Population Policy in a Prosperous City-State: Dilemmas for Singapore

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SINGAPORE HAS HAD a remarkable record of sustained economic growth over the past five decades. Per capita GDP in constant prices rose on average by 5.8 percent each year over the period 1965–2005 (Ghesquierre 2007: 12). Over the period 1960–2000, Singapore's growth rate appears to have been the highest in the world (ibid., Figure 1.1), although during the past decade the growth rates of China and India have surpassed it. The power of compounding applied to sustained high growth rates over a long period has resulted in dramatically higher income levels in Singapore today compared with those in the 1960s. Table 1 shows Singapore's per capita GDP level in 2010, compared with a number of neighboring and Western countries. Measured in purchasing-power-parity terms, Singapore's GDP per capita is the highest in the world, apart from the population minnows of Qatar and Luxembourg. Singapore's per capita GDP is well above that of Japan, the United States, and Germany.

Human development indicators such as life expectancy and educational attainment have also risen to very high levels in Singapore, unemployment rates are low, and rates of home ownership are very high. Singapore is a notably clean and green city, with low crime rates and high quality of life. With a multi-ethnic population, Singapore has nevertheless managed to achieve a sense of nationhood, with a remarkable degree of religious tolerance and ethnic harmony.

Singapore's economic and social policy model is *sui generis* and involves a relatively high degree of government orchestration of economic and social life. For example, more than 80 percent of the population lives in government-built but mostly privately owned housing (Housing and Development Board (HDB) high-rise apartment blocks, generally between 12 and 40 storeys),[1] and housing policy is directed toward maintaining a stable society based on home-

TABLE 1 Singapore's population, GDP, and economic growth in comparative perspective

Country	Pop. 2010 (millions)	GDP per capita 2010		Average annual growth rate, PPP, 2000–2010
		Purchasing power parity (PPP), current international $	Current US dollars	
Singapore	**5.1**	**56,694**	**43,117**	**5.8**
United States	310.4	46,860	46,860	2.8
Switzerland	7.7	41,950	67,779	3.0
Australia	22.3	39,764	55,672	3.8
Germany	82.3	36,081	40,274	3.2
Taiwan	23.2[a]	35,604	18,558	5.8
Japan	126.5	33,885	42,783	3.0
South Korea	48.2	29,997	20,756	6.2
Malaysia	28.4	14,744	8,423	4.9
Thailand	69.1	9,221	4,992	6.3
China	1,341.3	7,544	4,382	12.2
Indonesia	239.9	4,347	2,974	5.9
India	1,224.6	3,408	1,371	8.3

NOTE: Singapore population includes 1.3 million nonresidents.
[a]Council for Economic Planning and Development, «www.cepd.gov.tw».
SOURCE: International Monetary Fund (2011).

owning families as conventionally defined (Chua 1995; Teo 2010, 2011). If economic growth is seen as not a goal in itself, but rather a means to increase the well-being of its beneficiaries, it is worth asking whether Singapore's high score on per capita GDP is reflected in a similar high standing on measures of subjective well-being. Singapore, along with other East Asian societies, appears lower than might be expected in this respect.[2]Although Singapore scores higher than Japan, Hong Kong, and South Korea, it scores well below many countries with much lower income levels. As Easterlin (1995, 2005), Diener et al. (2009), and Inglehart et al. (2008) have observed, increases in incomes above a certain level do not typically lead to corresponding increases in reported human happiness, and research (and, by implication, policy) on happiness should focus not just on economic growth, but also on noneconomic aspects of well-being, such as democratization and social liberalization.

Looking ahead, Singapore faces a number of challenges, some of them with roots in demographic circumstances. In particular,

(1) Low fertility, leading to problems of maintaining population size, a potentially shrinking workforce, and population aging. If these problems are addressed through immigration, another issue arises:

(2) Problems of maintaining ethnic, cultural, and linguistic balance and a cohesive national population.

This article addresses these issues.

Ethnicity, citizenship, and population balance in Singapore

Singapore's population is a complex mix of citizens and noncitizens and of ethnicities. Its population of 5.1 million in 2010 was made up of 3.2 million citizens, 541,000 permanent residents (PRs), and 1.3 million nonresidents. This last group is, in turn, divided into various components: broadly, professionals and skilled workers and their dependents, on the one hand, and the more numerous low-skilled contract laborers on the other. Of the 756,000 working foreigners in Singapore in 2007, 85 percent were in the low-skilled category, with roughly equal numbers employed as construction workers, maids, and in the group of manufacturing, services, and marine industries (Abdul Rahman 2010: 200–201).[3] The numbers of PRs and nonresidents grew much more rapidly than citizens over the first decade of the twenty-first century. Despite the granting of citizenship to many PRs,[4] Singapore's citizen population increased by only 8 percent between 2000 and 2010, whereas the permanent resident population increased by 88 percent and nonresidents by 73 percent. As a result, PRs and nonresidents increased their combined share of the population from 14 percent in 1990 and 26 percent in 2000 to 36 percent in 2010.

How are permanent residence and citizenship acquired? A child, one of whose parents is a Singapore citizen, automatically acquires citizenship, whether born in Singapore or (since 2004) abroad.[5] However, in the case of a non-Singaporean who marries a Singapore citizen, there is no automatic eligibility for permanent residence status, the precursor of eligibility for citizenship. Indeed, until a recent change in regulations, many foreign spouses of Singapore citizens were not even successful in their applications for a one-year (renewable) long-term visit pass (LTVP), the main factor in cases of rejection apparently being concern about the citizen's financial ability to support his or her foreign spouse. A new regulation that took effect on 1 April 2012 grants successful LTVP applicants a longer period of residency and eligibility for health care and employment benefits.[6] Singapore does not permit dual citizenship, an important consideration being the requirement of two years' national service for all male citizens and permanent residents when they reach the age of 18, followed by a maximum of 40 days of training every year up to age 40.

Ethnic composition is an important issue in Singapore, as the government considers it crucial to maintain roughly the proportions of 76 percent Chinese, 14 percent Malay, 8 percent Indian, and 2 percent "Other" among its resident population. These proportions have changed remarkably little over the past four decades. Although differential fertility tends to increase the Malay proportion, in-migration (with many Chinese and Indians moving to Singapore) keeps the proportions in balance. Disquiet tends to be expressed about even small

TABLE 2 Resident population of Singapore by ethnic group and status as citizens or permanent residents, 2010

		Chinese		Malays		Indians		Others	
	Total (000s)	Number (000s)	Per-cent	Number (000s)	Per-cent	Number (000s)	Per-cent	Number (000s)	Per-cent
Resident population	3,771	2,794	74.1	504	13.4	348	9.2	126	3.3
Citizens	3,231	2,462	76.2	488	15.1	237	7.3	44	1.4
Permanent residents	541	332	61.4	16	3.0	111	20.4	82	15.2

SOURCE: Singapore Department of Statistics (2011a).

changes in ethnic proportions. When the 2010 census revealed that the Indian proportion of the resident population had risen from 7.9 percent in 2000 to 9.2 percent in 2010, and the Malay proportion had declined from 13.9 percent to 13.4 percent over the same period (largely because Indians greatly outnumbered Malays among the rapidly growing permanent resident population), Malay community groups expressed their concern. The widening discrepancies in the ethnic characteristics of citizens and PRs (see Table 2) suggest that, if citizenship is awarded roughly in proportion to the ethnic mix of PRs, the Indian (and "Others") share of citizens will continue to rise, and that of Malays will continue to fall (even bearing in mind higher Malay fertility), unless there is a decline in the number of PRs being granted citizenship.

Ethnicity, a basic marker of identity in Singapore, has practical ramifications in a number of areas—for example, the "mother tongue" language that students will study in school, and the possibility of acquiring HDB flats in particular localities, given the policy of preventing ethnic "enclaves" from developing in any particular housing block. The "CMIO" (Chinese, Malay, Indian, Other) balance is central, but inter-ethnic marriage is altering this balance. In 2010, 20 percent of total marriages were inter-ethnic, up from 12 percent in 2000 and only 8 percent in the early 1990s (Singapore Department of Statistics 2010b: p. 8, Tables A1.16 and A1.42). Marriages to noncitizens (many, but probably a minority, of which are also inter-ethnic marriages) have also accounted for a substantial 30–40 percent of marriages by citizens over the period 1998–2008.[7] In January 2011, the government made a major concession to those arguing for a weakening of the emphasis on the CMIO balance by announcing that dual ethnicities could be recorded on children's birth registration by those with mixed parentage.[8] By January 2012, however, only 16 percent of mixed-race children born since the new policy was announced were registered as being of dual race, among which four out of five had their father's ethnicity listed first (*Straits Times*, 11 January 2012). This proportion is likely to rise over time, as people become aware of the possibility of registering dual ethnicity. It is also possible to change to a dual ethnicity at a later stage, when the child becomes eligible for an identity card on reaching age 15.

It is useful to see where Singapore ranks in relation to other countries with large foreign-born populations. The Gulf states are well known as countries where the local-born are outnumbered by foreign workers. The foreign-born make up 70 percent of the population in the United Arab Emirates, 86 percent in Qatar, and 69 percent in Kuwait (United Nations Population Division 2009). Most Singaporeans would be appalled at the suggestion that the percentage of foreign-born should increase to anything like these levels. Nevertheless, leaving aside the Gulf states, Singapore ranks very high in the proportion of foreign-born in its population (36 percent), well above the highest proportions in Western countries: Australia (22 percent), Switzerland (23 percent), Canada (21 percent), and the US (14 percent).

The fertility/migration balance in future population trends

Recent population projections published by the Institute of Policy Studies (2011) provide a range of scenarios for the growth or decline of Singapore's population, depending on trends in vital rates and in net migration. These projections refer only to the resident population. They show that if the TFR remains at 1.24 (its level in 2005) and there is zero net migration, Singapore's resident population will remain essentially unchanged between 2010 and 2030 and then decline steadily. A gradual rise in TFR to 1.85 by 2025 would raise the projected population only slightly (3 percent higher in 2030 than in the constant-fertility projection), while net migration of 30,000 annually and 60,000 annually would have a much greater effect, raising the 2030 population from 3.62 million to 4.56 million and 5.50 million, respectively, and the 2050 population from 3.03 million to 4.89 million and 6.76 million. This last number (6.76 million) is significant, because it is close to the population size (6.5 million) frequently mentioned as a "target" for Singapore to reach by mid-century.[9]

Population aging will proceed apace according to all population scenarios, but substantial migration (according to the assumptions about its relatively youthful age and evenly balanced sex ratio) would considerably slow the increase in the share (but obviously not the number) of elderly. The share of the 65+ age group in the total population would rise from 9.6 percent in 2010 to 25.4 percent in 2030 if fertility remains unchanged and with zero net migration, to 20.3 percent if annual net migration is 30,000 and to 16.9 percent if net migration is 60,000. A rise in fertility to a TFR of 1.85 in 2025 would make only a minor difference in the pace of population aging.

Questions about the volume of migration that is socially sustainable have been widely debated in Singapore, with former Prime Minister Lee Kuan Yew stating that 20,000–25,000 net migrants per year is sustainable, but certainly not the higher figure of 60,000 used in one of the aforementioned

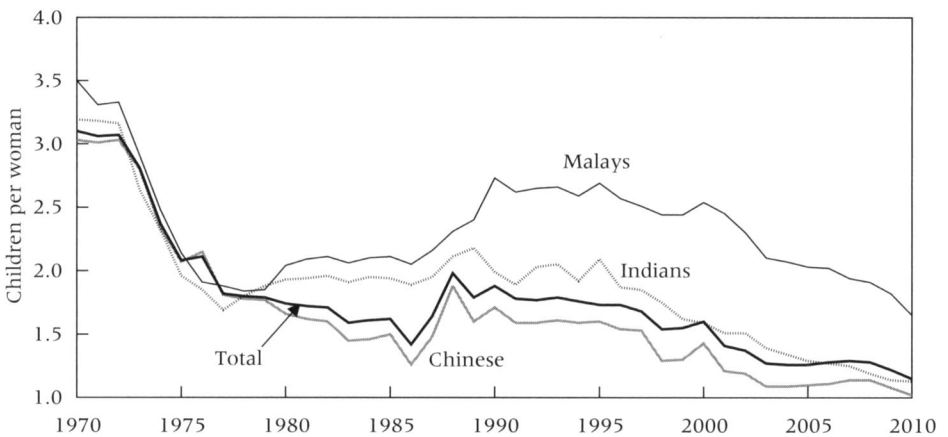
projections.[10] If the levels suggested by Lee are adhered to, then a substantial increase in fertility is the only way to reach a population of 6.5 million within the next 40 years. Of course, Singapore's *de facto* population includes the nonresidents (1.3 million in 2010 as noted earlier), so a *de facto* population of 6.5 million could certainly be reached by allowing entry to more contract workers, both professional/skilled and unskilled.

Prospects for increasing fertility

Fertility data for Singapore are provided for the resident population—that is, citizens and permanent residents. Figure 1 shows trends in fertility since 1970 for the country and also for the three main ethnic groups. Singapore's fertility is similar to that of the low-fertility countries of East Asia, although it has never fallen as low as levels recently found in Taiwan, Hong Kong, and South Korea. Bearing in mind, however, that Singapore is a city-state, comparisons with other *cities* in the region are appropriate. Singapore's fertility rate is 15 percent to 50 percent higher than in such cities as Tokyo, Seoul, Busan, Shanghai, Beijing, Taipei, Kaohsiung, and Hong Kong (Jones 2009, Table 2), although the differentials are substantially less if the comparison is restricted to Chinese Singaporeans.[11] As for the prospect of fertility "recuperation," there is no evidence that more than a small proportion of the lowered fertility is due to postponement of births, subsequently made up when women are older (Frejka, Jones, and Sardon 2010; Koh 2010).

Fertility differs among the various ethnic groups in Singapore. Malay fertility is substantially higher, and Chinese fertility lower, than the average. Given the three-fourths weighting of Chinese in the resident population, the overall fertility level is heavily influenced by that of Chinese Singaporeans.

FIGURE 1 Total fertility rate by ethnic group: Singapore, 1970–2010



SOURCES: Saw (2007); Singapore Department of Statistics (2011b: Table 4.1).

Malay fertility rose substantially for some time after that group became the first sizable Muslim population in the world to reach replacement-level fertility in 1976,[12] reaching a TFR of 2.7 in 1990, but in the last decade it has fallen sharply, registering 1.6 in 2010.

In Singapore, marriage is the gatekeeper to fertility. As in other East Asian countries, fewer than 2 percent of births occur out of wedlock.[13] Therefore the factors accounting for low fertility can usefully be divided into those resulting in delayed marriage or nonmarriage, and those resulting in low fertility within marriage. Koh (2011) estimates that declines in proportions married were responsible for one-third of the decline to ultra-low levels of fertility in Singapore in the period 1990–2005. Raising fertility in Singapore is likely to require increases in the proportions marrying.

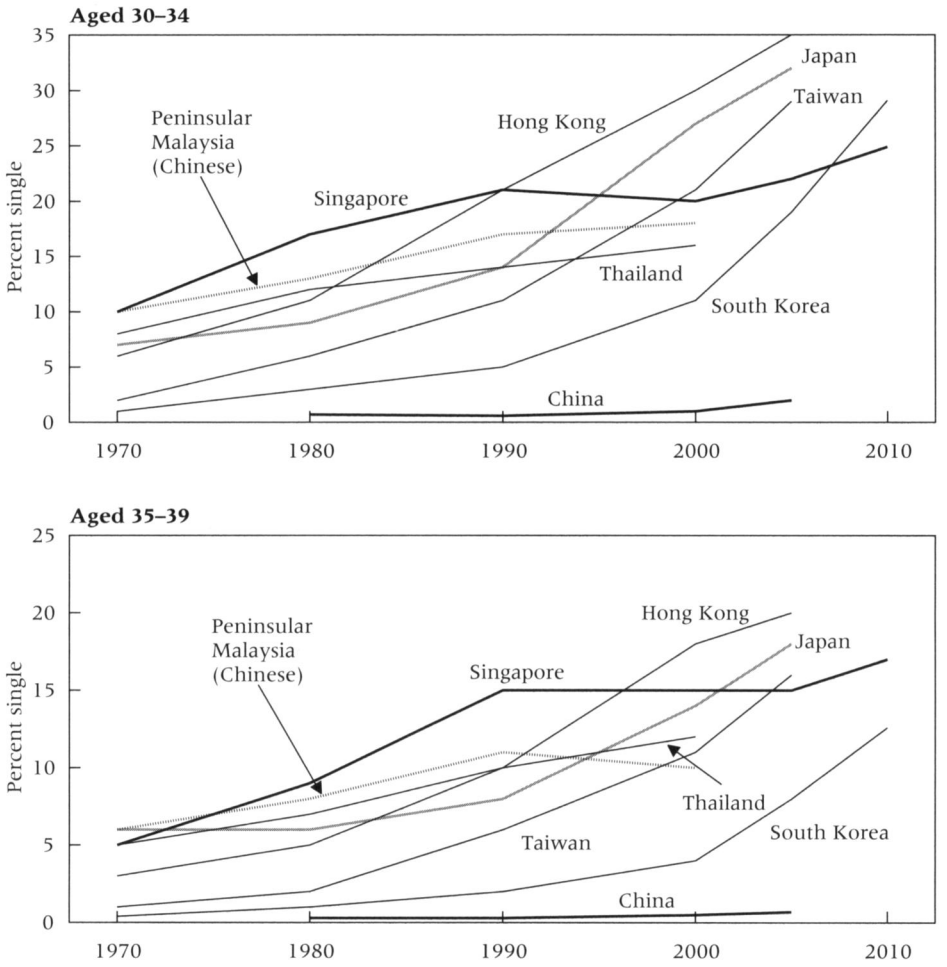
Trends in singlehood

Singapore is one of several East Asian countries where marriage is delayed and nonmarriage common, and where "effective singlehood" is generally higher than in the late-marrying countries of Europe (Jones 2007). The trends in singlehood (i.e., never-married women) for many of these countries are analyzed in detail in Jones and Gubhaju (2009); singlehood rates for women in their 30s are summarized in Figure 2.

If measured by the proportion of women single in their 20s and early 30s, singlehood in Singapore is still rising. However, if measured by the proportion of women single in five-year age groups in the upper 30s and 40s, or by the singulate mean age at marriage, there has been little increase in singlehood since around 1990. Indeed, when controlled by education,[14] prevalence of singlehood for women has remained steady at all ages above 35 since 2000 (see Table 3; also Jones 2004, Table 1). The proportions single among women with post-secondary and university qualifications have fallen for women aged 35–44 since 2000. This is the group whose low proportions marrying had long generated the greatest concern on the part of government.[15] This change among university-educated women differentiates Singapore from other East Asian countries (Jones and Gubhaju 2009: 251). The substantial differences between trends in Singapore and other low-fertility countries of East Asia are apparent in Figure 2.

Singapore is experiencing a "marriage squeeze" both for less-educated men and for highly educated women, resulting from educational trends (sharp increases in the number of young women completing upper secondary and tertiary education) and conventions about appropriate age differences between spouses and marital partners. Chinese men tend to marry women with lower education and lower income than themselves, while tertiary-educated women are reluctant to marry downward. Thus we observe high proportions remaining single among university-educated women and less-educated men, although this trend, as I noted above, has been modified in the first decade of

FIGURE 2 Proportions never married among women aged 30–34 and 35–39: Singapore and other East Asian countries, 1970–2010



SOURCES: Data from population censuses and inter-censal surveys from each country.

the twenty-first century. Given the difficulty of finding a suitable local mate, more Singaporean men are marrying foreign wives (Jones and Shen 2008).

Another key aspect of marriage trends since the turn of the century has been the narrowing of the gender gap in proportions never married between male and female university graduates. For men and women aged 30–39 in 2000, there was a difference of 10 percentage points in that measure (23 percent for women, 13 percent for men). By 2010, this difference had narrowed to 4 percentage points (21 percent for women, 17 percent for men). It is likely that the large number of foreigners granted permanent residence in Singapore over this period[16] (and then included in the statistics for residents)

TABLE 3 Percent never-married by age, sex, and education: Singapore, 2000, 2005 and 2010

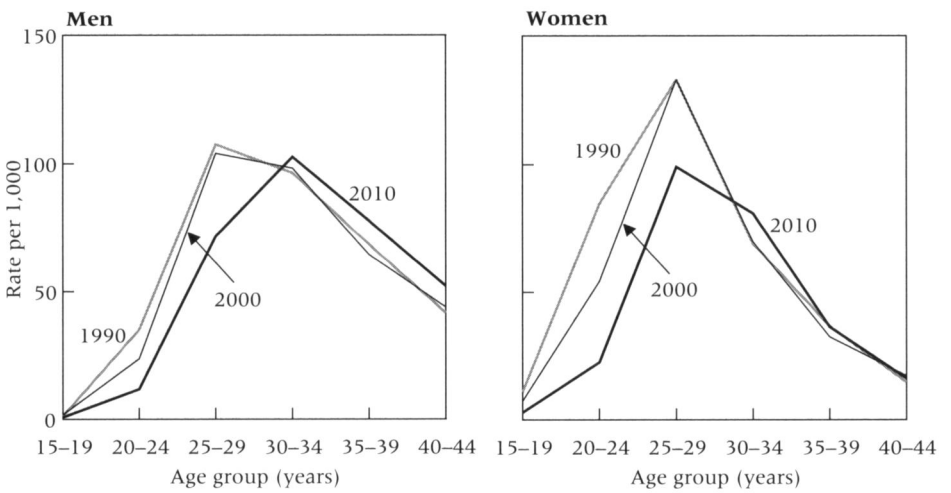
Sex and age group	Below secondary			Secondary			Post-secondary			University		
	2000	2005	2010	2000	2005	2010	2000	2005	2010	2000	2005	2010
Women												
25–29	21	21	23	30	34	35	43	47	52	54	56	62
30–34	13	13	13	17	17	18	23	24	27	27	28	28
35–39	10	10	9	14	14	13	20	17	18	23	20	21
40–44	9	10	9	15	14	12	20	18	16	22	21	19
Men												
25–29	62	67	64	58	63	64	70	69	74	69	73	76
30–34	40	42	39	29	35	38	28	33	37	28	32	35
35–39	28	29	29	18	22	25	15	18	21	13	14	17
40–44	21	23	23	14	14	18	9	12	14	7	8	11

SOURCES: Yap (2008), Table 8.3; Census of Population (2010).

influenced the trends, as did the increase in the proportions with high educational qualifications, particularly among women. Unfortunately, information is not available about the marital status of foreigners who are granted permanent residence.

Trends in age-specific marriage rates give a different summary view of circumstances in Singapore (Figure 3). Marriage rates for both men and women have fallen at ages 20–24 and 25–29, indicating delays in marriage, but have increased at ages above 30. The stock of unmarried Singaporeans in

FIGURE 3 Age-specific marriage rates per 1,000 single men and per 1,000 single women: Singapore residents, 1990–2010



SOURCE: Department of Statistics Singapore (2010b: Chart 1.3).

their 30s and 40s has grown substantially because of the decline in marriage rates at younger ages, but higher marriage rates than previously at ages above 30 are limiting the further growth of this stock.

The stalling of the increase in singlehood since 1990 notwithstanding, Singapore has one of the highest singlehood rates in East and Southeast Asia. Singlehood is higher for Chinese Singaporeans, for citizens and the native-born compared with permanent residents and the foreign-born, and for the highly educated. Singlehood is especially high among the Chinese population: the proportion of Chinese women single at ages 35–39 (19.9 percent) is twice as high as that for Malays (9.2 percent); proportions single for Indians are only 6.2 percent.

Factors influencing marriage and marital fertility

Factors influencing marriage

Economically and in terms of the culture of its majority ethnic Chinese population, Singapore conforms to the East Asian pattern, despite its geographic location in Southeast Asia. Some of the factors thought to underlie the high levels of singlehood in the region are discussed in Jones (2007). Trends in singlehood are linked to fundamental changes in demographic structure, the economy, and society that have affected marriage markets and the perceived costs and benefits of marriage and its normal sequel, childbearing. The limited survey information suggests that most women desire to marry[17] but that many factors weaken the intensity of this desire or hinder its realization. One important factor has been the expansion of education, more rapid in the case of women than of men. Educational expansion and trends in labor markets toward more employment in occupations traditionally favoring women have opened up employment possibilities for women, widened their aspirations, and freed many from financial dependence on men. Another factor has been increasing uncertainty in employment, leading to caution in entering into marriage and family formation. Rising divorce rates probably also lead to increased caution in choosing a marriage partner.[18]

Singapore is a leading global city,[19] facing issues of work pressures, housing affordability, and reluctance to live with (and later to care for) parents-in-law. Sex outside of marriage is not difficult to come by, and contraception is readily available. In such circumstances many Singaporeans in their 20s and 30s may give only limited attention to the search for a marriage partner. Recent studies in Singapore clarify these issues (Koh 2011; Jones, Zhang, and Chia, forthcoming). The latter study (henceforth referred to as the singlehood study) was based on in-depth interviews with 30 never-married ethnic Chinese (15 women and 15 men) aged 30–44, 24 of them with university educa-

tion and earning a wide range of incomes, though two-thirds of respondents earned between S$2,000 and S$5,000 a month.[20]

These studies suggest that attitudes about the desirability of marriage are changing. Although the preliminary findings of the singlehood study confirm that marriage was still considered desirable by the majority of respondents, one-third were either ambivalent about the desirability of marriage (eight respondents) or appeared to have completely lost faith in the desirability of marriage (two respondents). The rising divorce rate in Singapore and contact with friends or relatives in unhappy marriages are discouraging some singles from marrying. Singlehood seems to be widely accepted among the general public, premarital sex and cohabitation appear to be increasingly socially acceptable,[21] and cohabitation may no longer be rare in practice. Two-thirds of respondents in the singlehood study stated that cohabitation is acceptable to them, and several reported that they had earlier cohabited with a partner or were presently cohabiting.

The perceived costs associated with marriage, such as the elaborate wedding ceremony, housing, and later the costs of raising children, affect singles' attitudes toward marriage. Economic stability is considered a precondition of marriage, especially for single men, and traditional gender role expectations of men as providers and women as housekeepers make single women cautious about marrying a man with poor earnings prospects.

Freedom and independence present an attractive alternative to marriage for many single Chinese Singaporeans, who are also likely to give priority to career advancement, financial stability, and material success rather than to marriage and procreation. Marriage may be considered only after a stable career has been established (MCYS 2009; Koh 2011; Jones, Zhang, and Chia, forthcoming). Singles face career pressures, often including long workdays and working additional time at home after office hours. This work culture is a hindrance to active social life.

To what extent do people avoid marriage because they want to avoid having children? It is likely that in the East Asian context, in which strong pressure is placed on those who marry to have a child quickly, the easiest way to avoid having children is not to marry (Jones 2004: 17; see also Raymo 2003). The singlehood study suggests that weakening of the desire for children is relevant in understanding delayed marriage and nonmarriage (Jones, Zhang, and Chia, forthcoming). Eleven respondents (over one-third) were ambivalent about procreation, considering children not important to them or optional.

Lesthaeghe (2010) argues that the main features of the second demographic transition other than procreation within cohabiting unions have spread to several advanced Asian populations including Singapore. The mainly university-educated respondents in the Singapore singlehood study exhibit features of the second demographic transition as reported in many Western societies, such as 1) fairly high levels of acceptance of premarital

sex, cohabitation, and nonmarital births; 2) attaching great value to freedom, independence, and self-actualization; 3) increasing acceptance of casual and multiple dating relationships; and 4) ambivalence about having children. Many singles now regard marriage and having children as a personal choice rather than a social and familial duty.

Factors affecting marital fertility

While prolonged singlehood is prevalent in Singapore, most Singaporeans do eventually marry. To interpret fertility trends, we need to examine factors influencing the childbearing decisions of those who marry. The high costs of raising children in Singapore—both monetary and opportunity costs—are clear to all. Estimates of S$300,000–$500,000 as the cost of raising a child to age 21 are sometimes cited,[22] although much depends on the kinds of schooling involved and life style factors. Such estimates also fail to allow for the additional housing costs of a larger family. In HDB-built housing sold at preferential rates but applying selective rules to buyers, a three-bedroom flat, which may be considered necessary if a second or third child is planned, is on average at least S$90,000 more expensive than a two-bedroom flat (see Table 4).[23] The differential is even greater (on the order of S$250,000–$300,000) in private condominiums, to which the upwardly mobile aspire, even though they house only about 10 percent of Singaporeans. There are also many opportunity costs of raising a family in a city environment with its logistical problems of arranging children's activities, societal emphasis on economic success, and numerous alternative activities more available to those without family encumbrances. Women face the brunt of the responsibilities of raising a family—in particular, the opportunity costs of interrupted career development. Neither labor market circumstances, employer and co-worker attitudes, nor husband's or potential husband's attitudes make it easy for women to combine full-time work with raising a family. Singaporean men are often reluctant to assume a significant share of the childcare and household maintenance activities, even when their wives work full time.

TABLE 4 Resale prices and floor areas of different HDB flat types in Singapore, 2012

	2 bedrooms		3 bedrooms		Larger than 3 bedrooms	
	Min	Max	Min	Max	Min	Max
Price range (SGD)	250,000	585,000	320,000	763,000	266,000	852,000
Median price (SGD)	335,000		423,000		509,000	
Floor area (sq. meters)	46	107	74	133	110	141
Median floor area (sq. meters)	68		96		121	

SOURCE: Calculated from Housing and Development Board Singapore data «www.hdb.gov.sg».

The work/family conflicts are exacerbated by the strong societal expectations in Singapore, as in other East Asian societies, about intensive parenting and raising the "successful" child. It is noteworthy that of all OECD countries, the share of GDP going to private expenditure on education is highest in South Korea, and probably just as high in Taiwan (which is not a member of OECD). In Singapore, the share is also above the OECD average, though not as high as in Korea.[24] The burden of raising the successful child falls heavily on the mother. If the child fails to live up to expectations, it is the mother's reputation that suffers most.

Rising levels of education among women have played a key role in the very low fertility reached in East Asia, including Singapore. It is not the high level of education *per se* that is important. High levels of women's education in some Northern and Western European countries, the United States, Australia, and New Zealand have not prevented them from having close to replacement levels of fertility at present. Rather, the key is the extraordinarily rapid expansion of education in the East Asian institutional context. This has compressed the time interval in which family and society can adjust to the new opportunities, challenges, and constraints faced by women in the region.

Lutz (2008) has suggested that a low-level fertility trap may develop in which low fertility feeds back to negative attitudes toward children and to families with children. While it is not difficult to detect evidence of negative attitudes toward children and families in Singapore,[25] it is very difficult to know how widespread these attitudes are.

Policy affecting marriage and marital fertility

Policy toward marriage

There are two policy areas in which the government clearly promotes marriage in ways other East Asian countries do not: housing policy and matchmaking efforts.

As mentioned above, the great majority of Singaporeans live in government-built HDB flats. The government's housing policies encourage marriage, and earlier rather than later marriage. Singlehood is discouraged by the eligibility rules for HDB flats: singles must be over age 35 to be eligible to purchase this subsidized form of housing. Thus the fact that a very high proportion of singles continue to live with their parents[26] appears to reflect not only strongly held norms that doing so is appropriate but also the difficulty that those who may want to live independently must encounter in finding alternative housing unless they marry.

Various inducements are offered to Singaporeans planning to marry. Under the Fiancé/Fiancée Scheme, couples who intend to marry may apply to purchase an HDB-built flat. This helps to shorten waiting time for flats, and if couples plan ahead the flat could be ready when they are ready to

move in, since they only need to produce their marriage certificate within three months of getting the keys to their flat, which they then own carrying a 30-year mortgage with subsidized interest rates. They are also allowed to buy an HDB flat from the resale market (which involves a mark-up in price but allows for flexibility in timing). First-time HDB buyers are also allowed to rent flats while waiting for their own flats to be built, so that young couples will not have to delay their marriage until the completion of their flats (Wong and Yeoh 2003: 18). A concession is made to the possibility of Western-type patterns of shared housing by singles under the Joint Singles Scheme, whereby a flat can be bought jointly by two to four single Singaporean citizens from the open market. However, this option is only available to unmarried or divorced individuals if they are over the age of 35.

The Singapore government began its direct involvement in matchmaking in 1984 with the formation of the Social Development Unit (SDU) to facilitate partnering among university graduates. Subsequently, a Social Development Service was formed to assist individuals with lower educational qualifications (Quah 2003: 21–23). In 2009 the two services were merged to form the Social Development Network (SDN) in a bid to give members "a wider pool of singles to choose from" (*Straits Times*, 29 January 2009).

In Singapore seeking a partner through the government's matchmaking network tends to be stigmatized. It is widely accepted, however, that the demise of earlier traditions of matchmaking, combined with demanding work commitments and limited opportunities to socialize, greatly reduced the possibilities of finding a suitable partner. Similar concerns are frequently expressed in Japan (Retherford, Ogawa, and Matsukura 2001: 87–88). The SDN places a strong emphasis on the internet; its website, "Love Byte. A world of possibilities. Just a click away," lists the four dating services it provides. The website also announces initiatives to raise standards in the local dating industry. An accreditation scheme has been introduced and seed funding is provided to qualifying companies to upgrade and professionalize their activities.

It is difficult to assess the impact of the government's matchmaking efforts. Official reports list the number of couples who have "tied the knot" after being engaged in SDU activities. In 2003, for example, some 4,050 university graduates who were registered with the SDU married, or 15 percent of its total membership of about 26,000 (Saw 2005: 147). These figures cannot address the counterfactual—how many of these people would have married anyway, in the absence of the government's programs? Nevertheless, marriage trends in Singapore have diverged from those in most other countries of the region, which certainly leaves open the possibility that government housing programs, matchmaking programs, and other elements of family policy have played a role.

Another important aspect of Singapore government policy over the course of the 2000s has made a largely unrecognized contribution to the

stalling of the increase in singlehood: the policy of increasing the number of foreigners granted status as permanent residents. As shown in Table 5, among women a far higher proportion of citizens than PRs are single—double the proportion at ages in the 30s. A similar comparison applies for men. Given that PRs account for about 30 percent of the resident population at ages in the 30s, this clearly has a substantial effect on overall proportions single in Singapore. A simple calculation shows that among women in their 30s, rising trends in the granting of permanent residence lowered the increase in singlehood over the period 2000–10 by between a third and a half.[27] The government's criteria for approval of permanent residence applications[28] suggest that raising the proportions married (and thereby the fertility rate) may have been one of the aims of the PR program.

Policies toward marital fertility

Singapore started earlier and has taken more steps than other East Asian countries in some areas of policy designed to influence fertility. This applies particularly to the use of tax rebates to encourage early childbearing, the scale of child allowances, maternity leave provisions, subsidization of child care, and specific programs to encourage marriage. Policy developments over time have been described in detail in Wong and Yeoh 2003; Saw 2005; Yap 2009; and Straughan, Chan, and Jones 2009. Here I highlight a few of the key policy changes.

Policies introduced in Singapore around 1987 and extended in 1990 included income tax relief for children, childcare subsidies for working mothers, and income tax relief for the foreign maid levy for working mothers. In 2000, additional measures were introduced, prominent among them the baby bonus scheme for second and third children, a two-tier payment involving an outright cash component and a co-saving component matched dollar for

TABLE 5 Percent single among women by age group and residence status: Singapore, 2000 and 2010

Age group	Total residents		Citizens		Permanent residents	Born in Singapore
	2000	2010	2000	2010	2010	2010
25–29	40	54	46	62	33	63
30–34	19	25	22	31	15	33
35–39	15	17	16	20	10	22
40–44	14	14	14	16	9	17
45–49	12	13	13	14	7	15
25–49 (thousands)	733	770	634	573	197	508

SOURCE: Population censuses (2000, 2010).

dollar by the government. In 2001, the eight-week paid maternity leave was extended to the third child.

Additional measures were introduced in 2004, including extension of the baby bonus to first and fourth children; parenthood tax rebates; application of paid maternity leave to the fourth child and extending its duration for all births from 8 to 12 weeks; and contraction of the work week for civil servants to five days, though with extended working hours. Working mothers were also eligible for tax relief in cases where grandparents or in-laws care for children below age 12.

In 2008, revisions to the Marriage and Parenthood (M&P) Package were introduced, budgeted to cost the government S$1.6 billion annually, double the cost of the 2004 measures (Lee 2008). The baby bonus scheme was extended to fifth and subsequent children, and cash payments for the first and second child were also increased. Tax relief for children and for working mothers was increased. Paid maternity leave was extended from 12 to 16 weeks, the last eight of which can be taken any time over a year from the child's birth. Employers who fire pregnant women for no justifiable reason in the last six months of their pregnancy must pay their maternity leave benefits. Previously, this applied only to women fired in the last three months of pregnancy. Finally, subsidies to working mothers for the cost of childcare centers were increased from S$150 per month to S$350 per month, covering about half of the fee charged by the average childcare center.

An ideological shift with regard to men's role in the family was apparent in the government's post-2000 population policies. Paternity leave of three days was introduced in 2000 for fathers who worked as civil servants. Compared with 12 weeks of maternity leave for mothers, this is a meager allowance, but symbolically it signifies that fathers should be involved in childcare. At the same time, all fathers with a child aged under seven were entitled to take two days of paid childcare leave. In the 2008 M&P Package, paid childcare leave was extended to six days annually for each parent when the child is below age six, and unpaid leave for infant care was introduced, giving each parent six days annually when the child is less than two years old. The government argued that this was a more flexible arrangement than giving longer paternity leave, noting that the rate of use for such leave in Scandinavian countries is low.

Fertility has not increased in response to these measures as hoped, and this may well reflect the fact that the baby bonuses and tax concessions for children are not substantial enough to offset the high monetary costs of raising children. Moreover, the culture in many workplaces in Singapore remains unfavorable to employees who prioritize family over responsibilities to the firm, and this discourages women from having a child that may hurt their career prospects and complicate their relationships with co-workers. Nevertheless, Singapore's increasingly comprehensive policies to support marriage

and childbearing are probably part of the reason why fertility rates in Singapore, though disappointingly low from the perspective of the government, are higher than in other major cities in the region, as noted earlier. But as long as rates of singlehood remain high, it is unlikely that fertility rates can be raised significantly unless childbearing by unmarried couples increases, as it has in most Western countries. There is no sign of such a prospect emerging in Singapore.

The labor market, productivity, and migration

Singapore's government considers continued economic growth to be crucial, and it sees human resources as key to that growth, given that the city-state lacks natural resources aside from its strategic location. Thus policies aimed at upgrading the quality of the labor force receive considerable attention, as does strategic adjustment of the labor supply to the needs of employers, both by producing the requisite skills through Singapore's own education system, and by adjusting the issuance of work permits for skilled workers (generally referred to as "foreign talent") and unskilled workers to the needs of the economy. The one factor that is impossible to control is the emigration of professionals; concern is often expressed in official quarters about the loss of skilled Singaporeans. A delicate balancing act is required in this respect, because the government also encourages Singaporeans to be entrepreneurial in seizing opportunities in all regions of the world, and this requires that many Singaporeans work abroad for varying periods of time. It is difficult to predict how many of those working abroad will decide not to return.

Singapore is able to attract all the foreign talent it needs, given the high salaries on offer and the many attractive aspects of life awaiting new arrivals. The number of unskilled and low-skilled foreign workers in Singapore, though, is much higher. These workers are seen as forming a short-term labor pool that is easily repatriated and is given almost no opportunity to establish long-term residence (Yeoh 2006; Yeoh and Lin 2012). Over the first decade of the twenty-first century, Singapore attracted large numbers of foreign workers to meet the needs of a rapidly growing economy whose labor force would otherwise have grown very slowly (see Koh 2007, Figures 5 and 6; Hui 2002; Shantakumar 2002; Hui and Hashmi 2007, Table 6; Saw 2007: 309–315). The scale of migration's contribution to Singapore's population growth over the decade becomes clear if we compare the population for 2010 projected by the United Nations in 2000 with the actual 2010 figure. The United Nations used an assumption that recent rates of migration would continue; indeed, their projections suggested that net migration would contribute more than twice as much to population growth as would natural increase over the decade 2000–2010 (United Nations 2002, Table IV.3.). Nevertheless, the UN's projected population total for 2010 was 4.6 million, almost half a million below

the actual figure of 5.076 million. Rates of population growth recorded in Singapore exceeded 3 percent per annum between 2006 and 2009, peaking at 5.5 percent in 2008. Clearly, substantial in-migration was allowed (much of it in the form of easily repatriated foreign contract workers) in order to capitalize on the rapid economic growth achieved in this period and to meet the resultant labor needs. The citizen population grew by less than one percent per annum over the decade, despite being augmented by the acceptance into citizenship of some permanent residents every year (see endnote 4).

As the decade progressed, however, considerable ambivalence arose among Singaporean citizens about an increasing share of noncitizens in the population. The ambivalence is related not only to increasing numbers of unskilled contract workers, but also to foreign talent, seen to be taking away the jobs of locals, and to the increasing number of permanent residents. The fact that many of these PRs (though the government does not reveal how many) are from China might be expected to lead to their wider acceptance by the majority ethnic Chinese Singaporeans, but this does not appear to be the case. High levels of immigration, regardless of origin, have instead been accompanied by social tensions. Singaporeans complain of feeling like strangers in their own country, of crowded subways and buses, rising house prices, heightened competition for school places, and dealing with shop assistants who cannot communicate with them. These negative reactions to the rapidly rising number of foreign-born workers in Singapore were evident to the government, which responded with a drastic cut in the number of applicants granted permanent residence in 2009 and 2010.[29] Although the difficult global economic conditions no doubt played a role in this decision, it is significant that the government, which faced an election in 2011, was well aware of the electoral sensitivity of the immigration issue. Thus there are clearly limits to the feasibility of using foreign workers to meet manpower needs.

In confronting the policy issues posed by demographic and social trends, the Singapore government will need to reconsider both the 6.5 million figure considered a desirable population for 2050 and the different means available to increase the country's population. As noted above, the population increases over the first decade of the twenty-first century were due entirely to migration and its contribution to natural increase, and this will probably remain the case for any further increases. However, public disquiet with the effects of the rapid influx of foreigners, the sharp fall in the number of permanent residence permits granted, and the recently announced plans to raise the minimum salary level required for issuance of work permits for foreign skilled workers all demonstrate the government's growing determination to limit the growth of the noncitizen population. A high-level government committee recommended in 2010 that the economy's dependence on the foreign workforce should not be allowed to grow significantly beyond current levels of about one-third of the total, partly because if access to labor is too easy, companies

will have little incentive to invest in productivity improvements (Economic Strategies Committee 2010). The implication is that both population growth and labor force growth will slow drastically.

How many foreign workers will be needed to ensure that economic growth can be maintained at desired levels? This figure could be projected using assumptions about labor force participation, growth in labor productivity, and loss of Singaporean workers through emigration (see Hui and Hashmi 2007 for earlier estimates along these lines). If the estimate of foreign workers required is shown to be modest, then it can no doubt be met without difficulty. The difficulty would arise if the projections indicated the need for a faster increase in the foreign worker population.

As I noted earlier, the resident population has been projected by the Institute of Policy Studies according to different fertility and net migration assumptions, and a figure exceeding 6.5 million in 2050 was reached assuming that net migration averages 60,000 a year. What has not been made public in these projections is the trend in the proportion of the population that would then be foreign born (and the proportions of the foreign born originating from various countries). Given political realities in Singapore, this is really the crux of the issue. The gross migration flows underlying the net migration figure would be relevant here, too, a point rarely acknowledged in media discussions of the topic in Singapore. A net migration figure of 60,000 would have different implications for the proportion of the foreign born if large numbers of Singaporeans were leaving and this outflow was thus being offset by even larger numbers of immigrants. While only about 1,200 Singaporeans give up their citizenship each year, there is concern among officials in Singapore that the figure of 180,000 Singaporeans living abroad in 2010 may be swelled further as Singapore becomes increasingly integrated within the global economy.[30]

Government spokespersons have sought for several years to convince Singaporeans of the need for continuing immigration, both permanent and in the form of contract workers.[31] The problem, of course, is that the balance between the need for foreign workers and the barriers to their assimilation is difficult to manage. One topic that has not yet surfaced in public discussion is whether the sharp decline in the proportion of permanent residence applications being approved[32] will adversely affect Singapore's ability to attract skilled workers on contract. It is highly likely that some of the workers who take a contract to work in Singapore do so in the hope that they will later qualify for permanent residence.[33]

The way ahead

Singapore's population, with fertility below replacement level since 1975, would have been declining for some time had it not been for net migration.

Future decline also appears inevitable without migration. Despite the recovery of fertility in Europe—though to levels still well below replacement (Myrskylä, Kohler, and Billari 2009)—there is little sign of such a fertility upswing in East Asian countries, including Singapore (Frejka, Jones, and Sardon 2010). Globalization, neo-liberalism, and consumerism in societies imbued with Confucianist principles provide the context in which the life goals of individuals and families in these countries are determined, and in which uncertainty increases about whether these goals can be met. In all of these societies, at least in the short term, the twin goals of economic advancement and population replacement are on a collision course.

In these East Asian countries the state and individual families seem united in their belief that children should be pressured to achieve high performance in education. Parents' reliance on the *juku* or cram school in Japan is legendary, and similar situations exist in South Korea, with its *kawwe* (private tutors) and *hagwon* (cram schools), and in Taiwan. While the cram school is less in evidence in Singapore, extra tutoring of students to ensure they reach the necessary level in key subjects is ubiquitous. Many parents in Singapore take two weeks' vacation to assist their 12-year-olds to prepare for the primary school leaving examination, which plays a major role in determining the child's future life course. Similar attitudes can be seen in China, where, "even when schools cut back on extra classes or try less exam-oriented teaching methods, parents make up for this by sending their child to more supplementary classes, hiring tutors, or buying extra study materials" (Crabb 2010: 397, citing Tang 2005).

In many ways, the emphasis on education is commendable, albeit sometimes placing excessive pressure on children. East Asian countries (Taiwan, South Korea, Hong Kong, Singapore, and Japan) lead the world in the performance of 4th and 8th graders in mathematics and science (Gonzales et al. 2008). On the other hand, the emphasis on education is also one of the factors reducing fertility to ultra-low levels. Many young Singaporeans are unwilling to contemplate parenthood until they are confident that they can assume the role of the ideal mother or father. Many will not marry; and for most of those who do, the quality/quantity tradeoff in raising children is a deterrent from having more than one or two.

The economic success achieved in the East Asian countries is partly (perhaps largely) attributable to the high-quality human capital they have built up through their emphasis on exceptional educational performance. The advanced economy thereby created, however, will be enjoyed by fewer and fewer citizens and may itself be put at risk by a decline in labor force size and (with some delay) in population size. There is an evident irony in the fact that the very pressures to prioritize economic growth and the human capital factors that contribute to it harbor the seeds of an inability of the population to replace itself.

Is there some way out of this dilemma? Perhaps some hints can be found in the experience of those Western countries where fertility remains relatively high—a diverse group, including the Scandinavian countries, France, the United States, and Australia. In assessing explanatory factors, some would say that the key in Scandinavia is gender equity, in France substantial financial incentives for childbearing, and in the US the culture of minority populations (in particular Hispanics) and religious fundamentalists. None of these factors provides relevant policy prescriptions for raising fertility in Singapore to near-replacement levels, given the country's distinctive sociopolitical structure. But two points can be made: 1) greater gender equity in the household would help alleviate the stark choices facing women deciding between career and family or trying to manage both; 2) less single-minded attention to children's educational performance, and more family-friendly workplaces, might help raise the birth rate, although perhaps at the sacrifice of some economic growth.

The government publicly acknowledges that Singapore is entering a period of slower economic growth, inevitable in a maturing economy. The Prime Minister has stated that a growth rate exceeding 3 percent per annum over the next decade would represent a good performance (*Business Times*, 21 October 2011). Even if a slowdown in growth were not inevitable, Singapore, as one of the world's wealthiest countries, could well afford to sacrifice some economic growth and to relax the national and individual pressure to succeed. This just might enable it both to score higher than at present on measures of subjective well-being and to avoid the unappealing choice between the alternatives of population decline and a steady increase in the foreign-born proportion of the population.

Notes

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1 About 90 percent of those living in HDB apartments own them. Ownership is based mainly on payment from the mandatory state-managed Central Provident Fund (CPF) savings (Tan 1998; Low and Aw 1998).

2 Subjective well-being in Singapore—based on combined data on reported happiness and life satisfaction, equally weighted, from the 1995–2007 World Values Surveys—gives Singapore a score of 2.72, 31st out of 97 countries. This is well above the mean of 1.57 but well below the score of many lower-income countries. See National Science Foundation 2008.

3 The exact numbers of foreign workers in different categories are difficult to determine, and I have been unable to obtain a breakdown for a more recent year.

4 The number of permanent residents granted citizenship rose sharply from 7,600 in 2004 to around 20,000 in both 2008 and 2009 (Yeoh and Lin 2012).

5 In the case of a child born outside Singapore, if the parent is a Singapore citizen by descent, the parent must have been resident in Singapore for a total of at least four years at

any time before the child's birth or a total of at least one year out of the five years preceding the child's birth.

6 The LTVP will now be awarded for three years at the first successful application and up to five years for each renewal. Factors taken into consideration in awarding the LTVP include whether the couple have a child who is a Singapore citizen, a longer than three-year duration of marriage, the ability of the sponsor to support the family financially, and good conduct of both the spouse and applicant. (Immigration and Checkpoints Authority website «http://www.ifaq.gov.sg/ica/apps/», accessed 28 March 2012).

7 See National Population Secretariat 2009. It is impossible to know how many of these marriages are between Chinese Singaporeans and foreigners of Chinese ethnicity (likewise for Indians and Malays) because the government does not release data on the country of origin or ethnicity of foreign spouses. Likewise, information is not released on national origins of foreign workers or of persons granted permanent residence. "Political sensitivity over the racial composition of the population ... has been an important factor in determining the country of origin of foreign manpower in Singapore. It has also contributed to the shroud of official secrecy over the number and other details of foreigners here" (Hui 2002: 34).

8 For further details, see «http://www.ica.gov.sg/news_details.aspx?nid=12443».

9 In 2007 the National Development Minister stated that the figure of 6.5 million is not a target, but rather a "planning parameter" to guide the Urban Redevelopment Authority's Concept Plan. The Minister Mentor, Lee Kuan Yew, favored a lower figure of 5 or 5.5 million as a population target.

10 Lee made this statement at a forum at Nanyang Technological University in September 2011. See *Straits Times*, 6 September 2011.

11 Singapore's TFR is roughly 20–30 percent higher than in Seoul, Busan, Taipei, Kaohsiung, and Hong Kong; 50 percent higher than in Shanghai and Beijing; and about 15 percent higher than in Tokyo. However, the differential narrows substantially if we compare the Chinese Singaporean TFR with TFRs in the aforementioned cities. The TFR for Chinese Singaporeans fell to historic lows of 1.08 in 2009 and 1.02 in 2010.

12 It has been hypothesized that Malays, as the lowest-income group in Singapore, were more directly influenced than other ethnic groups by pronatalist incentives introduced by the Singapore government in 1987–88. Further, it is worth noting that the rise in Malay fertility coincided with a rise in Malay fertility in neighboring Malaysia and, given the close links between the two countries, may have been affected by some of the factors operating there (Jones 1990: 529).

13 The most recent evidence on the proportion of births to nonmarried women in these countries indicates that it is at most 2 percent in Japan, Korea, and Singapore (Frejka, Jones, and Sardon 2010, fn. 10) and slightly over 4 percent in Taiwan. Cohabitation will have little effect on fertility if it remains (as is the case in the region) overwhelmingly a child-free relationship.

14 "Below secondary" refers to the first six grades of education. "Secondary" refers to the next five grades of education. "Post-secondary" comprises Upper Secondary, Polytechnic, and Other Diploma.

15 See then-Prime Minister Lee Kuan Yew's National Day Rally speech of 14 August 1983, reprinted in Saw 2005, Appendix A. An ill-fated attempt to selectively raise the fertility of educated women followed (Wong and Yeoh 2003: 8–10; Saw 2005: Chapter 9).

16 For the numbers, see endnote 32.

17 See Chan 2002; MCYS 2009. For instance, 85 percent of singles surveyed in the 2007 Study on Marriage and Parenthood indicated an intention to marry (MCYS 2009). This proportion is higher than the response in 2004 when a similar survey was conducted, which suggests there is a good deal of involuntary singlehood in Singapore.

18 The general divorce rate for males (per 1000 married resident males) increased from 6.1 in 1990 to 7.7 in 2009, and the general divorce rate for females rose from 6.1 to 7.3 during the same period (Singapore Department of Statistics 2010b).

19 In 2012, Singapore ranked 11th among global cities (down from 7th in 2008), and 4th in Asia, according to the Global Cities

Index published in *Foreign Policy* magazine, in collaboration with A.T. Kearney and the Chicago Council on Global Affairs. It ranked 3rd in the world in 2012 according to the *Economist Intelligence Unit*'s ranking of the competitiveness of global cities, based on their demonstrated ability to attract capital, business, talent, and visitors.

20 At the time of the survey, the Singapore dollar was equivalent to approximately US$0.77. By early 2012, this had risen to approximately US$0.80.

21 This is not surprising, given evidence from other countries in the region of an increase in both premarital sex and cohabitation among the rising proportions who remain single at ages well beyond traditional ages at marriage. For Japan, see Retherford, Ogawa, and Matsukura 2001: 88–91; Retherford and Ogawa 2006: 19–20; Raymo and Iwasawa 2008; Lesthaeghe 2010, Tables 3 and 4. For Taiwan, see Lesthaeghe 2010, Table 5. In Japan and South Korea a significantly higher proportion of young people accept cohabiting relationships than do older generations.

22 This estimate takes into account medical fees incurred during pregnancy and delivery, infant care, childcare, enrichment activities, education costs from preschool to university, and basic food and other necessities (see Perroy 2011).

23 Among properties managed by the HDB in 2011, 26 percent were two-bedroom flats, 38 percent were three-bedroom flats, and 31 percent were four-bedroom flats or larger. Many elderly Singaporeans continue to live with their children in "multi-generation flats."

24 In 2007, private consumption expenditure on education in Singapore was 1.1 percent of GDP, compared with an OECD average of 0.9 percent in the same year and 2.8 percent in Korea. See OECD 2010, Table B2.4; and *Yearbook of Statistics Singapore 2011*, Tables 5.4 and 5.5.

25 Letters to the editor of the main newspaper, *The Straits Times*, in the last three years have featured controversies over whether some restaurants should be permitted to declare themselves child-free, and over the alleged selfishness of parents in bringing strollers onto public transport and using them aggressively to clear a path in crowded public places. There are also reports of single co-workers being aggrieved about having to work on key public holidays to allow parents to spend such holidays with their children.

26 Twenty-six of the 30 single respondents in the Singapore singlehood study, all aged over 30, lived with their parents, and two others lived with their siblings.

27 At ages 30–34, if the proportion of PRs in 2010 had remained the same as in 2000, the proportion single would have risen from 19.5 percent in 2000 to about 28.5 percent in 2010, instead of to 25.1 percent, as actually happened. Similarly, at ages 35–39, the proportion single would have risen from 15.1 percent in 2000 to about 18.8 percent in 2010, instead of to 17.1 percent. In other words, trends in granting of permanent residence held the increase in singlehood to only about 64 percent of what it would otherwise have been among women aged 30–34, and to 54 percent of what it would have been among women aged 35–39.

28 Although the government does not reveal specific criteria for approval of permanent residence applications, the Deputy Prime Minister, in reply to a question in Parliament in October 2011, stated that the factors considered include the person's economic contributions, qualifications, age, and family circumstances (*Straits Times*, 22 October 2011).

29 The number of permanent residence permits granted in the early 2000s ranged from 30,000 to 40,000. This number rose sharply to 52,300 in 2005, 57,300 in 2006, 63,627 in 2007, and 79,167 in 2008. It fell to 59,460 in 2009 and to 29,265 in 2010. For the first time in 20 years, the number of permanent residents in Singapore fell in the year to June 2011.

30 Evidence that this is likely to be so includes: 1) a substantial rise in the number of Singaporeans who applied for the Certificate of No Criminal Conviction required for the application for long-term residential visas by many of the developed countries to which Singaporeans wish to move; 2) the fact that 78 percent of global inquiries to the New Zealand Immigration Service for work, education, and long-term residential visas originated from Singapore; and 3) social survey findings that

more than half of Singapore youth surveyed would leave the country to advance their careers if given the chance (Leong and Soon 2011: 15; Yeoh and Lin 2012).

31 As stated by the Deputy Prime Minister and Minister-in-Charge of the National Population and Talent Division, as an addendum to the President's address in 2011: "Immigration has helped to address our declining fertility and inject vibrancy in our economy and society. At the same time, we must ensure that Singaporeans' sense of belonging and national identity remain strong. We will continue to manage the pace of immigration to ensure that immigrants are assimilable, of good quality and can be well integrated into Singapore society."

32 The number of permanent residence applications that were rejected rose from an average of 16,639 a year over the period 2004–2007 to 58,923 in 2009 and 68,143 in 2010. The proportion of applications rejected rose from around 22 percent during 2005–2008 to 50 percent in 2009 and 70 percent in 2010.

33 One survey among skilled foreign workers (employment pass holders) found that more than half contemplated applying for permanent resident status (Yeoh and Huang 1999).

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