tr>
<td>Non-monetary Incentives</td>
<td></td>
<td></td>
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<td></td>
<td>Unchanged</td>
</tr>
<tr>
<td>(B) Housing</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>B1) Public Housing</td>
<td>Public Housing Upgrading for Three-child Families:</td>
<td>Public Housing for Newly-weds: Down payment for the CPF Housing Top-Up Grant for Singles Getting Married:</td>
<td>Third Child Priority Scheme: Families with more than two children</td>
<td>Parenthood Priority Scheme: First-timer married couples with they turn 12, instead of 31 December of the year they turn 6. Parents can continue to save into the CDA and use CDA funds for their children and their siblings until 31 December of the year they turn 12.</td>
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<td></td>
<td>The rules were altered to make it easier for families with a third child to sell their three-room or larger apartment and buy a bigger one.</td>
<td>purchase of a four-room flat can be made in two stages, 10 percent when signing the agreement and the other 10 percent when taking possession of the apartment.</td>
<td>Singles who previously received Government-housing grant may apply for top up to quantum given to couples if they decide to marry.</td>
<td>will be included in the first balloting round for HDB. 5 per cent of available flat supply is set aside for this scheme. HDB Top-Up Grant remains.</td>
<td>children (including those expecting a child) are given priority allocation for their HDB flats, as a proportion of flats are set aside for them.</td>
</tr>
<tr>
<td>(C) Education</td>
<td></td>
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</tr>
<tr>
<td>C1) Primary School</td>
<td>Priority for children</td>
<td>Unchanged</td>
<td>Unchanged</td>
<td>Unchanged</td>
<td>Unchanged</td>
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</tr>
<tr>
<td>Registration</td>
<td>from a one-child, two-child, or three-child family. Disincentives against third and higher order births removed.</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>(D) Work-Family Balance</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>D1) Paid Maternity Leave</td>
<td>n.a.</td>
<td>(a) Paid Maternity Leave: Extended to working women giving birth to their fourth child. Leave period lengthened from eight weeks to twelve weeks for the first four births.</td>
<td>(b) Four weeks’ maternity leave for adoptions, to be paid by Government and capped at S$10,000.</td>
<td>Paid Maternity Leave: Increased from twelve to sixteen weeks. The first eight weeks are paid by the employer, and the subsequent half is paid by the government at a S$20,000 cap. The full sixteen weeks are paid for by the government for the third and subsequent confinement, capped at S$40,000.</td>
<td>16 weeks Paid Maternity Leave remains. Now Working fathers are eligible to share 1 week of the 16 weeks of maternity leave, subject to the agreement of the mother. This also known as Shared Parental Leave.</td>
</tr>
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</tr>
<tr>
<td>D2) Paternity Leave for all</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>Introduction of Paternity Leave: Working fathers are eligible for 1 week of paid paternity leave.</td>
</tr>
<tr>
<td>D3) Paid Childcare Leave</td>
<td>n.a.</td>
<td>n.a.</td>
<td>Statutory Childcare Leave: Two days of employer paid childcare leave for each working parent with children under age seven.</td>
<td>Paid childcare leave increased to six days for both working parents.</td>
<td>Parents have 2 days of paid child care leave per year each if they have at least one citizen child aged 7-12 years.</td>
</tr>
<tr>
<td>D4) Adoption Leave</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>Adoption Leave Introduced: Adoptive mothers with an adopted infant aged below 12 months are eligible for 4 weeks of paid adoption leave.</td>
</tr>
<tr>
<td>D5) Unpaid Childcare Leave</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>Unpaid childcare leave for both working parents introduced. Each parent receives</td>
<td>Unchanged</td>
</tr>
<tr>
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</tr>
<tr>
<td>D6) Maternity Protection</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>six days a year for children below age 2.</td>
<td>Employer will be required to pay for maternity leave benefits if employee is: (a) dismissed without sufficient cause within the last six months of pregnancy, or (b) retrenched within the last three months of pregnancy.</td>
</tr>
<tr>
<td>D7) Government-Paid Maternity Benefit</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>Working mothers who are not eligible for maternity leave may apply to receive the Government-Paid Maternity Benefit, as long as they have been in employment for</td>
</tr>
<tr>
<td>-------------------</td>
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<td>-------------------------</td>
</tr>
<tr>
<td>D8) &quot;Work-Life Works!&quot; Fund</td>
<td>n.a.</td>
<td>n.a.</td>
<td>$10 million fund. All private sector organizations can apply for grants from the fund to defray the cost of introducing measures that can help employees to better achieve work-life harmony.</td>
<td>Unchanged</td>
<td>a total of at least 90 days in the 12 months leading up to childbirth. The Work-Life Grant, which is part of the WorkPro programme, provides support to employers to implement work-life strategies, in particular flexible work arrangements to enable their employees to balance work and family commitments.</td>
</tr>
</tbody>
</table>

Adapted from Sun 2012, Yap 2009.
Chapter 6

Below-Replacement Fertility in Japan: Patterns, Factors, and Policy Implications
This paper examines the patterns and factors of Japan’s continuing fertility decline to below replacement, levels so low that its population started to shrink in the mid-2000s. Like many other post-industrial societies, Japan has experienced two fertility transitions, the first a decline from historically high to replacement levels, which occurred shortly after World War II, and the second a decline since the mid-1970s from replacement to very low levels of childbearing. While the first transition was due primarily to declining rates of childbearing among married couples, the second transition has been caused almost entirely by decreasing rates of marriage among the young Japanese. Further, in recent years marital fertility has also started to show signs of decline. Combined with decreases in marriages, this reduction of marital fertility has brought down Japan’s fertility to very low levels.

Why, despite the disturbing implications of ongoing very low fertility for Japan’s labor needs and formidable challenges associated with rapid and extreme population aging and ensuing population shrinkage, are young Japanese women and men not marrying? And why are Japanese couples having so few babies? The paper first examines the trends and patterns of changes in
fertility and nuptiality in postwar Japan. We next look at the social and economic factors associated with these changes in marriage and childbearing. We then look at the trends and patterns of gender division of household labor among Japanese couples at reproductive ages. The paper concludes with discussions of policy responses to these demographic change and their implications.

1. Trends and Patterns of Fertility and Nuptiality

From shortly after World War II to the late 1950s, Japan experienced a sharp downturn in its fertility. In a span of a little over one decade, the birth rate was cut by more than one-half from the TFR of 4.5 children per woman in 1947 to 2.0 in 1957 (National Institute of Population and Social Security Research 2013: 50–51). After this dramatic decline, Japan’s fertility stabilized at a level of 2.0 to 2.2 children per woman until 1974, when it began to decline again. Since the mid-1970s, fertility has been declining to well below replacement, reaching around 1.5 per woman in the early 1990s. Since then, the TFR has never recovered the 1.50 level, decreasing further to 1.3 to 1.4 per woman—the "lowest-low" level according to Kohler, Billari and Ortega (2002)—in the 2000s. Although this continuous decline to below-replacement levels was less dramatic and slower than that of the earlier postwar decline, its demographic and socio-
economic consequences are much important and serious, because it has resulted in rapid and extreme aging and population decline.

These two fertility transitions in postwar Japan are different in character and are associated with different demographic factors. As the age-specific fertility rates in Table 6-1 indicate, the earlier fertility decline occurred not only among women in their prime reproductive years (age 20–34), but also among those aged 35 and above, thereby suggesting a shift from a pattern of prolonged childbearing to one of deliberate stopping of childbearing well before the onset of natural sterility (menopause). In contrast, although the fertility decline to below-replacement levels involved marked decreases in fertility of women in their twenties, it also involved increases in fertility of women in their thirties, suggesting the increasing delay of marriage and childbearing.
An examination of changes in the age pattern of women's marriage provides further evidence that decreasing marriage has played a major role in Japan's fertility decline to below-replacement levels. As the upper panel of Table 6-2 shows, after modest declines during the earlier postwar fertility transition, the proportions never-married among women in their twenties and thirties were relatively stable until the mid-1970s, when they started to increase precipitously. The proportion for women aged 20–24 increased from 69 percent in 1975 to 90 percent in 2010. The increase for women aged 25–29 was sharper, from 18 percent in 1975 to 60 percent in 2010. The corresponding rate of decrease for women in their thirties is even more dramatic, from mere 8 to 35 percent for women aged 30–34 and 5
to 23 percent for women aged 35–39. Further, the celibacy rate, indicated by proportion never-married at age 50, shows a clear sign of increase in recent years: while it was less than 2 percent in the early postwar years, it reached 11 percent in 2010.

(Table 6-2) Percentage Never-Married by Age and Sex: Japan 1950-2010

<table>
<thead>
<tr>
<th>Sex and year</th>
<th>15-19</th>
<th>20-24</th>
<th>25-29</th>
<th>30-34</th>
<th>35-39</th>
<th>40-44</th>
<th>45-49</th>
<th>50</th>
<th>SMAM*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Females</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1950</td>
<td>97</td>
<td>55</td>
<td>15</td>
<td>6</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>23.6</td>
</tr>
<tr>
<td>1955</td>
<td>98</td>
<td>67</td>
<td>21</td>
<td>8</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>24.7</td>
</tr>
<tr>
<td>1960</td>
<td>99</td>
<td>68</td>
<td>22</td>
<td>9</td>
<td>6</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>25.0</td>
</tr>
<tr>
<td>1965</td>
<td>99</td>
<td>68</td>
<td>18</td>
<td>9</td>
<td>7</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>24.8</td>
</tr>
<tr>
<td>1970</td>
<td>98</td>
<td>72</td>
<td>18</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>24.7</td>
</tr>
<tr>
<td>1975</td>
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<td>21</td>
<td>8</td>
<td>5</td>
<td>5</td>
<td>4</td>
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<td>24.5</td>
</tr>
<tr>
<td>1980</td>
<td>99</td>
<td>78</td>
<td>24</td>
<td>9</td>
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<td>4</td>
<td>4</td>
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<tr>
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<td>81</td>
<td>31</td>
<td>10</td>
<td>7</td>
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<td>4</td>
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</tr>
<tr>
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<td>98</td>
<td>85</td>
<td>40</td>
<td>14</td>
<td>8</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>26.9</td>
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<tr>
<td>1995</td>
<td>99</td>
<td>86</td>
<td>48</td>
<td>20</td>
<td>10</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>27.6</td>
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<tr>
<td>2000</td>
<td>99</td>
<td>88</td>
<td>54</td>
<td>27</td>
<td>14</td>
<td>9</td>
<td>6</td>
<td>6</td>
<td>28.6</td>
</tr>
<tr>
<td>2005</td>
<td>99</td>
<td>89</td>
<td>59</td>
<td>32</td>
<td>18</td>
<td>12</td>
<td>8</td>
<td>7</td>
<td>29.4</td>
</tr>
<tr>
<td>2010</td>
<td>99</td>
<td>90</td>
<td>60</td>
<td>35</td>
<td>23</td>
<td>17</td>
<td>13</td>
<td>11</td>
<td>29.7</td>
</tr>
<tr>
<td>Males</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1950</td>
<td>100</td>
<td>83</td>
<td>35</td>
<td>8</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>26.2</td>
</tr>
<tr>
<td>1955</td>
<td>100</td>
<td>90</td>
<td>41</td>
<td>9</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>27.0</td>
</tr>
<tr>
<td>1960</td>
<td>100</td>
<td>92</td>
<td>46</td>
<td>10</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>27.4</td>
</tr>
<tr>
<td>1965</td>
<td>100</td>
<td>90</td>
<td>46</td>
<td>11</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>27.4</td>
</tr>
<tr>
<td>1970</td>
<td>99</td>
<td>90</td>
<td>47</td>
<td>12</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>27.5</td>
</tr>
<tr>
<td>1975</td>
<td>100</td>
<td>88</td>
<td>48</td>
<td>14</td>
<td>6</td>
<td>4</td>
<td>3</td>
<td>2</td>
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<tr>
<td>1980</td>
<td>100</td>
<td>92</td>
<td>55</td>
<td>22</td>
<td>9</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>28.7</td>
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<tr>
<td>1985</td>
<td>99</td>
<td>92</td>
<td>60</td>
<td>28</td>
<td>14</td>
<td>7</td>
<td>5</td>
<td>4</td>
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</tr>
<tr>
<td>1990</td>
<td>99</td>
<td>92</td>
<td>64</td>
<td>33</td>
<td>19</td>
<td>12</td>
<td>7</td>
<td>6</td>
<td>30.4</td>
</tr>
<tr>
<td>1995</td>
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<td>93</td>
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<td>11</td>
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<td>30.7</td>
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<tr>
<td>2000</td>
<td>100</td>
<td>93</td>
<td>69</td>
<td>43</td>
<td>26</td>
<td>19</td>
<td>15</td>
<td>13</td>
<td>30.8</td>
</tr>
<tr>
<td>2005</td>
<td>100</td>
<td>94</td>
<td>71</td>
<td>47</td>
<td>31</td>
<td>23</td>
<td>17</td>
<td>16</td>
<td>31.1</td>
</tr>
<tr>
<td>2010</td>
<td>100</td>
<td>94</td>
<td>72</td>
<td>47</td>
<td>36</td>
<td>29</td>
<td>23</td>
<td>20</td>
<td>31.2</td>
</tr>
</tbody>
</table>

Note: a--SMAM is the singulate mean age at marriage, which is calculated from the percentages never-married in each age/age interval.
The tendency of delayed marriage and increasing non-marriage are even more pronounced among Japanese men. The proportion never-married rose from 48 percent in 1975 to 72 percent for men aged 25–29. The corresponding proportion increased more dramatically from 14 to 47 percent for men aged 30–34 and 6 to 36 percent for those aged 35–39. Celibacy also increased much more dramatically among men, from mere 2 percent in 1975 to 20 percent in 2010. This extremely rapid increase of single middle-aged men (and, though to a lesser extent, women) has profound implications not only to fertility and population, but also to economy and society as a whole. Given a very low level of out-of-wedlock childbearing (around 1–2 percent since 1960), these never-married persons are likely to have no children/family to depend on in their old age. As Japan’s social security and welfare schemes have been built with family as the unit, a proliferation of single childless elderly will pose a serious challenge to the country’s social systems.

Declining marriage rate is confirmed by precipitous increases in the singulate mean age at marriage (SMAM) for both sexes after the mid-1970s. As shown in the last column of Table 2, the SMAM was relatively stable at the level of approximately 25 for women and 27 to 28 for men until 1975, but it started to show notable increases thereafter, rising for women from 24.5 in 1975 to 29.7 in 2010 and for men from 28.7 to 31.2.

Although several European countries such as Sweden,
Denmark, Germany and Spain have comparably high or even higher SMAMs in 2010 (UNECE 2013), the mean age at first marriage of Japanese women and men are among the highest in the world today.

Altogether, these numbers clearly indicate the increasing delay of first marriage and rising non-marriage among Japanese women and men at reproductive ages since the mid-1970s. In the Asian context, where marriage have traditionally been universal and most women have typically married by their mid- to late twenties (Smith 1980), the increasing postponement or avoidance of marriage among Japanese women and men are indeed remarkable, and have exerted profound demographic and socioeconomic impacts21). Like many other Asian countries, out-of-wedlock fertility has been very low in Japan, at around 1–2 percent since 1960 (National Institute of Population and Social Security Research 2013: 67). Under this regime of little childbearing outside marriage, delayed marriage and increasing non-marriage have strong negative impacts on fertility because declining marriage directly results in delayed and less childbearing. As shown above, the period that witnessed dramatic fertility declines to very low levels among women at prime childbearing years corresponds to the period that witnessed marked increases in proportions never-married among

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21) Delay of marriage has also been witnessed widely in East and Southeast Asia in recent years. See Jones (1997, 2004).
women in their twenties and thirties. This suggests that Japan’s fertility decline to below-replacement levels since the mid-1970s has been due primarily to decreasing marriages among women and men.

A demographic decomposition of changes in the TFR confirms that Japan’s low fertility since the mid-1970s is indeed caused almost entirely by declining marriage. While approximately 90 percent of the decline in the TFR between 1950 and 1960 was accounted for by the decline in fertility among married couples, the fertility decline from 1975 to 2010 is due almost solely to decreases in the proportions of women currently married, with period marital fertility showing moderate increases.

Although period marital fertility rates rose somewhat since the mid-1970s, the mean completed family size of married women at reproductive ages show signs of decline in recent years. As is shown in the top panel of Table 6-3, the average number of children ever-born began to decline moderately but steadily in the early 1990s among wives married for 10–14 years. On the other hand, among wives married for 15 or more years (i.e., couples considered to have finished their family

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22) For an explanation of the general concept, logic, and mathematical procedure of the demographic decomposition of period rates, see Kitagawa (1955). For applications of the procedure to the studies of fertility change, see Gibson (1976). Iwasawa (2008: 19–49) conducted a demographic decomposition of cohort fertility (cumulative total fertility rates by women’s birth cohort) and found that around 70 percent of decline in cohort TFR between women born in 1935 and those born in 1960 was due to delayed marriage and increasing non-marriage.
building), the average family size generally corresponds to the average intended number of children (see the middle panel of Table 3). This suggests that while completed family size of Japanese couples has been decreasing since the early 1990s, they in general achieve their targeted family size. Yet, as shown by the top and bottom panels of Table 6-3, although ideal family size (that wives report as ideal to them and their husbands) tends to be somewhat smaller among recently married couples, the mean ideal family size is considerably larger than the average number of children couples actually have even among those who have been married for 10 or more years. This in turn suggests that, as found by a recent empirical study (Tsuya et al. 2013b), a considerable proportion of Japanese couples do not have as many children as they want.
(Table 6-3) Average Number of Children Ever-Born, Intended Number of Children, and Ideal Number of Children by Duration of Marriage: Currently Married Women under Age 50 in Japan 1977~2010

<table>
<thead>
<tr>
<th>Marital duration</th>
<th>0-4 years</th>
<th>5-9 years</th>
<th>10-14 years</th>
<th>15-19 years</th>
<th>20+ years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children ever-born</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1977</td>
<td>0.93</td>
<td>1.93</td>
<td>2.17</td>
<td>2.19</td>
<td>2.30</td>
</tr>
<tr>
<td>1982</td>
<td>0.80</td>
<td>1.95</td>
<td>2.16</td>
<td>2.23</td>
<td>2.24</td>
</tr>
<tr>
<td>1987</td>
<td>0.93</td>
<td>1.97</td>
<td>2.16</td>
<td>2.19</td>
<td>2.30</td>
</tr>
<tr>
<td>1992</td>
<td>0.80</td>
<td>1.84</td>
<td>2.19</td>
<td>2.21</td>
<td>2.21</td>
</tr>
<tr>
<td>1997</td>
<td>0.71</td>
<td>1.75</td>
<td>2.10</td>
<td>2.21</td>
<td>2.24</td>
</tr>
<tr>
<td>2002</td>
<td>0.75</td>
<td>1.71</td>
<td>2.04</td>
<td>2.23</td>
<td>2.32</td>
</tr>
<tr>
<td>2005</td>
<td>0.80</td>
<td>1.63</td>
<td>1.98</td>
<td>2.09</td>
<td>2.30</td>
</tr>
<tr>
<td>2010</td>
<td>0.71</td>
<td>1.60</td>
<td>1.88</td>
<td>1.96</td>
<td>2.22</td>
</tr>
<tr>
<td>Intended number of children</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1977</td>
<td>2.08</td>
<td>2.17</td>
<td>2.18</td>
<td>2.13</td>
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</tr>
<tr>
<td>1982</td>
<td>2.22</td>
<td>2.21</td>
<td>2.18</td>
<td>2.21</td>
<td>2.20</td>
</tr>
<tr>
<td>1987</td>
<td>2.28</td>
<td>2.26</td>
<td>2.20</td>
<td>2.18</td>
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</tr>
<tr>
<td>1992</td>
<td>2.14</td>
<td>2.19</td>
<td>2.25</td>
<td>2.18</td>
<td>2.18</td>
</tr>
<tr>
<td>1997</td>
<td>2.12</td>
<td>2.12</td>
<td>2.18</td>
<td>2.23</td>
<td>2.19</td>
</tr>
<tr>
<td>2002</td>
<td>1.99</td>
<td>2.07</td>
<td>2.10</td>
<td>2.22</td>
<td>2.28</td>
</tr>
<tr>
<td>2005</td>
<td>2.05</td>
<td>2.05</td>
<td>2.06</td>
<td>2.11</td>
<td>2.30</td>
</tr>
<tr>
<td>2010</td>
<td>2.08</td>
<td>2.09</td>
<td>2.01</td>
<td>1.99</td>
<td>2.23</td>
</tr>
<tr>
<td>Ideal number of children*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1977</td>
<td>2.42</td>
<td>2.56</td>
<td>2.68</td>
<td>2.67</td>
<td>2.79</td>
</tr>
<tr>
<td>1982</td>
<td>2.49</td>
<td>2.63</td>
<td>2.67</td>
<td>2.66</td>
<td>2.63</td>
</tr>
<tr>
<td>1987</td>
<td>2.51</td>
<td>2.65</td>
<td>2.73</td>
<td>2.70</td>
<td>2.73</td>
</tr>
<tr>
<td>1992</td>
<td>2.40</td>
<td>2.61</td>
<td>2.76</td>
<td>2.71</td>
<td>2.69</td>
</tr>
<tr>
<td>1997</td>
<td>2.33</td>
<td>2.47</td>
<td>2.58</td>
<td>2.60</td>
<td>2.65</td>
</tr>
<tr>
<td>2002</td>
<td>2.31</td>
<td>2.48</td>
<td>2.60</td>
<td>2.69</td>
<td>2.76</td>
</tr>
<tr>
<td>2005</td>
<td>2.30</td>
<td>2.41</td>
<td>2.51</td>
<td>2.56</td>
<td>2.62</td>
</tr>
<tr>
<td>2010</td>
<td>2.30</td>
<td>2.38</td>
<td>2.42</td>
<td>2.42</td>
<td>2.58</td>
</tr>
</tbody>
</table>

Note: a—Ideal number of children that a currently married female respondent reported for her husband and herself.

Altogether, these findings suggest that we have to examine social and economic correlates of delayed marriage and increasing non-marriage to explain Japan's low fertility since the
mid-1970s. For this reason, in the following sections we will look at changes in educational attainment, employment, and gender relations at home—socioeconomic and family factors thought responsible for changing marriage behavior of young Japanese women. Given a prospect of further fertility decline caused by decreasing marital fertility in recent years, we will also look at gender relations at home, as related to employment, in order to show the changing relationship, or lack thereof, between work and family life among Japanese couples.

2. Trends in Women’s and Men’s Economic Opportunities

To explore the socioeconomic factors underlying decreasing marriages, we first look at changes in educational attainment of young Japanese women, as compared to their male counterparts. According to existing studies (Raymo 1998, 2003; Tsuya 2009, 2012; Tsuya and Mason 1995), increasing educational attainment of young women is a major factor causing delayed and fewer marriages in Japan after the mid-1970s.

Table 6-4 shows changes, by sex, in the percentages of graduates advancing from junior high school to high school, of high-school graduate advancing to junior college or 4-year college (university). Because Japan’s formal education system is competitive and tracked with strong age barriers, people rarely have the luxury of alternating their commitments between edu-
cation and other activities, such as employment. Economic and social disadvantages accrue for those who do not succeed in a series of structured 'contests' at specific time points in their educational careers or even at the entrance for the labor market (Brinton 1988; Tsuya and Choe 2004; Turner 1960). As a result, in Japan advancement to higher education and entry to the labor market tend to occur mostly within a narrow span of life course, in one’s late teens and early twenties.

(Table 6-4) Percentages of Graduates Advancing from Junior High School to High School, from High School Going to Junior College, and from High School to 4-Year College, by Sex: Japan 1950~2010

<table>
<thead>
<tr>
<th>Year</th>
<th>Females</th>
<th></th>
<th></th>
<th></th>
<th>Males</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High school</td>
<td>Junior college</td>
<td>4-year college</td>
<td></td>
<td>High school</td>
<td>Junior college</td>
<td>4-year college</td>
<td></td>
</tr>
<tr>
<td>1950</td>
<td>37</td>
<td>--</td>
<td>--</td>
<td></td>
<td>48</td>
<td>--</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>1955</td>
<td>47</td>
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<td>2</td>
<td></td>
<td>56</td>
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<td>13</td>
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</tr>
<tr>
<td>1960</td>
<td>56</td>
<td>3</td>
<td>3</td>
<td></td>
<td>60</td>
<td>1</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>1965</td>
<td>70</td>
<td>7</td>
<td>5</td>
<td></td>
<td>72</td>
<td>2</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>1970</td>
<td>83</td>
<td>11</td>
<td>7</td>
<td></td>
<td>82</td>
<td>2</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>1975</td>
<td>93</td>
<td>20</td>
<td>13</td>
<td></td>
<td>91</td>
<td>3</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>1980</td>
<td>95</td>
<td>21</td>
<td>12</td>
<td></td>
<td>93</td>
<td>2</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>1985</td>
<td>95</td>
<td>21</td>
<td>14</td>
<td></td>
<td>93</td>
<td>2</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>1990</td>
<td>96</td>
<td>22</td>
<td>15</td>
<td></td>
<td>93</td>
<td>2</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>1995</td>
<td>97</td>
<td>25</td>
<td>23</td>
<td></td>
<td>95</td>
<td>2</td>
<td>41</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>97</td>
<td>17</td>
<td>32</td>
<td></td>
<td>96</td>
<td>2</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>98</td>
<td>13</td>
<td>37</td>
<td></td>
<td>97</td>
<td>2</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>98</td>
<td>11</td>
<td>45</td>
<td></td>
<td>98</td>
<td>1</td>
<td>56</td>
<td></td>
</tr>
</tbody>
</table>

Notes: a—Junior high school graduates who advanced onto high school within one year after graduation; figures include those who were working while enrolled in high school but exclude those who were ronin (literally, masterless samurai; this term refers to graduates who have failed in a matriculation and are waiting for another chance to enter a higher-level school).

b—Percentages are computed by dividing the number of persons who entered to junior college or university in a given year with the number of junior high school graduates three years before.

From Table 6-4, we can see that the rate of educational advancement beyond high school increased notably for women between 1970 and 1975, which is just before the onset of fertility decline to below-replacement levels. In the same period, high school education also became virtually universal\(^{23}\).

While a similar leap in the advancement rate from high school to university is seen for men in the same period, the male advancement rate shows moderate declines and stagnation after 1975 to the mid-1990s. Furthermore, whereas the female advancement rate to junior college peaked at around 25 percent in the mid-1990s, the rate of females advancing onto university has continued to increase rapidly and steadily, reaching 46 percent in 2010.

Accordingly, the proportion of young women with junior college or university education increased notably in postwar years with the gain in the 1970s and 1980s being especially dramatic (see Table 6-5). The proportion of women aged 20–24 with higher education increased from 6 percent in 1960, to 17 percent in 1970, and to 40 percent in 1980, reaching 60 percent in 2010. The corresponding proportion for women aged 25–29 rose from mere 4 percent in 1960 to 10 percent in 1970, and then to 26 percent in 1980, reaching 52 percent in 2010.

\(^{23}\) Education through junior high school (9 years of schooling) is compulsory in Japan; junior high school attendance has been almost universal throughout the postwar years (Monbu-kagaku-sho 2012).
(Table 6-5) Percentages of Women Enrolled in or Graduated from Junior College or 4-Year College, by Age: Japan 1960~2010

<table>
<thead>
<tr>
<th>Year</th>
<th>20-24</th>
<th>25-29</th>
<th>30-34</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>6</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>1970</td>
<td>17</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>1980</td>
<td>40</td>
<td>26</td>
<td>17</td>
</tr>
<tr>
<td>1990</td>
<td>47</td>
<td>43</td>
<td>40</td>
</tr>
<tr>
<td>2000</td>
<td>58</td>
<td>51</td>
<td>44</td>
</tr>
<tr>
<td>2010</td>
<td>60</td>
<td>52</td>
<td>52</td>
</tr>
</tbody>
</table>


Altogether, these findings suggest that the educational opportunity structure for women, especially in higher education, has shifted dramatically since 1970, facilitating the rapid expansion of college-level education among young Japanese women. Although the proportion with university education also increased among young men after 1990 (and is still somewhat higher than that of young women), the increases among young women are quicker, more dramatic, and continuous.

How are these gains in educational attainment among young Japanese women related to their employment patterns? Table 6-6, which shows the percentages from 1950 to 2010 of female and male graduates obtaining regular employment (full-time employment with job security and fringe benefits) within one year of graduation by educational level, reveals strikingly different trends for the two lower as opposed to the two higher levels of education. For junior high school and high school graduates, the rate of obtaining regular employment upon
graduation declined precipitously in the 1970s and reached low levels in the 1980s to 1990s, presumably because of the rapid spread of higher education. In contrast, the rate of obtaining regular employment among female graduates from junior college and university increased steadily from 1970 to 1990, with a wide gender gap among university graduates disappearing completely by 1990.

〈Table 6-6〉 Percentages of Graduates Obtaining Regular Employment upon Graduation at Different Educational Levels, by Sex: Japan 1950-2010

<table>
<thead>
<tr>
<th>Sex and year</th>
<th>Junior high school</th>
<th>High school</th>
<th>Junior college</th>
<th>4-year college</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Females</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1950</td>
<td>44</td>
<td>36</td>
<td>--</td>
<td>45</td>
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<tr>
<td>1955</td>
<td>41</td>
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<td>1960</td>
<td>38</td>
<td>59</td>
<td>50</td>
<td>64</td>
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<tr>
<td>1965</td>
<td>26</td>
<td>63</td>
<td>57</td>
<td>67</td>
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<tr>
<td>1970</td>
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<td>1980</td>
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<td>1985</td>
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<td>43</td>
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<td>1990</td>
<td>2</td>
<td>36</td>
<td>88</td>
<td>81</td>
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<tr>
<td>1995</td>
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<td>1</td>
<td>16</td>
<td>57</td>
<td>57</td>
</tr>
<tr>
<td>2005</td>
<td>0</td>
<td>15</td>
<td>67</td>
<td>64</td>
</tr>
<tr>
<td>2010</td>
<td>0</td>
<td>13</td>
<td>67</td>
<td>67</td>
</tr>
<tr>
<td><strong>Males</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1950</td>
<td>46</td>
<td>48</td>
<td>--</td>
<td>64</td>
</tr>
<tr>
<td>1955</td>
<td>43</td>
<td>54</td>
<td>67</td>
<td>75</td>
</tr>
<tr>
<td>1960</td>
<td>40</td>
<td>64</td>
<td>80</td>
<td>86</td>
</tr>
<tr>
<td>1965</td>
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<td>87</td>
</tr>
<tr>
<td>1970</td>
<td>17</td>
<td>55</td>
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<td>83</td>
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<tr>
<td>1975</td>
<td>6</td>
<td>41</td>
<td>76</td>
<td>78</td>
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<tr>
<td>1980</td>
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<td>1990</td>
<td>4</td>
<td>34</td>
<td>73</td>
<td>81</td>
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<tr>
<td>1995</td>
<td>2</td>
<td>28</td>
<td>57</td>
<td>69</td>
</tr>
</tbody>
</table>
The rate of obtaining regular employment decreased drastically, however, for both sexes in all educational strata in the 1990s. This was triggered presumably by the burst of "bubble economy" at the end of the 1980s, which fundamentally altered the nature of the Japanese economy and the types of jobs available to young people. In an attempt to increase their competitiveness and profitability in the face of economic globalization, employers also have begun to move away in the early 1990s from lifetime employment, a long prevalent feature of the postwar Japanese labor market (Cargill, Hutchison and Ito 1997: 91–116). This resulted in the rapid increases of temporary employment such as keiyaku (employment under a fixed-term contract with limited provisions of social insurance) or haken (contract work whereby an agency sends workers to an organization for a specified period) (Igarashi 2009).

Workers with these temporary jobs tend to be young: 61 percent of those employed as keiyaku or haken in 2005 were those aged 15–34 (Statistics Bureau 2005). Another notable phenomenon in the Japanese labor market is an increase of so-called "freeta," young people who do not hold a stable job and hop...
from one temporary job to another (Somusho Tokeikyoku 2005). The worsening of employment prospects of the youth has also been happening in newly industrializing economies in Asia and many industrialized countries in the West (Imai 1999; ILO 2011; Lee 2010; OECD 2002: 129~169). Like in other industrialized countries (Oppenheimer 1994; Oppenheimer, Kalmijn and Lim 1997), this proliferation of temporary employment has likely had a negative impact on marriage and the family in Japan (Igarashi 2009; Kohara 2010) with the negative effects on the likelihood of marriage of increasing temporary employment among young men being especially strong (Tsuya 2012).

Taken together, these findings indicate that notable increases in the entry of highly educated young women into paid employment started shortly before the beginning of Japan’s fertility decline to below-replacement in the mid-1970s and continued throughout the 1980s. This in turn suggests that the increasing regular employment among young women with higher education, the percentage of which rising steadily in the 1970s and the 1980s, is responsible at least in part for Japan’s low fertility. Further, deterioration of the prospect of landing regular employment in the 1990s may have hurt chances and desires of young adults (especially young men) to marry and have children.

To assess how young women and men fare once they enter the labor force, not just immediately after graduating from
school, we next look at changes in age-specific labor force participation rates by sex from 1960 to 2010. As shown in the upper panel of Table 6-7, the labor force participation rate for women age 25–34 increased rapidly after the mid-1970s.

Although a precipitous drop in labor force participation is still seen for women of this age group, thereby sustaining the well-known M-shaped age pattern of Japanese women’s employment, it has become much less notable. This suggests that while there is still a tendency for Japanese women to exit the labor force upon the birth of their first child and reenter it once the last child enters school (Brinton 1988), such a tendency is weakening in recent years, due at least in part to the increasing delay of marriage. Furthermore, though not as dramatically as for women aged 25–34, the labor force participation rate for women in their late thirties and forties also rose substantially during the same period, indicating that employment of married women at reproductive ages has also been increasing.
On the other hand, men’s labor force participation rates have been declining slowly but steadily at all ages in Japan since the late 1990s, with the decreases among men age 25–34 being larger than those of the other age groups (see the lower panel of Table 7). Given that the employment rates of currently married Japanese men age 20–49 being 98 percent or above from the mid-1990s to late 2000s (Tsuya et al. 2013a), this suggests that the proportion who neither work nor seek employ-
ment have been increasing among never-married Japanese men at peak reproductive ages in recent years. This in turn implies that declining men’s job prospects are associated negatively with the likelihood of their first marriage.

Altogether, these findings show that after the mid-1970s women’s paid employment has been rising and possibly prolonging. Given the inherent endogeneity between women’s employment and family formation, it is difficult to estimate the nuptiality and fertility effects of these changes in women’s labor force participation. Nonetheless, as shown by previous studies (Tsuya 2009, 2012), improved educational and labor-market opportunities for young women—combined with decreasing regular employment among young men—may well lie behind their increasing postponement or avoidance of marriage. As we saw above, women’s education has increased rapidly, and increases in paid employment has been notable among women at reproductive ages during the last four decades. Women’s rising economic opportunities in the face of deterioration of men’s employment prospects may foreshadow further retreat from marriage and childbearing.

3. Gender Relations at Home

As shown in the previous section, women’s educational attainment has reached levels comparable to men’s, making pos-
sible an array of previously unavailable life options and, at the same time, providing a window on values that compete with women’s domestic roles. Views supporting traditional gender roles have been eroding in Japan, especially among young-women (Bumpass and Choe 2004; Choe et al. 2012; Lee, Tufiş and Alwin 2010; Retherford, Ogawa and Sakamoto 1996), resulting in a widening gap between young women and men in their expectations about marriage.

A central factor in the context of these socioeconomic and attitudinal changes is the persistence of the traditional gender division of labor in Japanese marriages, which places heavy obligations on women for household maintenance and childcare (Hirao 2001; Tsuya and Choe 2004). Like many Western countries, there has been an increase in paid employment among women at reproductive ages in Japan since the 1970s, as we saw in the previous section. This addition of economic roles to women’s domestic roles has not been offset by notable increases in husbands’ contributions to household tasks, however (Tsuya and Bumpass 1998, 2004; Tsuya et al. 2013a). In many Western countries significant increases in men’s contributions to domestic chores have been widely documented and, as a consequence, the gender gap in household task allocation has narrowed substantially (Bianchi et al. 2000; Fuwa 2004; Gershuny 2000; United Nations, 1991: 101–102, 1995: 132–133, 2010: 211–212). In contrast, according to a series of na-
tional time-use survey data since the mid-1970s, Japanese men’s contributions to household tasks have remained very low and the gender imbalance in the division of household labor appears to be extreme (Tsuya 2010).

Using micro-data drawn from the 1994, 2000 and 2009 national family surveys in Japan, let us examine recent changes in the patterns of household division of labor among currently married women and men age 20–49 and their spouses. First, we look at couples’ housework time. The upper panel of Table 6-8 presents the mean hours that wives and husbands spent each week on core household tasks and husbands' average share of couples' task hours in 1994, 2000, and 2009. As expected, there is a very large gender difference in the hours that spouses spend in housework at all three data points. While wives spent roughly 30 hours per week on household tasks, husbands spend only 2 to 3 hours on such tasks. Even though women universally spend more time on housework than men (Fuwa 2004; Gershuny 2000), the difference here is extreme.

24) Although the comparable time-series information is unavailable, South Korea around 1990 also has a very low level of men’s housework contribution, similar to Japan’s. For more details, see Tsuya (2010).
25) For specifics of the 1994, 2000 and 2009 surveys, see Nihon Daigaku Sogo Kagaku Kenkyusho (1994), Rindfuss et al. (2004), and Tsuya et al. (2013a), respectively.
26) Core housework hours are computed by adding the time devoted to cleaning house, doing laundry, cooking, cleaning after meals, and grocery shopping. Task hours exclude time spent on childcare.
Table 6-8 Mean Hours per Week Spent by Wives and Husbands on Household Tasks and Their Average Combined Workload (Hours on Household Tasks and Employment Combined): Japan 1994, 2000 and 2009

<table>
<thead>
<tr>
<th></th>
<th>1994</th>
<th>2000</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (N)</td>
<td>Mean (N)</td>
<td>Mean (N)</td>
</tr>
<tr>
<td><strong>Household Task Hours</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wives’ hours per week</td>
<td>33.4 (1,210)</td>
<td>28.8 (2,417)</td>
<td>27.4 (1,648)</td>
</tr>
<tr>
<td>Husbands’ hours per week</td>
<td>2.3 (1,224)</td>
<td>2.7 (2,384)</td>
<td>3.4 (1,643)</td>
</tr>
<tr>
<td>Husbands’ share (%)</td>
<td>7.0 (1,202)</td>
<td>9.4 (2,366)</td>
<td>11.8 (1,634)</td>
</tr>
<tr>
<td>% of husbands with no housework</td>
<td>41.9 (1,210)</td>
<td>30.4 (2,384)</td>
<td>22.0 (1,643)</td>
</tr>
<tr>
<td><strong>Combined Workload</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All couples</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wives’ hours per week</td>
<td>54.3 (1,211)</td>
<td>49.7 (2,354)</td>
<td>47.3 (1,627)</td>
</tr>
<tr>
<td>Husbands’ hours per week</td>
<td>53.1 (1,206)</td>
<td>51.3 (2,366)</td>
<td>52.9 (1,633)</td>
</tr>
<tr>
<td>Husbands’ share (%)</td>
<td>50.5 (1,180)</td>
<td>52.2 (2,297)</td>
<td>54.0 (1,610)</td>
</tr>
<tr>
<td>Dual-earner couples only</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wives’ hours per week</td>
<td>66.2 (700)</td>
<td>59.0 (1,388)</td>
<td>57.0 (952)</td>
</tr>
<tr>
<td>Husbands’ hours per week</td>
<td>54.0 (695)</td>
<td>52.5 (1,360)</td>
<td>54.0 (945)</td>
</tr>
<tr>
<td>Husbands’ share (%)</td>
<td>45.3 (690)</td>
<td>47.7 (1,356)</td>
<td>49.2 (943)</td>
</tr>
</tbody>
</table>

Notes: Mean hours and percentages are weighted for 2000 and 2009, but unweighted for 1994; the number of cases are unweighted for all three years.

a—Computed by adding the time devoted to cleaning house, doing laundry, cooking, cleaning after meals, and grocery shopping. Household task hours exclude time spent on childcare.
b—Computed by adding hours spent on household tasks and those on employment.

At the same time, we also see some signs of change in the gender difference in housework time in the Japanese home. Wives’ average total housework hours declined from around 33 hours per week in 1994 to 27 hours in 2009, while the corresponding hours for husbands increased modestly from 2.3 to 3.4 hours. Consequently, husbands’ share in couples’ house-
work time increased from 7 percent to 12 percent. These changes are all for the direction toward more gender balance at home, but the level of husbands’ housework time nonetheless remains very low and the absolute amount of increase in husbands’ contributions is still very small—around 1 hour per week. The increase in husbands’ share of household tasks are due much more to wives’ cutting their own housework time, rather than to increases in husbands’ contributions.

The large decline in wives’ housework time has been due primarily to increasing wives’ employment (Tsuya et al. 2013a), but perhaps in part to changes in standards for household maintenance. The once high "symbolic value" of the housewife role in postwar Japan (Lee, Tufiş and Alwin 2010) may be eroding in the face of increasing wives’ paid employment and financial difficulties experienced by many households. Another notable change is a sizable decline in the proportion of husbands who do not perform any housework: approximately 42 percent in 1994 to 22 percent in 2009. Japanese husbands seem to be increasingly drawn into the domestic arena traditionally considered as female, crossing the symbolic gender barrier associated with doing housework.

As traditional gender-role expectations assign the breadwinning role to husbands, virtually all Japanese husbands at reproductive ages are employed, with little change between 1994 to 2009 (Tsuya et al. 2013a). If the wife is in the paid labor
force, she devotes considerably fewer hours to housework compared to those who are not in it. Husbands, on the other hand, do not appear to increase their housework hours much in response to their wives' employment. Consequently, when we add employment hours to housework hours, we see a very different picture. As shown in the lower panel of Table 6-8, when housework and labor-market hours are considered jointly, the large gender inequality we saw in the division of household labor disappears, and the gender balance becomes over time more favorable toward wives: husbands' average share of combined workload increases from 51 percent in 1994 to 54 percent in 200927).

When we limit our analysis to dual-earner couples, however, the gender division of combined workload remains unfavorable toward women although the gender gap has narrowed during the period under study. These changes—either among all couples or dual-earner couples—in combined workload toward more gender-balanced directions are driven primarily by decreases in wives' workload with husbands' average workload being relatively stable. Nevertheless, large excesses (about 10 hours or more) of the average workload of working wives over that of all wives underscore the difficulties and time pressure

27) Were childcare time included, the gender balance in the average combined workload would likely become less apparent, as a majority (e.g., 61 percent in 2009) of non-working wives has preschool children and these mothers likely spend much more time in childcare than do fathers.
that working wives face in balancing their labor-market and domestic responsibilities.

Finally, we look at the relationship between marriage and the performance of household tasks by comparing never-married and currently married women and men. Table 6–9 presents the percentage distributions and means, by marital status, of the number of hours spent on housework each week in 1994, 2000 and 2009. The most notable features of the table are very large differences by marital status in women’s housework hours and contrasting similarities in men’s hours between the married and the never-married. A large majority (roughly two-thirds) of never-married women spend fewer than 10 hours per week on household tasks, in contrast to their currently-married counterparts who spend, on average, more than three times as long on these tasks, with a sizable proportion (roughly 40–60 per cent) spending 30 hours or more per week. The small numbers of hours that never-married women spend on housework are as expected, providing that more than 80 percent of them live with their parents and their mothers likely take care of most of the housework for them28).

28) Given only about 1–2 percent of births born out of wedlock in Japan (National Institute of Population and Social Security Research 2013: 67), it is highly unlikely that the never-married are doing any childcare.
Table 6-9 Percentage Distribution and Mean of the Number of Hours Spent on Housework per Week of Never-Married and Currently Married Women and Men Age 20-49: Japan 1994, 2000, and 2009

<table>
<thead>
<tr>
<th></th>
<th>1994</th>
<th>2000</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Never-married</td>
<td>Currently married</td>
<td>Never-married</td>
</tr>
<tr>
<td>Women’s housework hours</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zero</td>
<td>9.5</td>
<td>0.2</td>
<td>10.7</td>
</tr>
<tr>
<td>1-4 hours</td>
<td>22.9</td>
<td>0.5</td>
<td>38.5</td>
</tr>
<tr>
<td>5-9 hours</td>
<td>31.9</td>
<td>1.9</td>
<td>25.4</td>
</tr>
<tr>
<td>10-14 hours</td>
<td>10.0</td>
<td>3.3</td>
<td>9.4</td>
</tr>
<tr>
<td>15-19 hours</td>
<td>10.0</td>
<td>9.4</td>
<td>6.2</td>
</tr>
<tr>
<td>20-24 hours</td>
<td>7.6</td>
<td>11.3</td>
<td>4.0</td>
</tr>
<tr>
<td>25-29 hours</td>
<td>1.9</td>
<td>14.7</td>
<td>1.4</td>
</tr>
<tr>
<td>30-39 hours</td>
<td>3.3</td>
<td>28.2</td>
<td>2.8</td>
</tr>
<tr>
<td>40-49 hours</td>
<td>1.4</td>
<td>18.6</td>
<td>1.2</td>
</tr>
<tr>
<td>50 hours or more</td>
<td>1.4</td>
<td>12.0</td>
<td>0.5</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Mean hours per week</td>
<td>10.3</td>
<td>33.4</td>
<td>7.9</td>
</tr>
<tr>
<td>(Number of cases)</td>
<td>(210)</td>
<td>(631)</td>
<td>(875)</td>
</tr>
<tr>
<td>Men’s housework hours</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zero</td>
<td>43.5</td>
<td>36.5</td>
<td>34.3</td>
</tr>
<tr>
<td>1-4 hours</td>
<td>32.3</td>
<td>46.8</td>
<td>44.3</td>
</tr>
<tr>
<td>5-9 hours</td>
<td>15.1</td>
<td>11.6</td>
<td>12.1</td>
</tr>
<tr>
<td>10 hours or more</td>
<td>9.1</td>
<td>5.2</td>
<td>9.2</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Mean hours per week</td>
<td>3.4</td>
<td>2.5</td>
<td>3.4</td>
</tr>
<tr>
<td>(Number of cases)</td>
<td>(232)</td>
<td>(595)</td>
<td>(960)</td>
</tr>
</tbody>
</table>

Notes: All based on self-reporting, percentages and mean hours are weighted for 2000 and 2009, but unweighted for 1994. The numbers of cases are unweighted for all three years.

By contrast, whether they are married or not, men contribute, on average, only around 2 to 4 hours per week to housework. Although the percentage of men who do not perform any household tasks is declining, a large majority (roughly 70–80 percent) of Japanese men continue to spend less than 5 hours
per week on housework. Altogether, these results clearly illustrate a dramatic change in women’s family life resulting from marriage: large increases in the time they spend on household maintenance. By marrying, Japanese women change their position from a receiver of care within household to a primary provider of domestic tasks. Meanwhile, Japanese men remain largely at the receiver end of household tasks with the main provider of such tasks switching from their mothers to their wives.

What does the future hold? Since Japanese husbands are spending relatively little time on housework now, if there is change in their housework efforts, the direction is likely to be upward. For this to occur, we would need to see movement from husbands’ spending a very small number of hours on housework to substantially more. Overall, however, the likelihood for these to occur in the near future seems to be not very high. Japanese husbands spend very long hours in the labor market, but often provide little assistance at home.

Consequently, while men’s life changes little whether or not they are married or have children, whereas women’s lives change dramatically once they become wives and mothers and are now more likely to be combined with long hours of paid employment outside the home.

The gender division of labor is central to the traditional marriage "package" in Japan (Rindfuss 2004), and it has been slow to change. The persistence of unequal gender relations at
home, on one hand, and increasing economic opportunities and rapidly changing attitudes toward gender roles, on the other, make the traditional marriage package particularly unattractive for many young Japanese women. This conflict likely discourages young women from marrying, and wives from having more children. Men too may find the discrepancy between their expectations and those of potential spouses a cause for apprehension about marrying. Hence, making gender relations at home more equal may well be critical not only to Japanese marriage and family, but also to its fertility and population in the future.

4. Policy Responses and Implications

If we are correct in supposing that the increasing delay of marriage and non-marriage in Japan arose, at least in part, from increasing educational and economic opportunities for young women (and men) coupled with changing normative orientations toward marriage and the family, and also from the persistent gender segregation of marital roles in the Japanese home that made young women reluctant to marry and discouraged married women at reproductive ages to have more children, Japan's fertility will remain at very low levels for some time to come. This in turn will expedite the pace of Japan's

29) According to the medium variants of fertility and mortality in Japan's latest
already rapid population aging and population decline. Given the trend in the past decades, educational attainment of young Japanese women is likely to continue to rise further. Entry of young women into career-oriented employment is also expected to increase (Retherford et al. 2001), as the demands for young qualified labor will increase as the population continues to age and shrink (National Institute of Population and Social Security Research 2012a). Changing normative environments have also eroded, both economically and socially, the imperativeness of women’s marriage (Bumpass and Choe 2004; Choe et al. 2012; Retherford et al. 1996).

Hence, the most viable ways to reverse the downward trends of marriage and fertility seems to be through making the gender division of household labor more equal, and helping, policy-wise, Japanese couples balance work and family roles.

Concerned about very low fertility and rapid population aging, the Japanese government has formulated various family policies and programs and promoted them actively since the early 1990s. Like other industrialized countries, these family policies and programs consist of three major components: (1) childcare services, (2) parental leave scheme, and (3) monetary assistance in the form of child allowance (Tsuya 2005).

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official population projection, the country’s population is projected to decrease to around 87 million with roughly 40 percent of it being age 65 and above by 2060 (National Institute of Population and Social Security Research 2012a).
To halt the sliding of fertility to very low levels, the government launched a succession of childcare-related programs and legislations—the Angel Plan of 1994, the New Angel Plan of 1999, the Plus-One Plan of 2002, the Basic Law to Address Low Fertility (Shoshika Shakai Kihon Ho) of 2003, the Strategy to Assist Children and Families (Kodomo to Kazoku wo Ouensuru Nihon Juten Senryaku) of 2007, the Vision for Children and Childcare (Kodomo Kosodate Bijyon) of 2008, and the 2013 Plan to Accelerate the Reduction of Preschool Children in Waiting Lists (Taiki Jido Kaisho Kasokuka Puran)—that were all designed to help parents with preschool children balance their employment and domestic responsibilities by providing more childcare services and encouraging the workplace to become more family friendly (Naikakufu 2012).

However, although the number of slots for children at daycare centers has been increasing since the mid-1990s, the number of children on waiting lists has remained substantial (Kosei-rodo-sho 2013a; Miura 2001), as the employment rate among mothers with preschool children has increased rapidly during this period (Tsuya et al. 2013a). Furthermore, there persist large regional differences in the demand and supply of childcare services. While there tends to be an excess supply (more slots available at daycare centers than applicants) in rural areas, there is an acute shortage of childcare services in large metropolitan areas (Kosei-rodo-sho 2013a; Naikakufu
The increase in the employment rate of mothers with small children has occurred despite, and contributed to, the shortage of affordable childcare services especially in large metropolitan areas, and this shortage has in turn become a major policy concern in Japan today (Kosei-rodo-sho 2010a).

Turning to Japan’s parental leave scheme, the government enacted the Maternity and Childcare Leave Law (Ikuji Kyugyo Ho) in 1992 and revised it in 1995, 2005 and 2009 (Kosei-rodo-sho 2010b). Since the scheme’s beginning in 1992, the duration of parental leave has been, in principle, 12 months (until children’s first birthday)\(^{30}\) and the leave is applicable to working parents covered by the national employment insurance scheme. Although parental leave had been without pay at the beginning, income compensation was introduced in 1995 with the proportion of compensation being 25 percent of monthly pay (prior to the start of leave). The level of compensation was raised to 40 percent in 2002, and then to 50 percent in 2007 (Kosei-rodo-sho 2013b).

The major shortcomings of Japan’s parental leave scheme seem to be its limited coverage, a relatively low level of income compensation, and the lack of legally binding power. As stated above, the leave has been applicable only to working mothers

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\(^{30}\) Due to the 2009 revision of the law, the duration of leave can now be extended to 14 months, instead of 12 months, when both parents take parental leave together (rather than a parent taking a leave without her/his spouse). For specifics, see Kosei-rodo-sho (2010b).
(and fathers) who are covered by the national employment insurance and, to be covered by the insurance, employees have to usually work at least 20 hours per week and are expected to be employed for at least 31 days (Kosei-rodo-sho 2013c).

Consequently, mothers working less than 20 hours per week and/or are employed for a short duration are not eligible. With regard to income compensation, the current level (50 percent of pay prior to the leave) is low compared to many western European countries in which the compensation level has in general been 70 percent or higher (Tsuya 2005). Further, although it has been required since 1995 for all employers to offer parental leave to all eligible employees, there is no legal sanction against non-compliance.

Consequently, the proportion of eligible mothers (female employees who gave birth within last 12 months) taking the parental leave was around 84 percent in 2010 (Kosei-rodo-sho 2013c)\(^{31}\).

Launched originally in 1972, the child allowance scheme (jidou teate seido) had initially been applied to third or higher-order children of households with income below a certain level, and the duration of payment was from children’s birth to their graduation from middle school (Tsuya 2005). Since then, the allowance scheme came to cover lower-order births and

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31) While the proportion of eligible working mothers who took parental leave was 49 percent in 1996, it went up to 72 percent in 2005. The latest available figure is 88 percent in 2011. For details, see Kosei-rodo-sho (2013c).
the amount of allowance has been increased notably since 2000 although it has remained income-tested. Nonetheless, the amount of allowance is still relatively small: as of 2012, it is 15,000 yen (around US$150) per month per child for all children under age 3; it is 10,000 yen for first and second child, and 15,000 yen for third child when children are age 3 and above until they graduate from elementary school; it is 10,000 yen per month per child for all children enrolled in middle school (Kosei-rodo-sho 2013d).

Despite these governmental efforts, however, Japan’s family policy so far appears to have been ineffective in the sense that the strains on couples (especially working mothers) have not yet been alleviated and Japan’s fertility has remained very low.

Comparing 18 member countries, OECD (2001: chapter 4) ranked Japan as the second from the bottom in terms of its policies for "work-family reconciliation" and family-friendly work arrangements32). Given the serious, long-term demographic and socioeconomic consequences of the persistence of low fertility, however, we have no choice but to strengthen policy and society-wide efforts to help women and couples make work and family life more compatible.

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32) Using the relative measures of the contents of government policies for childcare services, maternity and childcare leave, and flexible work arrangements, the OECD specifically points out that Japan’s childcare coverage for children over age 2 and voluntary parental leave offered by firms as particularly insufficient.
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Chapter 7

Economic Issues Relating to Aging in Asian Countries
1. Key Features of Aging in Asia

Countries throughout Asia – and the rest of the world – are experiencing large and systematic changes in their age structure. Understanding the economic implications of the age transition requires some tasks that identify key features, explain why the age transition is occurring, and describe how it varies across countries.

The transition in age structure is summarized in Figure 7-1 by classifying countries on the basis of the age group experiencing the largest absolute increase in population: the number of children (under 25), working-age adults (25-59), or elderly (60 and older). Throughout the 1950s and 1960s, the dominant trend in Asia was the large increase in the number of children. In 1965, Japan was the only country where demographic change was not dominated by the increase in the number of children. The second phase emerged in the 1970s – the increase in the number in the working ages exceeded the increase in the number of children in a growing number of countries. By 1985 more Asian countries were in the second phase of the age transition than the first. During the last few
decades growth in the working-age population has become dominant. In 2004, the peak year, 35 of 41 countries experienced a greater increase in the working-age population than in either the child or elderly population.

Asia is now entering the third phase of the age transition. In most countries, the working age population is adding most to its numbers. In 2010, countries in the second phase outnumbered those in the third phase by three to one. The trend is very clear, however. By 2030, twenty of the forty-one countries will have reached the final phase of the age transition. During
the last year of the projection, the change in the 60-plus population will dominate changes in other age groups in thirty-four countries.

As in other parts of the world, population aging in Asia is due to two factors: lower fertility and longer life expectancy. Before the onset of the transition, birth and death rates were quite high and populations grew relatively slowly or not at all. The demographic transition began in most countries with a decline in death rates. Improvements in mortality were particularly concentrated among children and infants, and this led to substantial growth in the young population. In developing Asia, this transition occurred mainly in the 1950s and the 1960s.

Then birth rates began to decline, and the large birth cohorts of the 1950s and 1960s began to reach maturity starting in the 1970s fueling the growth of the working-age population: phase two of the transition began.

Over time, the decline in death rates has become increasingly concentrated at older ages. People are not only more likely to survive childhood, they are more likely to survive well into retirement. While improvements in mortality rates at older ages have led to more rapid population aging, the most important factor leading to an increase in the share of the old-age population is low fertility. The share of the old-age population in countries like Japan, Korea, and Singapore is projected to reach high levels because low fertility rates will lead to sub-
stantial declines in the working-age population.

Understanding the reasons for population aging is important for identifying solutions. For example, a solution frequently offered for a shrinking working-age population is to extend the retirement age. The logic behind this idea is powerful: if people are living longer they should work longer. This solution is a potentially important response to population aging, but it does not address the low fertility problem\(^{33}\). In many countries the elderly are heavily dependent on workers (taxpayers) who fund public pension and healthcare programs. Low fertility will lead to fewer children and then to fewer taxpayers on whom the elderly can rely.

Although this broad outline of a changing age structure appears to be common to all Asian economies, there is enormous diversity and uncertainty about the path any one of them should take to address it. East Asian and a few Southeast Asian economies are relatively far along in their demographic transitions. Life expectancy has already reached high levels and continues to rise steadily. Fertility has dropped to very low levels in East Asia and is in fact much lower than in the US and in many European countries. Recently, fertility has increased in the lowest fertility countries of Europe, but this has not happened in low-fertility Asia (Goldstein, Sobotka et al. 2009).

\(^{33}\) In addition, as we can see in the later section, delaying retirement may not work very well for many Asian countries.
One notable feature of Asia’s demographic transition is its exceptional speed. While the basic picture is the same worldwide, Asia is aging more rapidly than elsewhere primarily because fertility rates have declined more rapidly than elsewhere. Figure 7-2 illustrates how rapidly some Asian economies are aging and how diverse they are. By 2000, the share of the population aged 65 and older had exceeded 14% only in Japan, entering aged society. But by 2050 a majority of economies in the region will surpass this level, including a number of low-income ones such as Vietnam and Indonesia. India’s elderly population is also expected to be close to 14% by 2050. Korea is experiencing most rapid population aging, by recording the shortest duration of transition from aging to aged society, and from aged to super-aged society.

[Figure 7-2] Aging, aged, and super-aged society of Asia

Note: Aging society (the share of people 65 is over 7%): aged society (over 14%), super-aged society (over 20%).
Data: UN(2013) and Council for Economic Planning and Development Statistics Database.
The percentages of elderly people will more than triple between 2000 and 2050 throughout the Asian region. In only two economies—Japan and the Laos—will the proportion less than double during this period while it will more than double in Brunei, Malaysia, Korea, and actually quadruple in Singapore. This is in stark contrast to the US which is aging at a relatively slow pace due to a relatively high birth rate, a somewhat shorter life expectancy, and a high rate of immigration.

The first group of aging societies in Asia—Japan, Korea, and Taiwan—are all relatively rich, and many of the institutional elements that are important in aging societies are in place. Their governments are stable, relatively efficient, and capable of managing public healthcare systems and pension programs, although even the most advanced Asian economies have encountered difficulties in effectively administering their social security systems. Moreover, the private financial systems in these economies provide a relatively secure economic environment in which workers can accumulate wealth and provide for their own material needs at the end of life.

Asia’s next wave of aging economies may be less prepared to meet these challenges. The speed at which their age structures are changing is unprecedented in human history. In fact, aging is occurring more rapidly than development; hence, they will grow old before they grow rich. The concern is not wealth per se but that the financial and political institutions important in
aging societies may be relatively underdeveloped. This is not what the first group experienced.

2. The Economic Lifecycle and the Support Ratio

The age structure of a population is important due to a fundamental feature of human society: the economic lifecycle. In most societies children and elderly consume much more than they produce through labor. The pattern of the lifecycle deficit varies a lot across countries because countries vary greatly in per capita economic lifecycles as well as population age structure.

Our understanding of the economic lifecycle and the ability to measure resource reallocations across ages have been vastly improved due to the recent development of national transfer accounts (NTA) that measure on the aggregate how people at each age in the lifecycle acquire and use economic resources (Lee, 1994; Mason et al., 2009; R. Lee and Mason 2011). The NTA represent a significant advance because they provide a comprehensive set of measures of production, consumption, savings, and transfers in a manner consistent with national income and product accounts. The NTA also consider the pub-

34) NTA were developed as an international project led by Ronald Lee of the University of California at Berkeley and Andrew Mason of the East-West Center.
35) NTA are estimated relying on a variety of data sources. In addition to national income and product accounts, government financial statistics and government administrative records are used to estimate economy-wide aggregates. Age
lic and private sectors, both of which mediate economic flows across ages, so they can be used to study the implications of population aging for both.

Using NTA data, the economic lifecycle is represented by labor income and consumption by age for Japan and the Philippines in Figure 7-3. The per capita economic lifecycle varies by age because of individual characteristics and behaviors, institutions, and market forces. Productivity increases as children mature and benefit from human capital investments. Subsequently, productivity declines as health deteriorates and disability increases. Labor force participation, hours worked, and unemployment all vary with age as does their influence on the labor-income profile. Consumption is influenced by preferences, prices, interest rates, income, and public institutions. Both profiles depend on many other historical, cultural, political, social, and economic factors.

Profiles are estimated by making extensive use of administrative records and nationally representative income and expenditure surveys, labor force surveys, health expenditure surveys, and special-purpose household surveys.
[Figure 7-3] Comparison of labor income and consumption by age in Japan (2004) and the Philippines (1999), per capita and aggregate

Notes: Labor income is a broad measure consisting of earnings and benefits received by employees and the estimated value of the labor of the self-employed, including unpaid family workers. Consumption is also a broad measure that includes the value of all goods and services consumed by individuals and by governments on their behalf.

Data: Ogawa et al. (2009) and NTA database.
The economic lifecycle to a large extent reflects population age structure. Essentially, countries are trading a youth deficit for an old-age deficit of similar size over the course of the demographic transition. The Philippines, for example, has a very young population and a very large deficit at young ages. In Japan, which has an older population, the deficit is much larger at older ages compared with the youth deficit: the old-age deficit will grow substantially unless consumption and labor income patterns change radically.

There are, however, several important opportunities for changing course. Between the two points of high dependency in the last three decades, Asia has had an age structure very favorable to rapid economic growth—the first demographic dividend (Bloom and Williamson 1998, Kelley and Schmidt 2001, Mason 2001, and Mason and Lee 2007). This direct impact of the age structure is effectively described as a change in support ratios—the number of workers per person—that is direct and unambiguous. Many Asian and Pacific countries including Bangladesh, India, Indonesia, Pakistan, and Philippines will continue to experience the first demographic dividend as their working-age populations grow relative to their dependent populations. Favorable conditions should persist for at least the next 15 years and, in most cases, for much longer. The magnitude of the demographic dividend depends on age patterns of labor income and consumption, but estimates of these patterns
are not available for most countries. Based, however, on the eight Asian countries for which age profiles have been constructed in the NTA, a substantial demographic dividend can be expected (Table 7-1).

(Table 7-1) Growth in the support ratio during first demographic dividend for selected countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Minimum Support Ratio</th>
<th>Maximum Support Ratio</th>
<th>Support Ratio in 2050</th>
<th>Annual Gain (Max−Min%)</th>
<th>Annual Loss (2050−Max%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>0.69 1982</td>
<td>0.98 2033</td>
<td>0.94</td>
<td>0.69</td>
<td>−0.22</td>
</tr>
<tr>
<td>China</td>
<td>0.75 1972</td>
<td>1.00 2015</td>
<td>0.87</td>
<td>0.66</td>
<td>−0.39</td>
</tr>
<tr>
<td>India</td>
<td>0.75 1973</td>
<td>0.97 2042</td>
<td>0.96</td>
<td>0.37</td>
<td>−0.12</td>
</tr>
<tr>
<td>Indonesia</td>
<td>0.74 1976</td>
<td>0.96 2026</td>
<td>0.91</td>
<td>0.53</td>
<td>−0.26</td>
</tr>
<tr>
<td>Japan</td>
<td>0.69 1950</td>
<td>0.86 1978</td>
<td>0.64</td>
<td>0.78</td>
<td>−0.42</td>
</tr>
<tr>
<td>Korea</td>
<td>0.64 1966</td>
<td>0.93 2010</td>
<td>0.68</td>
<td>0.86</td>
<td>−0.79</td>
</tr>
<tr>
<td>Pakistan</td>
<td>0.71 1986</td>
<td>0.92 2050</td>
<td>0.92</td>
<td>0.42</td>
<td>n.a.</td>
</tr>
<tr>
<td>Philippines</td>
<td>0.68 1969</td>
<td>0.92 2046</td>
<td>0.92</td>
<td>0.40</td>
<td>−0.03</td>
</tr>
<tr>
<td>Thailand</td>
<td>0.71 1971</td>
<td>0.99 2011</td>
<td>0.89</td>
<td>0.84</td>
<td>−0.27</td>
</tr>
<tr>
<td>Vietnam</td>
<td>0.67 1980</td>
<td>0.97 2021</td>
<td>0.89</td>
<td>0.90</td>
<td>−0.30</td>
</tr>
</tbody>
</table>

Data: Mason and Lee (2012)

Over time, the populations of Asia will become increasingly concentrated at older ages where in all cases labor income is quite modest. In part this reflects low levels of employment at older ages, but it also reflects low wages and productivity for older adults. Population aging could serve as a drag on economic growth as the effective number of workers declines rela-
tive to the effective number of consumers. East Asia faces the most serious problems. In Korea, for example, the support ratio is expected to decline by 0.8% per year over the next 40 years. In the absence of measures to compensate for this change, standards of living will be reduced by more than 25% between 2010 and 2050.

A second potential problem caused by population aging is the strain on public transfer systems. The old-age transfer system is relatively underdeveloped in many developing Asian countries, so the effects would be smaller than in Europe, Japan, or Latin America, but the effects will nonetheless be significant. In a business-as-usual simulation, transfers of wealth (or implicit debt) would become 240% of total labor income in East Asia (Mason and Lee 2012). If countries in the region were to shift toward the consumption, labor income, and transfer patterns characteristic of rich countries, implicit debt will increase to much higher levels.

3. Support Systems in Asia

Economic lifecycles are sustainable only because a complex system of institutions and economic mechanisms enables economic resources to flow from surplus ages to deficit ages. Essentially, two economic mechanisms are used for age reallocations: transfers and asset-based reallocations. A defining fea-
ture of transfers is that they involve no explicit quid pro quo. Resources flow from one party to another either voluntarily in the case of most private transfers or involuntarily in the case of public transfers though private transfers may involve implicit contracts enforced by social conventions. Asset-based reallocations rely on inter-temporal exchanges. An asset acquired in one period can be used to support consumption in subsequent periods either by using income from the asset or by disposing of it. When individuals accumulate pension funds or personal savings during their working years and rely on income from and/or the disposal of those assets during retirement, they are relying on asset-based reallocations. Likewise, when individuals borrow to finance education or to buy a car or a home, they are relying on asset-based reallocations to consume more than their current labor income. This means that they must forego consumption in later periods to repay those loans.

Both the public and private sectors mediate economic flows across age groups. The public sector reallocates resources relying on social mandates embodied in laws and regulations and implemented by governments. Education, public pensions, and healthcare programs are important examples of public reallocations. Private sector reallocations are sometimes governed by law but are also governed by voluntary contracts, social conventions, and deeply ingrained behavior patterns that are mediated by markets, households, families, charitable organizations, and
other private institutions.

Familial transfers are the dominant support system for children, not just in Asia. The difference between Asia and non-Asian countries is that in Asia, familial transfers are especially important for supporting the elderly as well. Although in Japan and Korea, the extended family as an institution has declined very rapidly in the last few decades, roughly half the elderly still live with their children. In other Asian countries, the great majority of elderly live with their children, and there is a surprising degree of stability in these arrangements.

The reallocation system varies greatly across countries. An understanding of the pattern of reallocations is of great interest to both academics and policy makers in large part due to a huge policy challenge: countries need to develop social systems and institutions that can provide economic security to their citizens and sustain strong economic growth. Figure 7-4 shows the relative importance in Asian, Latin American, and European economies with available data and in the US of the three ways the elderly fund the gap between what they consume and their labor incomes. Private and public transfers are measured as net transfers—transfers received minus transfers made—relative to consumption in excess of labor income for those 65 and older. Reliance on assets is measured as asset-based reallocations—asset income minus savings—relative to consumption in excess of labor income for those 65 and older. The lifecycle deficit—
consumption minus labor income—must equal net public transfers plus net private transfers plus asset-based reallocations, i.e., the three components of the support systems must add up to 100% (Lee and Mason 2012).

[Figure 7-4] Support systems for people 65 and older for Asian and non-Asian economies

Note: Outside of the triangle represent net outflows, i.e., elderly provide more support to their families than they receive. If values in one support system are outside, values in another support system can be greater than 100%.
Data: NTA database.

There are interesting regional patterns in the support systems. Familial transfers for old age are much more sig-
significant in many Asian economies than in the other economies in Figure 7-5. Familial transfers fund about 45% of the lifecycle deficit for the elderly in Taiwan, 33% in Thailand, and slightly under 20% in China and Korea. Compared with European and Latin American countries, the public sector is generally less important to the elderly in Asia. In the Philippines and Thailand, net public transfers are zero, i.e., the elderly are paying as much in taxes as they are receiving in benefits. In Indonesia, the elderly pay somewhat more in taxes than they receive in benefits. In Korea and Taiwan, net public transfers are funding about 33% of the lifecycle deficits of the elderly. Elderly people in China and Japan rely more on public transfers than do the elderly in the US, but less than the elderly in many European welfare states do.

Assets are an important source of support in all Asian countries except China and Taiwan where transfers are more important. In Indonesia and the Philippines, the elderly rely almost entirely on assets. Certainly some elderly in those economies do depend on familial and public transfers, but as a group, net transfers to the elderly are zero or negative, and asset-based reallocations are equal to or exceed the lifecycle deficit. Thailand’s elderly also rely heavily on assets. In China, asset-based reallocations are the lowest among the Asian economies in this study. The elderly are saving quite a bit, but they also have relatively low asset-based incomes.
There are some interesting savings patterns for Asian countries that require further examination. In the conventional lifecycle savings model, asset-based reallocations follow a simple age pattern: they are negative during the working years as individuals save some portion of their labor incomes and are positive in old age as individuals rely on asset-based income and draw down on their savings to fund consumption. There are elements of this lifecycle model that are supported by NTA estimates. In countries without extensive old-age transfer systems, the elderly do rely heavily on assets to support themselves as shown in Figure 7-5. Available evidence from the NTA and other studies is, however, that the elderly do not in fact dissave. With minor exceptions, the elderly continue to save and often at surprisingly high rates. In other words, the elderly in Asia are relying on asset income and do not dissave to support themselves. Although some have speculated that the elderly in low-income settings might rely more on family transfers than on assets, we did not find this to be the case.

Changes in age structure have a strong effect on financing public transfers: Miller (2011) calculated the fiscal support ratio to assess the pressure those transfers exert on fiscal sustainability. The ratio is calculated holding age-specific public transfer inflows and outflows constant while allowing the population’s age structure to change in accordance with historical estimates and projections. Table 7-2 shows the evolution of the fiscal
support ratio for selected Asian economies using the age profiles of public transfers in NTA data sets. The effective number of taxpayers is calculated by weighting the population in each year using the age profile of per capita taxes paid. The effective number of beneficiaries is calculated using per capita benefits in the base year to weight the population age distribution. The ratio is set at 100 in the base year of 2010 so that all values are expressed relative to the fiscal position in 2010.

(Table 7-2) Fiscal Support Ratios (%) from 1950 to 2050 for selected Asian economies and the United States

<table>
<thead>
<tr>
<th></th>
<th>1950</th>
<th>2010</th>
<th>2020</th>
<th>2030</th>
<th>2050</th>
<th>Year of most favorable age structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>89</td>
<td>100</td>
<td>97</td>
<td>89</td>
<td>82</td>
<td>2012</td>
</tr>
<tr>
<td>India</td>
<td>97</td>
<td>100</td>
<td>102</td>
<td>103</td>
<td>102</td>
<td>2028</td>
</tr>
<tr>
<td>Indonesia</td>
<td>79</td>
<td>100</td>
<td>106</td>
<td>110</td>
<td>108</td>
<td>2033</td>
</tr>
<tr>
<td>Japan</td>
<td>91</td>
<td>100</td>
<td>92</td>
<td>87</td>
<td>74</td>
<td>1976</td>
</tr>
<tr>
<td>Philippines</td>
<td>87</td>
<td>100</td>
<td>106</td>
<td>111</td>
<td>116</td>
<td>2050</td>
</tr>
<tr>
<td>Korea</td>
<td>76</td>
<td>100</td>
<td>97</td>
<td>89</td>
<td>80</td>
<td>2008</td>
</tr>
<tr>
<td>Taiwan</td>
<td>68</td>
<td>100</td>
<td>100</td>
<td>94</td>
<td>78</td>
<td>2015</td>
</tr>
<tr>
<td>Thailand</td>
<td>66</td>
<td>100</td>
<td>104</td>
<td>104</td>
<td>104</td>
<td>2039</td>
</tr>
<tr>
<td>US</td>
<td>99</td>
<td>100</td>
<td>96</td>
<td>92</td>
<td>89</td>
<td>2006</td>
</tr>
</tbody>
</table>

Note: Recalculated based on Miller (2011)
Data: NTA database.

In Japan, population aging combined with the current tax and benefit policies would lead to a 26% decline in the fiscal support ratio by 2050. Thus, taxes must increase, or benefits must decrease, or deficits must increase, or some combination of the three must occur. China, Korea, and Taiwan show somewhat smaller fiscal impacts with an 18% to 22% reduction in the
fiscal support ratio by 2050. In contrast, India, Indonesia, Philippines, and Thailand will see an increase in their fiscal support ratios because net transfers to the elderly are modest or in some cases negative and because changes in their age structures are partially concentrated at ages when net transfers are generally negative. For these four, changes in age structure will relax public sector budget constraints.

The danger, of course, is that countries with favorable demographics will implement generous transfer systems that ultimately prove to be unsustainable. The role of the public sector is, in fact, growing quite rapidly in the region. In Korea, for example, social welfare benefits for the elderly rose sharply over a very short time span.

Medical insurance benefits rose 15.3% annually between 2000 and 2005, and public pension benefits grew by 9% annually during the same period (An et. al. 2011). Such a sharp rise is somewhat exceptional, but low-income countries are also experiencing a rapid increase in per capita public transfers to the elderly. Recognizing the importance of a guaranteed support system for its aging population, in 2006 the Government of Indonesia issued Law No. 40/2004 expanding the social security system to include a national pension system for workers in both the formal and informal sectors (Maliki 2011). In 2009, China committed itself to building a universal public pension system in rural areas funded by individual premiums and gov-
ernment subsidies. The government also made public health insurance available to urban employees in 1998, to rural citizens in 2003, and to urban citizens in 2007 (Li, Chen, and Jiang 2011).

The elderly in Asia are relying less on their families than they did in the past. The question is, what strategy should be used to compensate for the decline in this traditional source of old-age support: developing extensive social welfare systems as in Europe and parts of Latin America or relying more on accumulating personal assets as in the Philippines, Thailand, and the US? The strategy must simultaneously meet both challenges of providing economic security for the elderly and sustaining economic growth.

4. Options for Sustaining Growth in the Face of Population Aging

One strategy for responding to population aging emphasizes capital accumulation. Many of the fundamental insights were established by Modigliani and Brumberg (1954) and Tobin (1967) who explored the implications of the economic lifecycle for savings and investment. The lifecycle has implications for both because the old-age deficit is funded in part by asset-based reallocations. Population aging will lead to an increase in the demand for assets for three reasons. First, to the
extent that longer life expectancy leads to longer retirements, the incentive to accumulate more during the working years will increase. Second, because fertility is lower, fewer resources may be devoted to childrearing and more to saving for retirement. The third reason is simply due to age composition. Older individuals are wealthier because they have had longer to accumulate wealth; hence, a population composed of more old people will have greater wealth per capita.

The strength of the relationship between age structure and capital depends, however, on the nature of the old-age income support system. This idea has been explored in many industrialized countries and to a more limited extent in developing countries. The primary focus has been the possibility that public transfers will crowd out savings (Feldstein 1974, 1998; Gale 1998; and Munnell 1974). These and similar studies inform efforts to evaluate existing transfer systems, to guide the development of new systems, and to anticipate the implications of alternative reform proposals. Social security reform, in particular, has been the subject of an enormous amount of research (Feldstein and Samwick 2001, Feldstein 1998, and Krueger and Kubler 2002).

The evidence suggests that East Asian countries have actively pursued the high savings, high investment paradigm. Singapore is an interesting example because it has institutionalized this approach to aging through its Central Provident Fund in which
Singaporeans are required to save a high fraction of their earnings through mandatory contributions. The fund provides pension benefits and has led to high rates of savings, investment, and economic growth. This is quite different from the public pension systems in Japan, Europe, Latin America and the US that provide for retirees out of current taxes and therefore have no positive growth effects.

The experience of other East Asian countries indicates that mandatory savings may not be required as very high rates of savings have accompanied the age transition in the absence of mandatory schemes. This is certainly true of China today. East Asian economies share two important features: rapid population aging and low reliance on public transfers. Thus, the incentive to save more generated by population aging is not undermined by large public transfers to the elderly (Feldstein 1974, Gale 1998, Lee et al. 2003, and Lee and Mason 2010).

Nevertheless, healthcare for the elderly is a large and increasing cost that is often heavily subsidized by the public sector, and familial transfers to the elderly may be very important in Asia. Thus, aging in Asia may lead to large implicit debts that are shared by taxpayers and the adult children of the elderly. If the needs of a growing elderly population are met through greater reliance on lifecycle savings, population aging will lead to an increase in assets with favorable implications for economic growth. Previous studies and the following analysis show
that through this mechanism, changes in age structure can lead to the second demographic dividend (Mason and Lee 2007), i.e., to higher standards of living that persist long after the favorable effects of the first dividend have ended.

According to estimates by Lee and Mason (2012), population aging will lead to substantial capital deepening, a strategy very much in line with Asia’s traditionally high savings and investment rates. Table 7-3 shows that pension assets in ADB DMCs would rise from 1.2 times total labor income in 2010, to 2.1 times total labor income in 2030, and 2.7 times total labor income in 2050. This capital deepening should provide a boost to economic growth that easily dominates the effects of a declining support ratio.

(Table 7-3) Pension assets relative to labor income in Asia from 2010 to 2050

<table>
<thead>
<tr>
<th></th>
<th>Low income profiles</th>
<th>High income profiles</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2010</td>
<td>2030</td>
</tr>
<tr>
<td>Asian countries</td>
<td>1.6</td>
<td>2.4</td>
</tr>
<tr>
<td>East Asia</td>
<td>1.4</td>
<td>2.4</td>
</tr>
<tr>
<td>South Asia</td>
<td>0.9</td>
<td>1.3</td>
</tr>
<tr>
<td>Southeast Asia</td>
<td>1.1</td>
<td>1.9</td>
</tr>
</tbody>
</table>

Source: Mason and Lee (2012).

Given current patterns of old-age consumption, production, and transfers, the total demand for pension assets will increase very substantially over the coming decades rising from $26 trillion in 2010 to $157 trillion in 2050. Thus, under these circumstances, aging should not depress savings rates. The gross sav-
ings rates required to meet the demand for pension assets will increase from 12.2% of gross domestic product (GDP) from 2010 to 2020 to 15.4% of GDP from 2040 to 2050.

Another possible response to population aging is to scale up investment in human capital. Children rely almost exclusively on transfers to fund their lifecycle deficit, but countries vary in the extent to which those resources are provided through the public sector rather than the private sector. They also vary a great deal in the extent to which transfers are devoted to investments in human capital, i.e. education and healthcare. Asia’s population aging is primarily a consequence of low fertility. The total productivity of the working-age population is not, however, determined exclusively by the number of workers. Total labor income could be raised by increasing the quality of the labor force through investments in human capital (Becker and Barro 1988)

A recent analysis by Lee and Mason (2010) showed that the impact of spending on education is strong enough to offset the adverse effects of population aging, but this conclusion depends on the effectiveness of the investment. Figure 7-6 compares human capital spending per child and the total fertility rate for Asian economies for which estimates are available (Mason, Lee, and Lee 2010). The total fertility rate is the average number of births per woman over her reproductive life given current age-specific birth rates. Human capital spending is
measured in a similar way as the average expenditure on health and education during childhood given current age-specific spending. To facilitate comparisons across economies at very different levels of development, human spending is expressed as a fraction of the average labor income of a working adult aged 30-49. Therefore, the highest level of human capital investment in Figure 7-6: 6.2 for Taiwan—means that human capital spending during childhood is equal to about six years’ worth of the pre-tax labor income of a working-age adult. Note that this value includes both public and private spending on education.

The investment response to population aging naturally integrates sustaining economic growth and providing economic security to the elderly. This is because the high rate of investment is a consequence of workers saving more for their retirement. The situation is very different with human capital. Retirees do not own the human capital in which they have invested: instead it is owned by the children who received it. The only way to recoup the investment is through expanded public transfers. Given current trends in private transfers, it seems unlikely that parents who invest more in their children will be compensated by old-age support directly from their children. The compensation is more likely to take the form of public transfers intermediated by the government. Smaller cohorts of workers would thus pay higher taxes to support the elderly as
compensation for the higher levels of human capital investment they received.

It should be emphasized that the two paths to successfully coping with population aging—investing in physical capital and human capital—are not mutually exclusive. A sound approach to sustaining economic growth and providing economic security for the elderly would strike the right balance between assets and public transfers while promoting high rates of human capital investment. Finally, although this discussion has centered on economic growth and average standards of living, poverty and inequality are also inextricably linked to population aging. Unfortunately, little is known about these issues in Asia though several studies have examined the link between population aging and poverty/inequality in Latin America. One school of thought views inter-generational conflict through the prism of intra-generational inequality. For example, Turra and Holz (2009) using NTA data for Brazil stress a view of government as controlled by class interests in which most public pension benefits are directed to the wealthy elderly and most public tertiary education benefits are directed toward wealthy university students. Although studies for Asia are limited, we hope that enriched microeconomic data can shed light on this issue soon.
5. Korea’s Challenge

There are several serious socioeconomic problems in Korea, such as the rising numbers of disadvantaged households and elderly people, and employment instability. The importance of social policy is highlighted most by its rapid population aging. The speed of population aging of Korea is unprecedented, and the proportion of the elderly in Korea’s population will surpass that of the United States and many European countries in less than two decades. Since many public social policies target the old and the young, the changes in age structure have profound and fundamental implications for social policy.

The challenges resulting from the rapid aging are of particular concern to Korea where the population age structure is changing very rapidly. The challenges facing the rapid population aging are of great concerns to the nation simply because no other societies have faced a demographic transition that is as fast as Korea’s experience. The relative size of Korea’s working-age population will begin to decline in a couple of years. Increasingly, Korea’s population will consist of very few children, not many workers, and many old people. Korea is also entering a stage of slower economic growth. As the country passes through this transition of rapid population aging and slower economic growth, how resources are allocated across generations will become increasingly important.
One interesting feature of Korea’s demographic transition is its diversity by region. Figure 7-5 illustrates how rapidly some regions are aging compared with other regions, and how diverse they are. While the basic picture is the same nationwide, provinces have aged much faster than metropolitan areas. In addition, among provinces, some areas, such as Cholla province, have aged much faster than Chungchong provinces until most recently. This might be in large part due to migration country, although differences in fertility or mortality may play a role too. By 1990, the share of the population aged 65 and older had exceeded 7% in only three provinces, entering aging society. While five provinces entered had entered aged society by 2000, none of the metropolitan areas entered the aged society even until 2010. However, as we can see from the figure, it is projected that urban areas will experience much faster population aging in Korea. By 2030, all regions in Korea will enter the super-aged society.
Intergenerational transfers in Korea is also experiencing the transition era as traditional familial support system deteriorates rapidly and dependency on the social programs expands (An et al. 2011). Economic growth is also moving to a stage of slow speed. Thus, a study of the intergenerational reallocation of economic resources in Korea passing through such transition can draw a sufficient attention.

Some of Korean phenomena are quite interesting and are worthwhile to investigate more in the future due to its important policy implications. Most of all, the life-cycle deficit for the elderly in Korea is not as big as other countries, in part because of the low level of consumption for the elderly. This is
good for Korea because the smaller reallocation of resources toward the elderly will mitigate the financial burden due to the rapid population aging. However, as the recent change in the public sector accounts implies, the net benefit for the aged is increasing. This trend will be reinforced in the future, since the regulatory old-age pension of the National Pension System started to be paid from 2008, which results in the resource redistribution to the older age groups. Thus, the fiscal impact of population aging will be much greater.

In fact, population aging provides both challenges and opportunities to Korea. As the number of children declines, policymakers and families can increase their investment in the health and education of each child, improving child welfare and boosting the productivity of the future workforce. With fewer children to support, the society also has additional resources to save and invest. There is evidence that Koreans have seized this opportunity. Measured relative to labor income, spending on the health and education of children is higher in Korea than in the United States, Latin America, or much of Europe. But it should be noted more than one-half of this spending on young people comes from families rather than the public sector, which could be too much burden for individual household. In addition, the question of the effectiveness and the efficiency of the investment remain.

In the coming decades, the challenge will be to support
Korea’s growing elderly population without overburdening other age groups or slowing economic growth. In the past, elderly Koreans received considerable support as private transfers from their children. Although this type of support was still common in 2000, the elderly today are increasingly supporting themselves from their own assets, built up over a lifetime. And public sector programs are also playing a larger role.

The rapid increase in the social expenditure results in a large upward shift in the age profile of social welfare benefits (Figure 7-6). The upward shift of the age profile is more conspicuous for the old-age groups, due to the increase in the public pension benefits. The sharp increase in the public pension benefits for the aged 60-64 reflects the increase in the number of the newly entitled national pension benefit recipients and the upward shift of the benefits for the aged 65 and older is mainly due to the increase in the pension benefits recipients of the occupational pensions. It is remarkable that the public pension benefits for the aged under 55 decreased for the period 2000-2004, because of the strengthened eligibility of the entitlement to the lump-refund of the national pensions, which are usually given to those in working age groups, who decide to cease the participation into the National Pension System due to the unemployment, emigration and transition to the occupational pension participation. The medical insurance benefit increased which reflects the government’s expansion of the
The recent change in the public sector accounts in Korea implies the increase in the net benefit for the aged. This trend will be reinforced in the future, in large part because the regulatory pension from the National Pension System was paid beginning 2008. The propensity to consume is known to increase by age, which in turn leads to lower national savings. The fall in the savings rates will be accelerated with the rapid population aging. The overall findings suggest that the change in the pub-
lic sector accounts due to change in fiscal policy stance in the last decade in Korea will substantially affect the private sector accounts. The investigation of interaction between public and private accounts will be an important agenda for the future research.

6. Some Simulation Exercise

Many governments around the world have considered policies to reduce the economic impact of future population aging. One of the pension reforms has been to increase the pension eligibility age. For example, the normal retirement age (full pensionable age) at which full benefits are payable remained at 65 in the U.S. for many years. However, according to the Social Security Amendments of 1983, beginning with people born in 1938 or later, that age has been gradually increased so that it reaches 67 for people born after 1959. Recently Korean government has considered this kind policy too.

The increase in normal retirement age or a decrease in pension benefits unambiguously improves the fiscal sustainability of a country. However, it is important to note that the overall impact on economy relies on many factors which also depend on individual behavior and productivity by age. What would be the impact of delaying retirement on funding consumption for older people? Figure 7-7 presents the estimation results for
people ages 65-74 on labor income as a source of consumption. Delaying effective (actual) retirement by 2 years has a substantial impact on the labor incomes of the elderly in many countries, but the impact varies a lot by country. The magnitude of the effect is usually larger for countries with high income for elderly and low labor force participation of the elderly. Obviously, work plays a smaller role for the elderly in all European and other economically advanced countries, but the increase in the importance of labor income is substantial for these countries. On average, delaying retirement by 2 years increases the labor income as a source of funding consumption by 17 percent for people ages 65-74. All European countries are above the average. By contrast, all Asian countries except Taiwan and Japan are below the average. Latin America is similar to Asia. The insight from this comparison is somewhat clear. Let us take Korea as an example. Although Korea has quite high activity rates for people ages 65-74, the average labor income of these people is quite low. Thus, just delaying retirement will have a limited implication for solving old-age problems in countries with low income (but high labor force participation) for elderly. That the elderly are earning relatively less in Korea than most developed countries even though Korean elderly have higher labor force participation is a striking result. The lesson to be learned from this is the importance of policies that maintain the productivity of workers as they age.
Figure 7-7] Labor income as a source of funding consumption (%) for people ages 65–74 before and after delaying retirement by 2 years.

Economic variables may also respond to such a policy in several different ways. In a simple lifecycle model, workers might accumulate wealth in anticipation of future needs to support consumption for longer periods of retirement without pension benefits. They may do this through personal saving, employment-based funded pension systems, or publicly funded retirement programs. This response initially leads to higher savings
and lower consumption, but the additional capital is growth enhancing, and eventually income per worker rises. Moreover, the incentive structure created by public pension programs can have an additional effect on individual behavior in such a way that individuals delay their retirement. This possibility is supported by previous studies on the link between pay-as-you-go retirement pension benefits and earlier retirement practices (e.g., Gruber and Wise 1999). If workers delay their retirement substantially in response to the policy change, then the aforementioned effect on savings may be muted, since the future need to support consumption for retirement decreases.

7. Conclusions

Population aging presents two important challenges to national and regional leaders everywhere in the world. The first is to develop a socioeconomic system that will provide economic security to the growing number of old people. The second is to encourage and sustain economic growth. How well Asia tackles these two challenges will determine whether the region will be able to revert to its pre-crisis high-growth trajectory in the medium and long term. One strategy for supporting the elderly and achieving strong, sustained growth is to promote investment in physical capital, a strategy very much in line with Asia’s traditionally high savings and investment rates. The other
strategy is to promote investment in human capital to make workers more productive. Parents’ recovery of human capital investments in their children will require taxes and public transfers.

Asian policymakers face a number of difficult obstacles in meeting the two challenges posed by population aging. Asia’s financial systems still lag substantially behind the region’s dynamic real economy, and many Asian countries are saddled with rigid, inflexible labor markets that discourage employers from hiring any workers, let alone older workers. Governments need to put in place policies that are conducive to working, to generating high rates of savings and investment, and to greater investment in human capital. Closer regional cooperation and integration are integral components of such policies.

The sheer speed and scale of Asia’s demographic transition, which is unprecedented in human history, adds a sense of urgency to policymakers’ tasks. While it is true that the more immediate priority for younger countries is to fully take advantage of a still wide-open window of demographic opportunity, they too should start planning for a grayer future. Even though the age structure of 2050 may seem too distant to be relevant today, the policies implemented by today’s governments influence the ability of today’s workers to adequately prepare for retirement. In fact, regardless of their current demographic profiles, countries across the region should prepare as early as
possible to cope with the socio-economic impacts of population aging. They would also do well to learn from the policy mistakes of advanced economies that aged earlier, e.g. fiscally unsustainable public transfers and premature retirement ages. Once inappropriate old-age support policies become entrenched, they are politically almost impossible to reverse as is evident in the vocal opposition to even relatively limited pension reforms in the advanced economies. On the other hand, the failure to spread the fruits of growth to the elderly will not only be socially costly but may adversely affect economic growth by causing political instability.

What lies ahead for the Korean economy in terms of global aging? What are new challenges and opportunities to deal with and/or take advantage of? How should Korea respond effectively to changes in demographic composition? What kind of public policies is needed to do what is best for its economy and by region with special reference to industrial and labor policies? The paper’s general implication for either Asia or Korea is far from addressing all these answers. However, it is clear that the rapid aging is new social risks nationwide in Korea which hinder sustainable growth and social cohesion, and worsening social conflicts. Complicating the response are fiscal burden through rapid increase in welfare expense, inter-generational conflicts, deteriorating familial support system, and poverty of older population. These risks are new social
risks, and market system has limited power to deal with the uncertainty and risks. The elderly are particularly vulnerable in Korea, because the traditional family support system has been deteriorating rapidly. Public pension programs and public health care are obvious, important examples of the pressing needs of the elderly.

These problems call for substantial reform in social policies. The demand for Korean government activities to resolve these problems has reached its peak. Unfortunately, a policy for other regions of the world, such as delaying retirement, does not work very well for Asia, even for an advanced economy like Korea. Likewise, a policy worked for urban areas in Korea may not work for rural areas in Korea. Two lessons to be learned from this result is: 1) the importance of policies that maintain the high income (or productivity) of workers as they age, 2) there may not be one size fit for all policy even within Korea. The policy might have to be tailored and localized by region.
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Chapter 8

Policy responses to Low Fertility and Population Aging: The case of the Netherlands
1. Introduction

Just as many industrialized nations, the Netherlands is has an increasingly aging population and life expectancy, coupled with a rapid decline and postponement of fertility. The Netherlands is a particularly interesting case within Western Europe, having one of the highest population densities in Europe and moderate levels of fertility across the last decades. But how has the Netherlands managed to maintain these moderate levels of fertility? The aim of this paper is to attempt to understand the population trends in the last decades in the Netherlands by focussing on the relationship of fertility in particular with various direct and inadvertent national policy constellations. To position the Dutch context for an international audience, data on the Netherlands will often be compared with other nations in Europe in order to understand the level of uniqueness or similarity.

The first section of the paper presents a comprehensive overview of the population trends and policies in the Netherlands, with a focus on fertility. This is followed by a brief elaboration on the theoretical framework – Coleman’s (1990)
macro-micro-macro theory – which is used to understand the link between institutional policies and constellations, fertility decisions and behaviour at the individual level and how these form the macro-level fertility levels we observe at the national level. Family policies are then examined in more detail, with the recognition that due to a fear of overcrowding and high population density, the Dutch have not been concerned about dropping fertility levels. Other related factors such as family planning, childcare, child allowance and parental leave are then described. In the final part of this section, the strong cultural and normative values about parental – but particularly mother – care and the aversion to women working full-time in this country are discussed.

Not only direct family policies, however, shape fertility intentions and behaviour. For this reason, the second half of the paper is devoted to inadvertent national constellations that have clear influences. The section starts with a description of the paternalistic welfare-state to understand how Dutch gender-roles have emerged with the prominent male-breadwinner and one-and-a-half earner model. The right to part time work and labour market flexibility is also addressed as it is a core feature of the Dutch labour market, which strongly impacts women and their ability to combine work and family. This is followed by an overview of not only how higher levels of education impact family formation, but the role of educational
field of study, education systems and the costs of secondary education. The Netherlands is one of the most non-religious, secular societies in Europe, which arose more recently and has influenced fertility in particularly in higher level parity. The section ends with a reflection on how housing systems and immigration impacts fertility followed by a summary of the most prominent aspects.

2. Key population facts for the Netherlands

The population of the Netherlands has several striking and highly interrelated characteristics: an extremely high population density, an aging population and increased life expectancy, a rapid decline and postponement of fertility decline, and a shift to unmarried consensual unions.

Although it is a relatively small population of around 16.8 million people in 2013, with 484 persons per square kilometre, it has one of the highest population densities in Europe. Since 2000, the Netherlands has experienced continued and rapid population decline, which has been linked to falling birth rates and immigrants and a rise in emigration. The population is expected to remain stable without growth until 2035 at which time it is projected to consistently decline (Garssen and Van Duin 2006; Fokkema et al. 2008).

As with many Western European countries, the Dutch pop-
ulation has experienced an aging population. Figure 8-1 compares the changes in the population composition from 1975 to 2013, illustrating the emergence of an older population. The number of persons aged 65 and older has increased by 1.2 percentage points per decade with the baby-boom generation aged 65 and over projected to grow until 2040, when the percentage of elderly is then expected to reach 24% and remain stable at this level (Garssen and Van Duin 2006).

[Figure 8-1] Changes in the Population Composition 1975 and 2013, The Netherlands

Note: 1975, population, 13.6 million | 2013, population, 16.8 million

In addition to an aging population, there have also been increases in life expectancy, even over the last 10 years. As Figure 8-2 illustrates, since 1991, male life expectancy has increased by just over 5 years, compared to a 2.67 increase to
women. Conversely, as the figure also shows, women have made fewer gains in the average number of years that they are expected to live in good health, which generally remains below men.

[Figure 8-2] Life expectancy and health life expectancy at birth by sex, 1991~2012, The Netherlands

![Graph showing life expectancy and health life expectancy at birth by sex, 1991-2012, The Netherlands.](source: CBS (2013))

Another remarkable change has been the rapid decline in fertility, with the tempo-adjusted total fertility rate (TFR) shown in Figure 8-3 from 1951 to 2009 for selected countries. Until around the early 1960s, the Netherlands stood out for its relatively high fertility rate which was only comparable with high fertility countries such as Ireland, Portugal and Poland. The fig-
ure shows that the Netherlands experienced a ‘baby boom’ from around 1953 to 1964, following rapid fertility decline starting in 1964 with a change in the TFR from 3.065 to 1.713 by 1977. Between 1975 and the mid-1980s it remained low, followed by a relatively steady birth rate just below 2 until 2009. In 1974, the TFR then sunk below the replacement level of 2 and has never returned above that level. Although below the levels of the US and Sweden, the Netherlands sits in a ‘middle-range’ of fertility levels in Europe, with higher levels than in Eastern European countries such as the Russian Federation and Asian countries such as Japan. One reason for the decrease in fertility was attributed to the drop in higher order births over 2 children. Until around 1938, around 40% of Dutch women had three or more children, which was the norm. From around 1939, 2 children rise as the most popular choice with those having three or more children dropping to around 22% in 1945 to 25.7% in 1965 (Berghammer 2009).
Fertility in the Netherlands is also characterized by extremely late fertility with the Netherlands having the oldest first-time mothers in the world. Figure 8-4 shows that the age at first birth for women in the Netherlands is now over 29, which has increased steadily since the 1970s. Another characteristic is that Dutch women have compressed fertility and generally have their second child quite rapidly with most women who are now in their late 40s having almost 2 children (around 1.87 born in 1957; 1.85 born in 1960 on average) (Fokkema et al. 2008). This remains relatively high in comparison to other European countries.
Partnership formation has likewise undergone some significant changes over the last decades in the Netherlands. This includes the postponement of entry into first partnership, postponing and forgoing marriage and differences in the level of symbolic and legal commitment by relationship type (Liebброer & Dijkstra 2000; Poortman & Mills 2012). Between the late 1980s and late 1990s, the share of people aged 25 and over who entered consensual unions without being married more than doubled (see Figure 8-5). This has only continued to increase over the last decades. The rise for women in the younger age categories (20-24) represents the fact that they generally live with men who are a few years old. Another striking devel-
opment is that not only are more and more people living together without being married, but they also do so for a longer period of time. The Netherlands has experienced not only an increasing number of couples who postpone marriage, but a smaller proportion who eventually marry. This is attributed to changes in Dutch partnership laws such as registered partnerships and cohabitation contracts in the late 1990s, which no longer mean that individuals need to get married for legal reasons or in relation to clarifying the rights of children. This has also meant a surge in the number of children born in consensual unions, which is now over one in five.

[Figure 8-5] Rise in unmarried cohabitation, 1988 to 1998

Data: CBS(2001)
3. Towards a theory of system-related fertility change

In order to understand how different national constellations policy might impact the population and fertility levels, it is essential to have an underlying understanding of how this link might occur. It is implausible to assume that macro-level (or institutional, national) policies lead directly to the macro-level fertility rates that we observe. It is therefore useful to adopt Coleman’s (1990) macro-micro-macro model to understand the link between macro-level systems, micro-level intentions, decision-making processes and behaviour and in turn, macro-level national fertility levels. Following Coleman (1990) the macro-level consists of the social system, which as shown in Figure 8-6, I opt to divide into several distinct parts that are specifically either directly or indirectly to fertility decision-making and behaviour. To understand micro-level processes of fertility decision-making and behaviour generally demands more detailed micro-or individual-level theories such as rational choice, human capital or the theory of planned behaviour (Balbo, Billari & Mills 2013).

What is central in this model is that the different levels of the analyses are causally linked which is a useful heuristic to understand how macro-level systems at the national levels serve as an antecedent to micro- and macro-level consequences. It also clarifies that macro-level fertility outcomes can only be
described by linking them to a micro-level analysis.

[Figure 8-6] Theoretical macro-micro-macro framework to understand how national level institutions impact observed fertility levels

The remaining discussion now goes into more detail of how direct and perhaps even inadvertent policies and institutional changes have developed in the Netherlands.

4. Family policies

1) Direct fertility policy: Fear of overcrowding and a stable population

Although several European countries have been concerned about low fertility levels, the Dutch government has never perceived the fertility levels as too low, nor has it ever taken any
pronatalist steps or policies. Due the high population density and disturbing population forecasts in the 1970s, the Dutch government remained concerned about overpopulation. As Fokkema et al. (2008) chronicle, a Royal commission on population in 1977 concluded that the natural population growth should be stifled and argued for the advantages of a stable population. This was repeatedly supported in the parliament and even official government statements have argued: “in the longer run a stationary population is viewed as desirable” (Government of the Netherlands 1999: 135).

The general opinion about population growth and overcrowding is also often in the public debate, generally in relation to the recent migration. Survey data also shows that it is the only European country where a many people would like to have a lower population (e.g., Kontula & Miettinen, 2005). Dorbritz, Höhn & Naderi (2005) with only one-fifth of the Dutch population perceiving the drop in birth rates as negative.

Although the Dutch government has never promulgated direct fertility policies, as this section and the following section on indirect policies detail, there are a myriad of institutional features that impact fertility in either an intended or unintended manner. This includes family-related policies, often aimed at work-family reconciliation and aiding women to enter the labour market, but there are also indirect national-level factors such as employment protection legislation and the cost
of higher education of students that either enhance or hamper fertility.

2) Family Planning: Contraceptive use and abortion

Until the 1960s, contraceptive use was forbidden and a taboo within the Netherlands. A prohibition was removed on contraceptives in 1969, followed by their coverage by national health insurance in 1971 which ensured for the widespread usage that still persists today (Fokkema et al. 2008). It should be noted, however, that in 2004, national health insurance rules changed and no longer funded free contraceptives to women above the age of 22. The use of reliable birth control became common practice in the Netherlands and still persists today. The pill, which is also the most effective contraceptive method, is the most common technique of birth control, followed by voluntary sterilization, UIDs and to a much lesser extent condom use (Fokkema et al. 2008). The peak usage of the pill is between the ages of 16 and 28, clearly used for effective birth control.

The Netherlands has by far one of the lowest rates of legal induced abortion in Western Europe, which has remained historically low. In 2003, for example, the Dutch rate of legal abortion rose to 8.6, compared to 18.7 in Sweden, 16.5 in France and 68.4 in the Russian Federation (Frejka 2008, Table 8-3). The abortion rate is higher in the four main ethnic minority groups
of Suriname, Netherlands Antilles, Turkey and Morocco, where
is it around three to ten times higher compared to the non-minority population (Beerthuizen 2003: Fokkema et al. 2008).

3) Childcare: Use it, but not too much

The Netherlands has a complicated relationship with formal and informal childcare. Due to the historical development of the welfare state and position of religion, discussed in the final section, there is a strong cultural norm for the care of children by at least one of the biological parents and preferable the mother (Portegijs et al. 2006: Mills & Täht 2010). In fact, it was not until the early 1990s that formalized public childcare was formally introduced or even accessible. In the last decades, the government has continuously searched for a balance and often altered childcare regulations. The central childcare policy was that the government, employers and parents should share the responsibility of childcare (Den Dulk, 2011). A childcare act was introduced in 2005 which formally required the government, employers and parents to equally share the costs of childcare. However, since employers were not formally required to share the costs, many did not contribute. The payment from the Dutch government is income-adjusted, with the government paying a third of childcare costs and an income-adjusted share since 2007.
A striking aspect of childcare usage in the Netherlands in comparison to the rest of Europe is very limited number of hours that children are enrolled in formal care, which is related to the high number of part-time hours that Dutch women work. Figure 8-7 shows the percentage of children under the age of three within formal arrangements and broken down by the time spent in care per week for 2010. Childcare became a central issue in many European countries due to the introduction of Barcelona Targets in 2002 (Mills et al. 2013). Specifically, the intention was to encourage Member States to “remove disincentives to female labour force participation and strive, taking into account the demand for childcare facilities and in line with national patterns of provision, to provide childcare by 2010 to at least 90% of children between 3 years old and the mandatory school age and at least 33% of children under 3 years of age” (Barcelona European Council, 2002). The Figure shows that although the Netherlands meets the Barcelona objective of a 33% coverage rate for children under 3 years of age, the use of formal childcare is predominantly part-time.
Figure 8-7. Percentage of children up to three years of age cared for by formal arrangements by weekly time spent in care, 2010

Note: A number of data points are computed based on small samples and are not considered statistically reliable. These include: BG, CZ, IE, EL, CY, LT, MT, NL, AT, PL, RO, SK, FI, UK, CH, and HR for 30 hours or over; and BG, CZ, DK, DE, EE, EL, CY, LV, LT, HU, MT, AT, PL, PT, RO, SI, SK, FI, IS, No and HR for 1 to 29 hours.
Data: Eurostat, ilc_caindformal, extracted: Nov 15, 2012

Figure 8-8 plots the employment rate of mothers of 0-2 year olds against the full-time formal childcare coverage rate across Europe in 2010. Here we see only a weak relationship between mother’s employment rate and full-time childcare coverage. We see that in the Netherlands, once again stands out with low full-time childcare coverage associated with very low rates of full-time employment.
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[Figure 8-8] Full-time employment rate of mothers and full-time formal childcare arrangements for children up to 3 years old, 2010

Note 1: A number of data points are computed based on small samples and are not considered statistically reliable. These include: AT, BG, CY, CZ, EL, IE, LT, NL, PL, RO, SK, UK, HR, EE, and MT.

Note 2: The four countries which overlapped with each other (with a full-time childcare coverage rate of 18-20% and employment of 38-42%) were ES, BE, LU and FI.

Data: Mills et al. (2013), EU-LFS data 2010 and EU-SILC data 2010

4) Child allowance

Means-tested child allowance has been provided in the Netherlands since 1946, with the minimum level for the first child at almost 60 euros per month (Fokkema & Esveldt 2006). The benefit level also increases with the age of the child with differences set between ages 6 and 12 and is paid until the age of 17 years. Before 1995, child allowances were paid according to the age and number of children in order to provide higher
benefits to large families. During this period, the larger the family size, the higher the benefit level for each child. After 1995, however, this seemingly pronatalist policy was stopped with the allowance paid only according to the age of the child.

5) Parental leave: Maternity and Paternity leave

Women in the Netherlands have a legal entitlement to 16 weeks of maternity leave that is 100% paid leave. Generally, women are required to stop working 4 weeks before the due date and then take around 10 to 12 weeks after the birth of the child. Mothers and fathers are also entitled to further parental leave, which varies by employer with some trade-union or collective agreements allowing some pay, generally for up to one year. A father has the right to two days of paternity leave. Across Europe there is considerable variation in the length of maternity leave with countries such as Sweden, for instance, have seven weeks before and seven weeks after the birth and a flexible parental leave system which can be transferred to the father and extended to 480 days, with up to 80 percent of the salary. The very short maternity leave in the Netherlands may be attributed to why women pull out of the labour market after the birth of a child.
6) Cultural and normative values about parenthood and childcare

The previous figures hint that other factors beyond childcare availability or usage are related to women’s decision to participate in the labour force and have children. Using the European Social Survey (2006), it is possible to situate the Netherlands in a comparative context in relation to cultural and normative values about parenthood and childcare. Figure 8–9 provides a comparative European view of the level of approval, ambivalence (neither approval nor disapproval) and disapproval of whether a woman with a child under three years of age should have a full-time job. Only 50% approve overall that a woman with a child under three should have a full-time job in more than half of the countries. There is also a striking similarity of the level of approval of women with young children working full-time with the actual levels of childcare enrolment and employment shown in the previous figures. The low levels of approval in countries such as the Netherlands, Switzerland, Austria and Germany provide a further indication as to why some childcare and female employment policies may have been ineffective or in some cases non-existent. The negative perception of full-time female employment may operate as a barrier for women’s employment and childcare, but also create a lack of momentum to create policies.
5. Inadvertent national constellations that impact fertility and population

1) The paternalistic welfare-state

The Dutch welfare state emerged out of Keynesian economic policies, with similar government policies introduced in the 1950s and 1960s focusing on the role of the state and corporate institutions in the these policies. During this time, several life course risks were taken away from citizens and families and transferred to the paternalistic authority state institutions, often (co)governed by corporatist institutions such as trade un-
ions or employer’s organizations. The government transferred an ideal of the ‘the good life’ with signals that were a mixture of accepted practices, such as the absence of labor market participation of married women, and the realization of social and political ideals, such as the state pension and insurance against unemployment and disability, the health care plan, and the policies to increase educational attainment (Wielers & Mills 2001). These signals were codified in an increasing number of laws, that assigned citizens an increasing number of rights, and to which they, generally willingly, adapted their life.

During this period, the growth of the full-time housewife was promoted by the government and codified in various regulations. Although this standard division of gender roles was not enforced, the constellation of social security arrangements made certain life choices more attractive and thus prevalent, with little resistance to these options. Although career women were not completely absent in the 1960s, those that did exist were generally unmarried without children. The political, cultural and moral implications of the paternalistic state was put into question in the 1960s by youth and the women’s movement, the latter of which organized it itself around the issue of abortion and then later the division of paid and unpaid labor (Kool-Smit, 1967). The social-democratic government changed its position for more moral liberalism, which was staunchly resisted by the large political group of the Christian-democrats, who abhorred
the idea of individual freedom on moral issues.

A consequence of the paternalistic policies aimed at decommodification of the Dutch welfare state was that the Dutch labor market had very low flexibility, which made it increasingly vulnerable. The economic crises in the 1970s and particularly the 1980s highlighted the growing recognition that the welfare state could no longer fund long durations of unemployment or disability (Mooi-Reci & Mills 2012). The crisis was followed by a considerable job growth, relative stability in job quality, with a clear rise in labor market participation (particularly of women) and flexibilization of the labor market via temporary jobs, part-time employment and the growth of temporary employment agencies.

In 1994 a new government was formed, consisting of social-democrats and liberals. Since 1917 Christian democrats had taken part in all elected governments, several cultural issues that had been pending for decades could now be resolved. The main goal of the new cabinet was, like that of its predecessors, to increase labor market participation, but with framework also changing from a Christian-liberal to a social-liberal legislation. New regulations included the fiscal equality between men and women, expansion of childcare, but also the extension of shop opening hours and the right to part-time work for men and women.
In the middle of the 1990s, employment started to suddenly grow rapidly and particularly the number of part-time jobs, but also the number of hours in part-time jobs. The stagnant Dutch labour market had evolved into a job machine overnight (Visser and Hemerijck, 1997). This created a tight labour market with improvements for workers in flexible jobs. The government developed legislation to drive out wage discrimination in part-time jobs, and to assign the legal ‘right to part-time work’, where every employee was granted to the right to reduce his or her number of work hours. This right was championed by Dutch feminists as a way for women to remain at home and still participate in the labour market. Also, more importantly, part-time workers had the same benefits of full-time workers, such as health care coverage, pensions and other related benefits. These new laws were enacted in 1997 and 2000 respectively (Wielers & Mills 2011). In addition, legislation was developed to reduce the risks of temporary jobs. An employer could extend the temporary contract with an employee for a new period only twice and, at maximum, for a period of 6 years, thus increasing the attractiveness of a fixed contract.

The growth of flexibilization has had mixed effects on the life courses of individuals in the Netherlands. Although the
growth of fixed-term contracts and part-time work permitted youth and women to enter the labor market in large numbers, these jobs were often characteristic of either ‘stop-gap’ jobs for youth or unequal or dead-end jobs for women. The persistence of the ‘modern male breadwinner’ or ‘one-and-a-half’ earner model in the Netherlands where the man works full-time and the female partner works part-time, has meant that men’s employment careers have remained relatively stable. The amount of employment security, ability to enter the labour market and work-life reconciliation is central in the ability for individuals to make long-term binding commitments to have children (Mills & Blossfeld 2005).

3) Unequal pay for unequal work

The Netherlands is truly exceptional in international terms in its high share of part-time jobs. Most women in the Netherlands work in part-time jobs. In 2005 61% of women were working in part-time jobs, in comparison to 15% of the men (SCP, 2006, p.145, based upon OECD). In comparison to men, women are also over-represented in temporary jobs. In 2005, 9% of working women had a temporary contract, in comparison to 7% of men (SCP, 2006, p.82, based upon CBS/EBB). Typical female jobs are jobs in personal services, mostly jobs that are labor-intensive and poorly paid. In the 1980s, Schippers (1987) charac-
terized the situation as one of ‘unequal pay for unequal work’, and this segregation has continued. Kalmijn and Luijkx (2006) and Luijkx, Kalmijn and Muffels (2006), clearly demonstrate that there is certainly is no equality in the careers of Dutch men and women. This inequality becomes particularly problematic for women when a divorce or death of the spouse occurs, making them very vulnerable.

4) Educational level and Field of Study & National Education Systems

4.1) Educational level and fertility

The relationship between the level education and fertility has been a central focus within demography and related social sciences (Rindfuss et al. 1980; 1984; 1996; Begall & Mills 2013). The majority of research has focused on three primary mechanisms linking education and fertility. The mechanism that is examined most often is how achieving higher education (particularly of women) operates to postpone the timing of fertility and particularly the age at first birth (Bulatao & Casterline 2001; Balbo et al. 2013). Longer educational enrolment can also limit the quantum of fertility by leaving a shorter reproductive period to have more children. A second mechanism is one of reverse causation where early fertility may impede higher edu-
cational attainment (Upchurch et al. 2002). Last, fertility and education may be influenced by common unobservable factors, such as fertility preferences and attitude towards family.

Figure 8-10 shows the percentage of women that are childless in relation to the highest level of education in the Netherlands. It clearly shows that childlessness is much higher in women with medium and particularly higher levels of education. This supports a large body of research that has linked postponement and forgoing of parenthood to women’s gains in educational attainment noted above.

[Figure 8–10] Percentage childless by educational level and age group, The Netherlands, 2004

4.2) Education field of study

Women have made considerable gains in achieving higher levels of education, which now exceed that of men in the Netherlands (Mills & Praeg, 2013). An underresearched area that has been increasingly shown to impact fertility and other aspects of women’s life course is not only the level of education that women attain, but also the educational field that they study. The educational field in turn leads to a particular occupational trajectory that may or may not be amenable to combining family and employment.

A growing number of studies have also linked educational and occupational fields to fertility (Hoem, Neyer & Andersson 2006; Lappegård & Ronsen, 2005; Martin-García, 2009; Van Bavel, 2010; Begall & Mills, 2013). All studies show a positive association between ‘classical’ female educational fields such as teaching and health-related studies to higher fertility. Possible explanations for these findings are that it may be either self-selection of women into these jobs due to the better working conditions, more supportive work-family culture in predominantly female occupations (Charles, 2005; Cook & Minotte, 2008; Begall & Mills 2011) and preferences of women with a higher family orientation to opt for occupations with stereotypical feminine qualities such as contact and caring (Van Bavel 2010; Begall & Mills 2013). A second explanation is
that it is socialization and that formative educational institutions infuse particular attitudes and values on young girls and boys. Although it is difficult to distinguish these two processes, Begall & Mills (2013) recently studied the link between educational fields and occupation on fertility in the Netherlands. Examining cohorts born between 1940-85, they found that compared to women with a degree from educational studies (teaching), women who studied technological, economical or cultural subjects had a significantly lower transition to first birth. They likewise found that women who ended up in occupations where there with a higher proportion of women had a significantly faster transition to first birth.

4.3) Educational systems

A further under-evaluated indirect national level impact is the education system and particularly aspects related to how the education prepares youth for the transition to the labour market, the costs of education for parents and the level of competition for prized educational degrees that might lead to educational success.

Firstly, nations differ in their educational systems, but more importantly, how the educational system matches the demands of the labour market (Allmendinger 1989, Mills & Blossfeld 2005; Shavit & Müller 1998). Nations differ in the way they:
differentiate the maximum number of school years attended by all and tracking (stratification), (2) value certificates or ability-based learning (qualificational versus organizational), (3) standardize the quality of education (standardization), and (4) link education with entry into the labour market.

Another important factor is how educational systems track or stream students into particular fields or levels of education and the availability of vocational educational training. The latter has been shown to allow youth to enter the labour market earlier and obtain more stable jobs (Mills & Praeg 2013), which in turn would result in less postponement of fertility.

Secondary education can be divided into three broad categories (Mayer 2004). First, there are general or theoretical programs that do not specifically train youth for an occupation or trade. Countries where over 60% of students are enrolled in this type of upper secondary education include: Hungary, the United Kingdom, Greece, Estonia, Iceland, Ireland and Portugal (OECD 2011: p. 305). The second group is practical on-the-job or pre-vocational or technical training. This provides youth with work experience and prepares them for further vocational or technical education programs. This type of training is quite specific to certain countries such as Ireland and Italy (OECD 2011: p. 305). The third category is combined school-and work-based programmes, where less than 75% of the curriculum is school-based and includes apprenticeship programs or
attendance at both educational institutions and workplace-based locations. It prepares youth for direct entry into specific occupations and does not require additional training.

Previous research has shown that students who have the more general or theoretical education have more difficulties upon entry into the labour market, whereas those with some vocational and educational training (VET) that is—at least partially—workplace-based fare considerably better (Biavaschi et al. 2012). This is attributed to the previous labour market experience of the latter group and the fact that they already have a ‘foot in the door’ into the labour market.

Figure 8-11 shows the transition from school to work for youth in 29 countries across Europe. We see that youth with VET that is at least partially workplace-based make a more rapid transition into starting their first job. These differences are likely also attributed to the structural differences in the educational system. The figure and additional regression analyses (not shown here) also showed that the returns differ by sex (Mills & Praeg 2013).
4.4) State-sponsored Free Education and Limited Competition for Admission

The price that education costs and particularly higher secondary education is likely another crucial factor in parent’s decision-making about whether and how many children they can have. In some countries, education is not only costly, but highly competitive, with parents and students needing to take out personal or student loans to finance their education. In the Netherlands, until 2012 higher and University education was virtually free with students also obtaining a monthly financial payment from the state. Virtually all studies (with the exception of medicine
and some other limited areas) have no additional selection criteria for grades and are required by law to admit all students who have finished the higher level University-streamed level of High School (VWO in Dutch). When weighing fertility choices in the Netherlands, the previous cohorts therefore did not likely view higher education as a prohibitive cost of having children, but rather as a right.

5) Religion: Secularization of Dutch society

Cultural norms and ideational change in addition to secularization was one of the pillars of the second demographic transition (Lesthaeghe 1995), yet in Dutch fertility the role of religion has played a less pivotal role. Previous research has shown a high correlation with religious variables and number of children across various countries (e.g., Adsera 2006). One of the strongest predictors for family size is church attendance (e.g., Westoff 2008; Adsera 2006).

As discussed previously, the Netherlands had one of the highest levels of fertility in Europe until around the early 1960s, comparable to countries such as Ireland. Research has confirmed that these high fertility levels were in fact largely driven by the Catholics in the South of the Netherlands (Van Poppel 1985; Engelen & Hillebrand 1986). As the previous figure showed, there was a relatively dramatic decrease in fertility
over the next decades, but still the Netherlands remained as a country with moderately high levels of fertility with a TFR of 1.72 in 2007 (CBS 2009).

Historically, the Dutch population consisted primarily of Christians, who were geographically divided with Protestants to the North and Catholics in the south with very limited intermarriage. Particularly in the religious schools and churches, pronatalist and pro-family Christian teaching was prevalent (Berghammer 2009). Another force were the regular social meetings of church members and strong social networks that offered exchanges in relation to support, both instrumental and emotional to raise children (Krause et al. 2001). Social support has been shown to be highly relevant to fertility making decisions (e.g., Buehler & Philipov 2005; Balbo & Mills 2012). There was also a strong role and appreciation of motherhood and particularly the primary care of these mothers for their own children and scorn for entry into the labour market.

Until the mid-1960s, Dutch society was characterized by what has been called ‘pillarization’, which started at the end of the nineteenth Century. This meant that Dutch society was highly divided by affiliation to Protestant, Catholic or non-religious ‘Humanist’ beliefs, where societal institutions were highly structured, from social clubs and sports teams to schools (Bryant 1981; Dekker & Ester 1996). As Dutch society became secularized, many people shed these divided institutions, which
now only remnants exist. From the mid-1900s, the Netherlands became a highly secularized, non-religious nation. In fact it has one of the highest levels of non-religious or non-affiliated populations in Europe, which is around 40% or half of the population (Statistics Netherlands 2007: 116). Even of those who state a religious affiliation, church attendance is very low (Berghammer 2009). Due to this secularization, denominational differences in fertility have become negligible since the mid-1960s (Somers & Van Poppel 2003).

6) Housing system

Although often ignored in fertility research, housing regimes can have indirect effects on fertility. Particularly for young individuals who are establishing themselves in the labour market and considering family formation, housing regimes play a role. Housing regimes that may negatively impact fertility decisions are those characterized by difficult housing-market entry. This includes those with high levels of home-ownership, difficulties in accessing mortgages, high housing prices and lack of affordable rentals (Mulder 2006; Mulder & Billari 2009).

Housing markets may also indirectly impact fertility via the restriction they place on the ability to leave the parental home and establish one's own home or cohabiting household with a partner. In the Netherlands, students leave home relatively ear-
ly, often to study and first live in small apartments. This is in contrast to their counterparts in Italy for example, who are often restricted in leaving the parental home and stay considerably longer. However, the notion that a high quality house is necessary for a union, but in particular to have a family remains strong. A common proverb for settling down is ‘huisje, boomtje, beestje’ or ‘house, tree, pet’, which reflects a higher quality and space, which is not always possible in this very small and densely populated country. Several studies have demonstrated that childbirth frequently follows a more from a single-family to house ownership (Feijten & Mulder 2002; Mulder & Wagner 2001). Others have linked delayed childbirth in Southern European countries to the low access to high-quality houses (Castiglioni, & Dalla Zuanna 1994). Very expensive housing could also impact couples’ decisions to have 2 or more children, since it would also entail additional expenses or even a move to larger house. Another theory is that home ownership might actually lower fertility by competing with the high costs of having and rearing children. Studies in the UK have linked home ownership with low rather than high fertility (Hakim 2003; Murphy & Sullivan 1985).

A striking cross-national difference that likely relates to the timing of first births is the distribution of the age at first home ownership. Whereas the peak distribution of homeownership is found in individual’s mid-60s in Italy and Austria, it is 15 years
earlier at around age 50 in the U.S., Canada, the U.K. and Australia (Chirui & Jappelli 2003). The authors attribute this to differences in the financial system and availability of credit.

Restrictive housing markets have also been shown to impact family formation and dissolution. A tight housing market, for instance, has been shown to be related to divorce or separation with homeowners in less likely to divorce than renters (Germany Wagner, 1997; Australia Bracher et al. 1993; Finland Jalovaara 2002). The causality, however, is not straightforward since a joint investment in a house has been shown to also be a reflection of the level of commitment in a relationship, with married individuals more likely to own a home than those in consensual cohabiting unions (Poortman & Mills 2010). Several studies have shown a positive relationship between union formation, particularly marriage, and home ownership (e.g., U.S. Clark, Deurloo & Dieleman 1994; Netherlands and Germany, Kendig, 1994; Mulder & Wagner 1998).

Mulder and Billari (2009) classify the European housing market into various housing regimes according to the levels of home-ownership and difficulty in access to mortgages, with the Netherlands characterized as a ‘lower level, mortgage finance: career home-ownership regime’. Other countries in this regime include, for example, Denmark, Germany, the UK and the US. Countries such as Austria, France and Portugal are a ‘elite home-ownership regimes’ with the European countries with
the highest TFRs (Ireland, Iceland, Norway) having an ‘easy homeownership regime.’ The most ‘difficult home-ownership regime’ are Italy, Spain and Greece where mortgages are difficult and intergenerational transfers are the imperfect solution.

The Dutch housing market has a fairly large and affordable rental sector for one-person or student living, which allows young people to leave the parental home to study at fairly young ages. The Dutch housing market has relatively restrictive spatial policies and many laws and regulations (Vermeulen & Van Ommeren 2006). In the past there has been a high unmet demand for housing and particularly an extreme shortage of affordable housing in the larger cities, such as Amsterdam. In recent years the government has responded by building more single-family households in urban areas (Mulder 2006).

Figure 8-12 places the level of home ownership and lending for a mortgage in a comparative perspective, showing the Netherlands in comparison to certain countries. In countries where the mortgage debt is low, few people have mortgage loans which may be related to different saving patterns, mortgage regulations or because many may inherit their homes from family. The figure shows that the level of home ownership across different countries in Europe and the U.S. differs with just over 50% of people in the Netherlands owning a home and rest via private and more commonly public housing. This is in comparison to countries such as Spain, Italy and Norway,
where the majority are homeowners. The levels of mortgage loans as % of the GDP are extremely high in the Netherlands, which is attributed to the unique system of ‘hypotheek aftrek’ or mortgage reduction, where the state co-finances mortgages. This was in response to extremely high house prices and the inability for particularly first time buyers to purchase a house.

[Figure 8-12] Percentage of homeowners and residential mortgage loans as percentage of GDP, selected European countries

7) Immigration: Does the foreign-born population raise fertility levels?

One hypothesis that has been relatively empirically ignored, but often raised to explain the higher levels of fertility in the
Netherlands in comparison to other European countries is that it may be attributed to the rise in migrants and their subsequently higher fertility. In 2011, around 11.2% of the Dutch population was foreign born, compared to 14.7% in Sweden, 12% in Germany, 11.2% in France, 8.8% in Italy and 1.4% in Poland (Eurostat, 2011). The 11.2% counts only foreign-born or first generation immigrants, with a similar amount consisting of second generation migrants who were born in the Netherlands. In contemporary Dutch history, migration began in the early 1960s, generally labour immigrants or supposed ‘guest workers’, largely from Turkish, Moroccan, Surinamese or Antillean, and Southern European (Italy, Greece, Spain) descent (Triandafyllidou, Gropas and Vogel 2007). An additional influx came in the 1970s from the same countries when the ‘guest workers’ were re-unified with their families. Even recently people from Morocco and Turkey still immigrate to the Netherlands, largely to marry Dutch-born youth from a similar descent. In the late 1970s and early 1980s, Suriname gained independence from the Netherlands which brought an additional flux of immigrants from this country.

Fokkema et al. (2008) argue: “migrant births account for a substantial share of all births in the Netherlands” with around 25% of all newborns in 2004 having a mother with a migrant background. Whereas Native Dutch had a TPFR of 1.6 in 1999, it was higher for instance, than for those from Iraq (3.4), Morocco (3.3), Somalia (4.4), Turkey (2.5), China
(2.8) and Afghanistan (2.3) (De Valk et al. 2004). Garssen & Nicolaas (2006) show, however, that since 1980, the fertility behaviour of first generation women of a minority status has continued to resemble the Dutch population. Although levels from Turkey and Morocco still remain higher, even they have started to converge towards 2-3.5 children. A central reason for this higher fertility among these groups is related to religious norms, but also the younger age at childbearing (Garssen & Nicolaas 2006).

However, in a more detailed analysis in the period 1995-2004, Fokkema et al. (2008) conclude that women with a non-Western or migrant background have only a limited impact on the TPFR (total period fertility rate) in the Netherlands by increasing it only from 0.06 to 0.08. This is also during a period where there was an increase in the migrant population. The TPFR of women of non-Dutch descent is higher among all groups. This is likely attributed to the fact that in the non-Western groups where fertility is high (e.g., Somalia), there are fewer migrants and even fewer women of childbearing ages. A second explanation is that many of the second generation Turkish and Moroccan women are still younger than 30. Second generation migrants, however, have later and fewer children, thereby resembling the Dutch native population more so than first generation immigrants. It is likely therefore, that this group of immigrant women may still have children and impact the TPFR, albeit less than the
first generation before them (De Valk & Liefbroer 2007). One factor that has not yet been researched is the impact of recent Dutch emigration on the fertility rates. Many of those who emigrate are of childbearing age. However, just as with minority immigrants, this is likely to have a very minimal impact on overall fertility levels.

6. Conclusion

Although the Netherlands resembles many Western European countries in terms of an aging population and postponement of fertility, it is a clearly a hybrid. It has been characterized as coming close to Scandanavian social-democratic welfare states, due to the strong universal coverage of individuals. In recent years, however, particularly more labour market flexibility and needs to cut public financing has repositioned this nation.

A striking aspect of this country is that due to moderate levels of fertility (and not the lowest-low fertility), combined with a highly dense population and cultural norm for women to remain primarily in the home caring for children, there has been little direct population policies aimed at fertility. The only policy that could come close to any pronatalist tendencies were child allowances, which in later years were restricted and did not promote larger families. Contraceptive use is highly prevalent.

In relation to family-related institutions, perhaps the most
marked aspect is the Dutch aversion to formal childcare, with children enrolled for very few days and of that few children. This is related to the large number of female part-time workers and strong cultural norms about the importance of primary care of children by mothers. The country also a very short maternity leave, which some have argued promotes women to drop out of the labor force after the birth of a child.

What is perhaps more interesting in the Dutch case is not the overt family policies, which in itself are not strongly existent, but rather more inadvertent national institutions and historical path dependency that highly influences fertility. The paternalistic welfare state grew to protect citizens, but it also prescribed the ideal life course and family constellation, with men being the primary breadwinners and women responsible for the household. This more moralistic stance has filtered down to Dutch households even today. Dutch gender roles remain traditional (Mills et al. 2008) in a male-breadwinner or one-and-a-half earner model, with Dutch women being the part-time working champions internationally. This part-time work, however, is often in marginalized position and is thus unequal pay for unequal work.

Although fertility research more often focuses on the impact of educational levels and particularly women’s gains in education, this paper also explored the impact of educational field of study on later labour market outcomes, educational systems
and the costs of higher education. Although women have higher levels of education, they are often streamed into particular educational fields of study, which lead to marginal positions in the labour market. It may be that they are socialized into these positions or select themselves into this track since they know that it will eventually lead to a job whether they can combine work and family more easily (teaching, health). State sponsored higher education has also meant that parents do not have to extensively worry about the costs of sending a child to University, with relatively open admission and ranking of programmes and Universities.

The Dutch society has also experienced extreme secularization over the last years and is now one of the most non-religious societies in Europe. Higher parity births were previously attributed to Catholics in the South and with the drop in religiosity, religion only appears to play a role in fertility in very select highly religious groups. Another aspect that deserves attention is the role of housing and how high levels of home ownership and difficulties in accessing mortgages impedes young people’s ability to start a family. The last section explores the popular notion that recent immigrants have been responsible for the higher fertility levels in the Netherlands, which is shown not to be the case.


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Appendix

Appendix Table A1 (in progress!! – integrated later).

1890-1920
Industrial revolution
1870s public debates on population

1945
Post WWII reconstruction. Growth of paternalistic welfare regimes

1969
Introduction and widespread use of contraceptives

1980
Economic crisis. Massive unemployment

1986-1990
Economic growth. Growth labour market, female emancipation, right to part-time work

2005-2007
Childcare law, mandatory employer payment Uniform Financing, mandatory availability before and after school care

2009-2013
Economic crisis

Large public cuts, Childcare allowance cuts

1890-1920
Number of children per woman 1850-1880 4.5 to 5.5; Constant drop 1879-1937 from 5.5 to 2.5

1946
First Kindergarten law (Kindergartenwet) First description quality of childcare. Mandatory age 6 for school.

1956
Child allowance related to age of child (upper limit 17), Min level per first child per month EUR 56.87

1983
Maternity leave introduced (16 weeks; 100% compensation)

1990
Parental leave: 6 months unpaid, until 8 years

1995
Child allowance unrelated to family size, focus on 'stable population'

2001
Paternity leave 2 working days, 4 days after birth, 100% compensation

2012
Changes in student higher education financing
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참고 2. 기업기업 진출준법시간 관리방안 연구 | 이상림 |