

the peaceful development of the cross-Straits relationship, the annual number of registered marriages involved wives from Mainland China is relatively stable.

Table 4. Registered Number of Marriages and Births by Bride's/Mother's Origins: 1998-2010

Year	No. of Marriages	Distribution of Bride's Origins (%)				No. of Births	Distribution of Mother's Origins (%)			
		Taiwan	China	SE Asia	Other		Taiwan	China	SE Asia	Other
1998	145976	85.9	8.2	5.9		271450	94.9	5.1		
1999	173209	83.0	9.7	7.3		283661	93.9	6.1		
2000	181642	77.0	12.5	10.5		305312	92.4	7.6		
2001	170515	74.9	15.1	9.8	0.2	260354	89.3	10.7		
2002	172655	74.1	15.8	9.8	0.2	247530	87.5	12.5		
2003	171483	71.6	18.5	9.5	0.3	227070	86.3	13.4		
2004	131453	78.6	8.0	13.1	0.3	216419	86.7	5.2	8.0	0.1
2005	141140	82.1	10.0	7.6	0.3	205854	87.1	4.9	7.9	0.1
2006	142669	85.5	9.7	4.5	0.3	204459	88.3	5.1	6.5	0.1
2007	135041	84.0	10.8	4.8	0.3	204414	89.8	5.0	5.2	0.1
2008	154866	88.2	7.8	3.6	0.3	198733	90.4	5.0	4.5	0.1
2009	117099	84.4	10.8	4.4	0.4	191310	91.3	4.6	4.0	0.1
2010	138819	87.2	9.0	3.4	0.4	166886	91.3	4.9	3.7	0.1

Source: Annual Population Statistics. Department of Household Registration Affairs, MOI, Executive Yuan.

Available online: Marriage Registration: [http://www.ris.gov.tw/version96/population\\_01\\_C\\_05.html](http://www.ris.gov.tw/version96/population_01_C_05.html)

Birth Registration: [http://www.ris.gov.tw/version96/population\\_01\\_C\\_03.html](http://www.ris.gov.tw/version96/population_01_C_03.html)

By the end of 2011, there were 459,390 marriage migrants, 67% from Mainland China, Hong Kong and Macao, and others mainly from Southeast Asia including Vietnam, Indonesia, Thailand and the Philippines. More than 90% of them were female, while Japanese were the number one choice in marriages involving foreign grooms (Ministry of the Interior, 2012). In terms of the residential distribution, a majority of marriages between Chinese wives and Taiwanese husbands were more prevalent in cities and adjacent areas. On the contrary, foreign spouses from Southeast Asia were more likely to concentrate in rural and remote areas dominated by agricultural activities. In southern Taiwan and outlying small islands, where fishing is the major means of livelihood, most foreign wives originated in Vietnam and the Philippines (Ministry of the Interior, 2004).

The decrease in the number of cross-border marriages could be considered as correlated fluctuations of fertility. Therefore, the share of births born to non-Taiwanese mothers has been declined in

recent years (see the right panel in Table 4). In addition, the lower total fertility rates have been observed in major cities and counties since 1990. There were only two exceptions, Kinmen and Lienchiang, counties of Fujian Province in southeast China. As shown in Table 5, following a rapid increase of marriage immigrants between 1990 and 2000, the fertility did not show a significant change in most non-metropolitan areas. Few counties, like Yunlin, Chiayi and Penghu, have seen a slightly rebounded TFR. The pace of fertility decline appeared to be slowing in Taipei City unexpectedly. Yet the implementation of new migration policy and regulations since 2004 has resulted in a downward trend in this marriage pattern. A substantial decline in the number of marriage immigrants from Vietnam has also been recorded during this period. In most agricultural counties, an even lower fertility rate may be associated with fewer cross-border marriages between 2000 and 2010.

The substantial number of babies born to immigrant mothers has made an important contribution to total fertility rates. Despite an increasing anxiety concerning the quantity of newborns from foreign and Mainland Chinese mothers, the research shows that the average number of children born to a marriage migrant is still lower than the replacement level. By examining the sex ratios of recent newborns from cross-border marriages, it is evident that some couples may have a strong preference for a son (Chen, 2008). In response to the declining birth rate in recent years, some counties and cities began to offer monetary incentives for encouraging newborns. Hsinchu City, the base for high technology industry in Taiwan, has offered additional benefits for the second and third child. Given its young population and a more generous pro-natal policy, there is no doubt that the highest TFR is observed in Hsinchu City in recent years.

Table 5. Changes in Total Fertility Rate by Cities/Counties in 1990, 2000 and 2010

County/City	1990	2000	2010	Period Change	
				1990-2000	2000-2010
Taipei County	1.800	1.480	.815	-17.78	-44.93
Yilan County	1.885	1.725	.990	-8.49	-42.61
Taoyuan County	1.930	1.835	.950	-4.92	-48.23
Hsinchu County	2.230	2.205	1.180	-1.12	-46.49
Miaoli County	2.095	1.915	.990	-8.59	-48.30
Taichung County	1.950	1.735	.905	-11.03	-47.84
Changhua County	2.020	1.860	1.000	-7.92	-46.24
Nantou County	1.930	1.810	.870	-6.22	-51.93
Yunlin County	1.960	1.990	.950	1.53	-52.26
Chiayi County	1.995	2.090	.875	4.76	-58.13
Tainan County	1.830	1.705	.760	-6.83	-55.43
Kaohsiung County	1.795	1.695	.770	-5.57	-54.57
Pingtung County	1.795	1.725	.795	-3.90	-53.91
Penghu County	1.670	1.850	.860	10.78	-53.51
Hualien County	1.815	1.710	.945	-5.79	-44.74
Taitung County	1.825	1.855	1.040	1.64	-43.94
Taipei City	1.475	1.510	.895	2.37	-40.73
Keelung City	1.720	1.565	.735	-9.01	-53.04
<b>Hsinchu City</b>	<b>1.870</b>	<b>1.775</b>	<b>1.300</b>	<b>-5.08</b>	<b>-26.76</b>
Taichung City	1.770	1.555	.835	-12.15	-46.30
Chiayi City	1.600	1.505	.825	-5.94	-45.18
Tainan City	1.610	1.405	.790	-12.73	-43.77
Kaohsiung City	1.585	1.420	.840	-10.41	-40.85
Kinmen County	2.570	2.210	1.350	-14.01	-38.91
Lienchiang County	2.165	2.225	1.420	2.77	-36.18
Overall TFR	1.810	1.680	<b>.895</b>	-7.18	-46.73

Source: Annual Data on Fertility Rates of Childbearing Age Women by Location, Department of Household Registration, Ministry of the Interior, ROC. (<http://sowf.moi.gov.tw/stat/year/list.htm>)

## 2. Intergenerational Transmission of Value of Children

In an age of individualism, more young Taiwanese have delayed their marriages and childbearing for pursuing the quality of their life. Some of them even choose to be single and childless. Those typical Chinese norms such as “*producing a male heir to continue the family line*,” “*suppressing oneself for the sake of the family*,” or “*raising children as insurance for old age*” no longer strongly appeal to younger generations. Although numerous efforts have been allocated to increase the birth rate among young married couples, relatively less attention is laid upon the attitudes or values held of having children.

In the 1970s, scholars have argued that an important reason of wanting to or not to bear children may result from the changing concept of having children (Arnold et al., 1975; Hoffman and Hoffman, 1973). While the traditional norm for the utility of children is largely restricted to the physical or economic provision, modern concept appears to emphasize the emotional gratification of raising children. In addition, social recognition of being parents still remains strong in East Asia and marital fertility not only constitutes almost all infant numbers, it is probably the only accepted fertility pattern by social norm in this region. Hence, it is important to study values behind the fertility behavior in order to achieve better prediction of the future demographic trends. In this light, family is presumed to be the major locus of value transmission including the value of children (VOC). To explore possible value transmissions of VOC among different generations will allow us to ascertain the construction of VOC at home as well as to delineate significant factors occurred in the process which may account for values endorsed.

To investigate the change and continuity of the value of children among Taiwanese and to examine how these values and reproduction behaviors being transmitted intergenerationally, Dr. Chin-Chun Yi and her colleagues have completed a nation-wide three-generation survey (Chen and Yi, 2009). In this survey design, the concept of value of children is distinguished by the advantages or benefits for having or wanting children. A five-point Likert scale is used, with 1 being the lowest score “not important at all” and 5 being the highest score “very important”. Three factors including emotional, physical-economic and social-relational reasons were generated through the factor analysis (see Table 6), with three items excluded from the analysis because of low internal consistency.

The emotional factor includes 5 items such as “Making family more important”, “Increasing sense of responsibility”, “It’s fun to have young children around the house”, “It’s a joy to have a small baby at home”, “It’s a pleasure to watch your children grow” and “Having children helps you grow”. The physical-economic factor comprises 4 items concerning economic support and old-age care. The social and relational factor reflects the dominant value of continuing the family name as well as improving one’s social standing as a parent. For teenagers, the result of factor analysis shows the structure of VOC is slightly different from their mothers and grandmothers. Taiwanese adolescents perceive that having

child can help them to learn about life and themselves. These results are identical with most other VOC findings in recent years (Nauck, 2007).

Table 6 presents the mean scores of all 13 VOC items as well as 3 factors. The result shows that emotional benefits of having children were the most reported reason over three generations, particularly being valued by mothers of teenagers (mean factor score=4.09). While grandmothers were more likely to emphasize the importance of physical/economical and social/relational reasons for having children, both teenagers and their mothers have devalued significantly these two VOC factors.

Table 6. Means and Standard Deviations of Positive VOC Items and Factors

Item	Grandmother	Mother	Teenager
<b><i>Emotional reason</i></b>	<b>3.76 (0.82)</b>	<b>4.09 (0.54)</b>	<b>3.70(0.84)</b>
Make family more important	3.83 (0.93)	4.15 (0.66)	3.64 (0.99)
Increase sense of responsibility	3.17 (1.16)	3.87 (0.84)	3.60 (0.97)
Joy to have a small baby	3.93 (0.86)	4.13 (0.67)	3.80 (1.04)
Fun to have young children around	3.96 (0.88)	4.09 (0.68)	3.71 (1.04)
Pleasure watching children grow	3.92 (0.99)	4.23 (0.71)	3.80 (1.07)
<b><i>Physical/Economical reason</i></b>	<b>3.79 (0.90)</b>	<b>3.04 (0.95)</b>	<b>3.03 (0.93)</b>
Less likely to be lonely in old age	4.00 (1.01)	3.36 (1.12)	3.35 (1.14)
To help your family economically	3.51 (1.21)	2.71 (1.15)	2.68 (1.08)
Children take care of you when you're old	4.00 (0.97)	3.29 (1.13)	3.20 (1.10)
Children support economically when you're old	3.65 (1.15)	2.80 (1.12)	2.88 (1.10)
<b><i>Social/Relational reason</i></b>	<b>3.49 (0.74)</b>	<b>3.18 (0.81)</b>	<b>2.32 (0.85)</b>
Standing/reputation among your kin	2.94 (1.25)	2.60 (1.13)	2.10 (0.93)
Childrearing helps learn about life/self	3.23 (1.07)	3.71 (0.85)	3.62 (0.99)*
Life will be continued through children	3.80 (0.84)	3.37 (1.05)	2.57 (1.17)
To carry on the family name	3.98 (0.88)	3.04 (1.17)	2.28 (1.11)

Note: \* For teenagers, this item is allocated into emotional reason.

We also examine the correlation coefficients of VOC factors of three generations in explaining possible transmission effects (see Table 7). With regard to emotional factor, one significant and positive relation is only found between grandmothers and their daughters ( $r = .16$ ). In addition, the result points the negative relation between grandmother's emotional concern and mother's physical concern. The most consistent findings are related to physical/economical and social/relational factors across generations. It is clear that physical/economical value is transmitted from grandmothers to mothers and from mothers to

their adolescent children orderly. However, we do not find significant transmission effect in social/relational dimension over generations in Taiwan's study.

Table 7. Correlation Coefficients of Positive VOC Factors of Three Generations

	E_g1	P_g1	S_g1	E_g2	P_g2	S_g2	E_g3	P_g3	S_g3
E_g1	1								
P_g1	.09	1							
S_g1	.56***	.39***	1						
E_g2	.16**	-.11	.09	1					
P_g2	-.14*	.23***	-.03	.01	1				
S_g2	-.09	.22***	-.01	.09	.64***	1			
E_g3	.01	.03	-.05	.11	.08	.04	1		
P_g3	-.08	.15**	-.01	.02	.12*	.04	.36***	1	
S_g3	-.05	.14*	.03	-.07	.10	.10	.27***	.54***	1

Note: \*\*\*  $p < .001$ ; \*\*  $p < .01$ ; \*  $p < .05$

### 3. The Evolution of Population Policies in Taiwan

As other developing countries, Taiwan confronted the problem of excess population after World War II. Although Taiwan stabilized its economy and resumed its normal course of development with the aid from the United States, a sustained rate of increase in agricultural production sufficient to support its growing population was hardly achieved at that time. The fundamental solution lay in reducing fertility and promoting industrialization. Therefore, in the late 1950s and early 1960s, positive views toward larger populations began to give way to concern about the adverse consequences of rapid population growth. In 1959, Dr. Chiang Molin, chairman of the Joint Commission on Rural Construction, made an emotional appeal in support of the family planning program, urging the government not to intervene in his efforts to promote it. Later, in September 1961 the Taiwan Population Studies Center, with technical and financial support from the University of Michigan and the Population Council, was established within the Provincial Health Department. A carefully designed action and research program was launched. The integration of population and development strategies had driven a dramatic demographic transformation.

In reality, the government action accelerated population change and economic development in Taiwan (Liu, 2001). In 1969, after the announcement of guidelines for population policy, the family

planning program received its legitimacy status and financial assistance from the Government. In addition to promoting a reasonable rate of population growth through voluntary family planning program, the guidelines also included measures to improve the quality of the population through better education, nutrition, and eugenic protection and to promote a rational distribution of the population. A remarkable shift in public opinion in favor of birth control became evident. Beginning in the late 1970s, a sharp decline in fertility rate was associated with the prevalence of induced abortion at private clinics, while the Eugenic Protection Law, which legalized abortion for medical reason only, had not been approval until 1985. Figure 2 shows that the total fertility rate had below the replacement level of 2.1children per woman by 1984, and it has remained below that level except the Year of the Dragon.

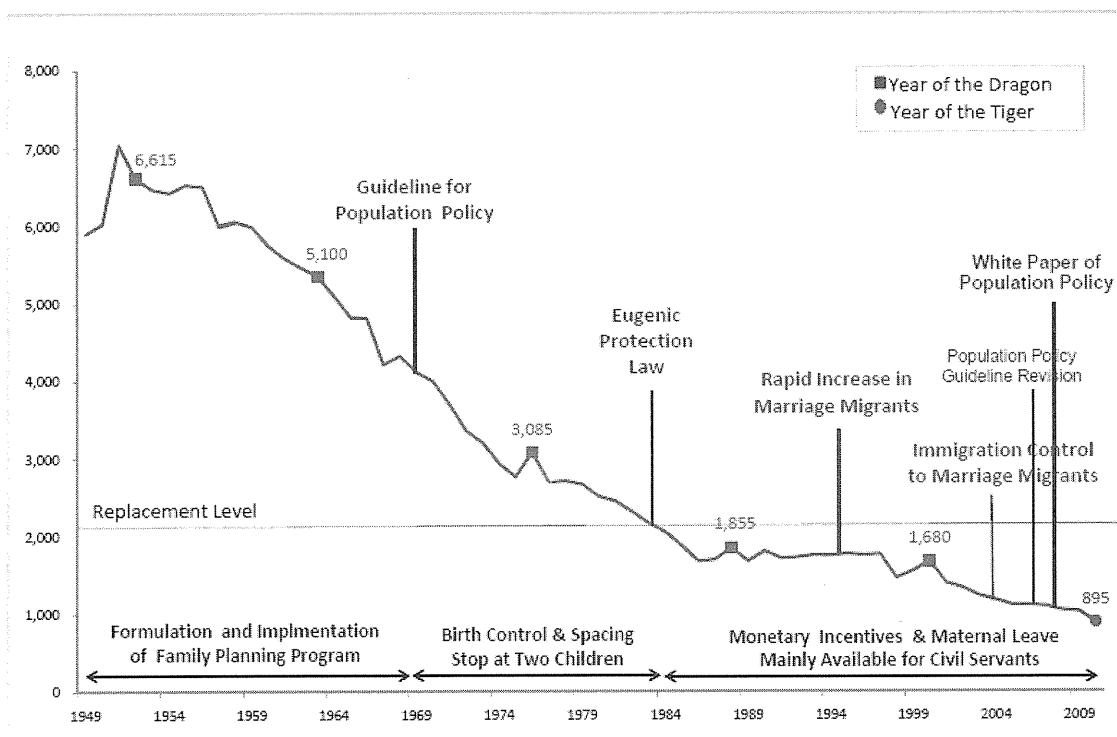


Figure 2. Population Policies, Marriage and Fertility Trends

While the family planning program was appraised as a success because it considered the accessibility for married women as well as the importance of diffusion of new ideas within society, both officials and scholars are evaluating its long-lasting impact on adults' reproductive attitudes and practices which may be attributed to Taiwan's low fertility rates (Tsai, 2007). In 1992, the Guideline for Population Policy was thus revised. The previous goal for reducing population growth was then modified into that for maintaining a reasonable growth of population. Nevertheless, new policy initiative announced at this

time was not accepted by the general public. More higher-educated Taiwanese preferred to remain single or to have fewer or no children became a trend that continues today. The introduction of cross-border marriage ever retained fertility rates for years, but the pro-natal population policy revised recently has not been as successful in reversing fertility declines. Furthermore, both feminists and environmentalists have expressed their concern over fertility lifting, which was actually interrupted government's plan for raising fertility to a certain extent (Lee, 2009).

Even though, in accordance with the spirit of revised Guidelines for Population Policy and in response to rapid aging and labor shortage, the research of White Paper for Population Policy was delineated into three parts, including pro-natal, aging, and migration policies. As a result, the White Paper for Population Policy was announced by the Minister of the Interior in 2008. Regarding the pro-natal policy, seven measures that have been set for lifting fertility rate are as follows:

1. Building up comprehensive childcare institution
2. Financial assistance for families with dependent children
3. Creation of family-friendly workplace
4. **Revision of maternity protection\***
5. Improvement of reproductive health care system
6. Creating child safe environments
7. Expanding opportunities to meet marriageable partners and promoting public goods value of children

Women groups have claimed that working women in Taiwan should be protected. In 2002, Gender Equality of Employment Law was passed by the Legislative Yuan in Taiwan. In the law, discrimination toward married or pregnant female workers is strictly forbidden. Employers should provide enough maternity and parental leaves for mothers and female workers who are mothers of children younger than 3 years old could adjust their working hours according to their own needs. The law was supposed to improve the motivation of working women to have children; however, almost 10 years after the law was passed, the fertility rate is still declining. Thus, questions are raised regarding the effectiveness of these policies and regulations. Because of financial difficulties and the lack of organizational and institutional consistency, a variety of policies and measures are implementing at national level and/or local level. There is no doubt that declining fertility and marriage are hardly changed in Taiwanese society.

In 2010, to encourage more babies, the Ministry of the Interior initiated a US\$35,000 cash prize for a slogan. Based on a month of online voting, Internet users have chosen “Children are our most precious treasures (孩子~是我們最好的傳家寶)” as the winning slogan. The government has been offering various incentives in an unsuccessful bid to boost birth rates, amid growing concerns that a severe



manpower shortage will trigger serious social and economic problems. Taipei City, where birth rates dived to an all-time low last year with fewer than 20,000 babies being born, will start paying couples NT\$20,000 for every newborn beginning from January 1, 2011. The mayor, Lung-Bin Hau, announced in his inaugural address last year, said “The falling birthrates have made a significant impact on our already graying population over the recent years. This phenomenon will indeed cripple our city’s development. So, the city government will unveil a series of generous incentive programs to encourage marriages, stimulate childbirths and provide more job opportunities for our young people. This is one of the most important policies I will execute in the next four years.”<sup>5</sup>

As shown in Table 10, in addition to a NT\$20,000 payment given to any family that has a baby, the other monthly subsidies will be available for eligible parents with a child 5 years old or under. Perhaps with the growing awareness that monetary incentives alone could not persuade individuals to change their fertility behavior, the Taipei City Government has emphasized free education for 5-year-old students enrolled in public pre-schools. Also, the family-friendly Enterprise Award is initiated to promote the long-term goal of enhancing the working environment. In response to expensive cost of living and housing in Taipei City Mayor Hau went to Singapore for learning its housing policy and has proposed to construct affordable rental housing for young couples.

The progression in Taipei’s pro-natal policy measures as well as declining fertility rate nationally have pushed President Ma Ying-Jeou to announce new policy measures for encouraging childbirths. The income tax rebate is the most important change in newly proposed policy. Parents who were taxed below 20% and have a child 2 to 5 years of age could enjoy a special tax rebate of NT\$25,000 per child beginning next year. To become a population policy, it should pass the voting process in the Legislative Yuan by the end of this year. Additionally, paid parental leave and housing subsidies are both proposed within the whole policy.

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<sup>5</sup> Mayor Hau’s Inaugural Speech.  
<http://www.taipei.gov.tw/ct.asp?xItem=41082&CtNode=5292&mp=100001>

Table 10. Comparison between Taipei City's and Whole Taiwan's Existing and Proposed Pro-natal Policies

Policy Measures	Taipei City (01/01/2011)	Taiwan (undecided)
Cash benefits	One-time payment of NT\$20,000 given to family with a newborn*	
Childcare subsidies	Parents taxed below 20% who have a child 5 years of age or under can receive a monthly subsidy of NT\$2,500**	Parents of child 0 to 2 years of age can receive: 1) A monthly subsidy ranging from NT\$3,000 to NT\$5,000 for babysitting 2) An extra subsidy ranging from NT\$2,500 to NT\$5,000, if child is cared by parents themselves
Income tax rebates		Special tax rebate of NT\$25,000 per child for parents taxed below 20% who have a child 2 to 5 years of age
Pre-school education	Free education for 5-year-old students enrolled in public pre-schools; a subsidy of NT\$12,543 given to students in private ones	Extended compulsory education: Free education for all 5-year-old pre-school students (August 2011)
Delivery subsidy	2-month salary for civil servants; 1-month salary for working mothers	
Parental leave & payment	1) Maximum 2 years of no pay parental leave for a family with child below 3 years old 2) Maximum 1 year of paid parental leave. Either father or mother is eligible to take up to 6 months paid leave at 60% of income.	
Housing subsidy	Subsidized loan and rental assistance for young couples in hope that they will not postpone marriage or delay having children	

Notes: 1US Dollar  $\cong$  29 NT Dollar

Qualification for application in Taipei: \*Either father or mother of newborn (born on or after 01/01/2011) who has been resided in Taipei at least 1 year. \*\*Both parents and child should be residents in Taipei at least 1 year, and the family does not receive any other social welfare subsidies.

#### 4. Conclusion and Discussions

Because of extra-low fertility happened in 2010, many predictions and guesses have been made and caught the public attention. The effect of the Tiger and Dragon years on fertility behavior in Taiwan and other Chinese societies in Southeast Asia is not just media hype but a very important issue. In the national vital statistics, the fertility rate drops during the Tiger years and significantly rises in the Dragon ones. The expert on demography, Dr. Wen-Shan Yang,<sup>6</sup> nonetheless cautions that the Taiwanese could well be

<sup>6</sup> *Tiger Throttling Taiwan's Birth Rate.* Asia Times, 01/12/2011. (<http://atimes.com/atimes/China/MA12Ad01.html>)

disappointed with the baby yield of the next Year of the Dragon. In recent years, while fertility dropped as usual during the tiger years, it failed to fully recover in the subsequent Year of the Dragon, unlike in the past.

In May, Taiwan was ranked the 6th in IMD World Competitiveness Yearbook 2011.<sup>7</sup> While the IMD continues to rank Taiwan as the top 5 most competitive economic entities in the Asia Pacific region and the 1st position in the GDP per capita less than US\$20,000 category, the good ranking is due to impressive achievements in productivity and efficiency of the private sector but not government efficiency. In reality, Taiwan's real wage growth has been stagnant in the last few years as wealth inequality has been rising in the metropolitan areas. The Yearbook said the island country faces some challenges in 2011. Most important one is that Taiwan Government should work to ensure comfortable living standards and maintain a suitable environment. And, it had better continue to implement financial and fiscal reforms for social needs.

Also, in mid July, the labor groups had called for a 31.2 percent increase from to NT\$17,780 to NT\$23,459 per month, while business groups said the increase would raise their costs. The minister of Council of Labor Affairs called for a gradual incremental increase in the minimum wage to avoid adversely affecting businesses, particularly small and medium-sized enterprises. Later, the council announced that the minimum wage would be raised by 5.03 percent, to NT\$18,780 per month or NT\$103 per hour, pending approval by the Executive Yuan. An estimated 1.7 million local workers and 190,000 immigrant workers will see their monthly pay increase as a result of the adjustment.<sup>8</sup>

An empirical result shows that human capital expenditures per child are substantially higher where fertility is lower. This suggests that, during the demographic transition, a portion of the first demographic dividend is invested in human capital, reinforcing the economic benefits of fertility decline. It also suggests that the very low fertility is associated with an increased human capital investment per child that might reduce or at least postpone the support problems brought on by population aging. In other words, human capital investment is a potentially important mechanism by which a second demographic dividend can be generated (Lee and Mason, 2010). In Taiwan, we do observe a rapid increase in educational attainment of young population. This trend is even more evident among female, however, the lack of concurrent in women's working and family lives can perhaps explain why Taiwan is experiencing a dramatic increase in the number of women who delay marriage and childbearing. Unlike their older

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<sup>7</sup> 2011 Ranking in the region of East Asia: Hong Kong (1), Singapore (3), South Korea (23), Japan (27). The Yearbook was released by the Switzerland-based Institute for Management Development in May. (<http://www.imd.org/research/publications/wcy/index.cfm>)

<sup>8</sup> *Labor Minister Defends Wage Hike Proposal*, Taipei Times, 07/23/2011. (<http://www.taipetimes.com/News/taiwan/archives/2011/07/23/2003508943>)

female counterparts who were more likely to combine work and family together within the informal sector, higher-educated younger Taiwanese women are forced to choose their either career or family in the formal labor market (Yu, 2009).

All these news and research indicate a similar trend—it is not easy for young population to survive and to maintain a comfortable lifestyle in Taiwan's metropolitan areas. How can central and local government work with infrastructure and policies to support this society? And what incentives could the government provide for marriage formation and childbearing? There is no simple answer for these questions. In particular, the pro-natal population policy is beginning to start in this year. It should be a good chance to evaluate the effectiveness of those policy measures in Taiwan's social context.

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## Late marriage and low fertility in Singapore: the limits of policy<sup>9</sup>

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### The Singapore context

Singapore, though located in Southeast Asia, can appropriately be compared with the East Asian low fertility countries – Japan, South Korea, Taiwan, and Hong Kong, though its special circumstances need to be borne in mind in doing so. One of these is its ethnic mix. Singapore's population of 5.1 million in 2010 was made up of 3.2 million citizens, 541,000 permanent residents (PRs), and 1.3 million non-residents. This last group is, in turn, divided into different components – broadly, skilled workers and labour migrants. The PRs and non-residents grew much more rapidly than the citizen population over the first decade of the 21<sup>st</sup> century (despite the granting of citizenship to many PRs), and increased their combined share of the population from 13.9% in 1990 and 25.9% in 2000 to 36.4% in 2010. The fertility data for Singapore are provided for the resident population – i.e. the citizens and permanent residents. Ethnic composition is important in Singapore, and although not stated officially, the government considers it of basic importance to maintain roughly the proportions of 75% Chinese, 15% Malay, 8% Indian, and 2% “other” among its resident population. Disquiet is expressed about even small changes in these proportions. Although differential fertility tends to make for increases in the Malay proportion, migration intake (with many Chinese and Indians moving in to Singapore) tends to keep the proportions in balance. When the 2010 census revealed that the Indian proportion had risen from 7.9% in 2000 to 9.2% in 2010, and the Malay proportion had declined from 13.9% to 13.4% over the same period, this led to expressions of concern by Malay community groups.

Trends in fertility, then, need to be examined separately for the different ethnic groups. Figure 1 shows trends in fertility since 1970. Interpreting these trends in comparison with low-fertility East Asian countries raises some interesting observations. First, Singapore's fertility is in the same league as these countries, though it has never gone as low as recent figures for 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. When this is done, we find that Singapore's fertility rate is approximately 15% to 50% higher than in cities including Tokyo, Seoul, Busan, Shanghai, Beijing, Taipei, and Hong Kong (Jones, 2009, Table 2).<sup>10</sup> We will later examine possible reasons for this. There may be some elements of policy in Singapore that are partly responsible for these differences.

Second, fertility differs substantially among the different ethnic groups in Singapore. Malay fertility is substantially higher, and Chinese fertility lower, than the average. However, given

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<sup>10</sup> Singapore's TFR is roughly 20-25% higher than in Seoul, Busan, Taipei, and Hong Kong, 50% higher than in Shanghai and Beijing, but only about 15% higher than in Tokyo.

the three fourths weighting of Chinese in the resident population, the overall fertility level is heavily influenced by the fertility of Chinese Singaporeans (whose TFR fell to a historic low of 1.08 in 2009) . Malay fertility rose substantially for some time after being the first Muslim population in the world to reach replacement level fertility in 1976,<sup>11</sup> but it has recently fallen sharply to reach its 2009 TFR level of 1.8.

## TRENDS IN SINGLEHOOD

Since the present paper is focusing on Singapore as a very low fertility country, the discussion here will place Singapore in the context of the other countries of the region where fertility is very low - Japan, Taiwan, South Korea, Thailand and Hong Kong. These are the countries where late marriage and non-marriage is very high, and tending to rise further; proportions remaining “effectively single” in their 30s are higher than in the late marrying countries of Europe (Jones, 2007), which probably means they are the highest in the world.<sup>12</sup> The trends for many of these countries are shown in Jones and Gubhaju (2009) and their effects on singlehood rates for people in their late 30s are also summarized in Figure 2. The most dramatic change in recent times is among the younger marriage-age cohorts in South Korea. Although for the cohort aged 35-39 in 2005, only 8 per cent of South Korean women remained single, far below the figures for Japan, Taiwan and Hong Kong (18, 16, and 20 per cent respectively), for the cohort aged 25-29, the South Korean percentage single (59 per cent) was just as high as in Japan and Taiwan. The factors making for this remarkable rise in South Korea have been discussed in detail in Jones and Gubhaju (2009).

It should be mentioned that in China, levels of singlehood have not risen significantly over recent decades. Almost all women have married by the time they reach 30 (for more detailed discussion, see Jones, 2007: 466-7). In terms of the proportion of women remaining single in their early 30s, China is an oddity compared to the other countries, though given its dominance of the region’s population, perhaps we should say that all the other countries are odd in not mirroring the Chinese situation.

Singlehood levels for women and men in their 30s in Singapore, while high, are distinctive in showing little increase since 1990, and indeed none when standardized by education. It is important to investigate why this might have been so.

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<sup>11</sup> It has been hypothesized that Malays, as the lowest-income group in the Singapore population, were more influenced than other ethnic groups by pro-natalist incentives introduced by the Singapore government in 1987. Aside from that, it is worth noting that the rise in Malay fertility coincided with a rise in Malay fertility in neighbouring Malaysia, and given the close links between the two countries, may have been affected by some of the factors operating there (Jones, 1990).

<sup>12</sup> It should be noted, however, that at least in the cases of Japan and Taiwan, cohabitation rates are quite high (Lesthaeghe, 2010: 236-240), thus throwing some doubt on this conclusion.

## FACTORS INFLUENCING MARRIAGE AND MARITAL FERTILITY

In Singapore, like other East Asian countries, childbearing outside marriage is extremely rare (less than 2 per cent of births). Therefore the factors accounting for low fertility can usefully be divided into those resulting in delayed or non-marriage, and those resulting in low fertility within marriage. In the case of Singapore, Yap (2008) estimates that declines in proportions married were responsible for more than a third of the decline to ultra-low levels of fertility in the 2000-2005 period.

### *Factors influencing marriage*

We will summarize very briefly some of the factors thought by various scholars (e.g. Retherford, Ogawa and Matsukura, 2001; Tsuya and Bumpass (eds), 2004; Ono, 2003; Jones, 2007; Eun, 2007; Raymo and Iwasawa, 2005; Retherford and Ogawa, 2006; Boling, 2008; Bumpass et al., 2009; Jones and Gubhaju, 2009) to underlie the high levels of singlehood in the region, before moving to a more detailed discussion of the Singapore situation.

Basically, these authors have argued that the trends are linked to fundamental changes in demographic structure, 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 available in the region suggests that most women desire to marry (Quah, 1998, Table 3.5; Quah, 1999; Chan, 2002; Raymo and Iwasawa, 2008; MCYS, 2004, Chapter 2),<sup>13</sup> but many factors weaken the intensity of this general desire to marry, or hinder its realization.

One important factor has been the expansion of education, more rapid in the case of females than of males. Educational expansion and trends in labour markets have opened up employment possibilities for women, widened their aspirations and freed many from financial independence on men. Delayed marriage has particularly characterized the growing group of women with tertiary education. However, in Japan, South Korea and Taiwan, upsurge in non-marriage since 2000 has occurred in all educational groups (Jones and Gubhaju, 2009). Another factor has been increasing uncertainty in the labour market, which has perhaps been most marked in Japan with the demise of the firm-based lifetime employment system, but has also been very important in Korea since the economic crisis of

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<sup>13</sup> For example, in a large Singapore survey, 76 per cent of never married women said they want to marry, another 20 per cent said they would leave it to fate, and only five percent said they did not intend to marry (MCYS 2004). In Korean and Japanese studies, though, not as high a proportion of women as of men see marriage as necessary or intend to marry (Choe, 1998; Retherford, Ogawa and Sakamoto, 1996), and in Japan, responses in attitudinal surveys indicate a time trend towards greater acceptance of non-marriage (Retherford, Ogawa and Sakamoto, 1996: 15-16.)



1997-8, and is felt in varying degrees throughout the region. As a result, men, and couples in serious relationships, are reluctant to marry until they can build up some capital, and women are increasingly cautious about marrying a man with poor earnings prospects. Rising divorce rates in many countries of the region are probably leading to increasing caution in choosing a marriage partner.

Most of these countries are basically urban societies, facing issues of work pressures, including very long hours of work, housing affordability, and reluctance to live with (and later, care for) parents in law. They are also increasingly sexually permissive societies, meaning that access to sex outside of marriage is easier to come by. The “line of least resistance” for many in such settings may be not to go through the marriage search process, or not to go through it again if one serious relationship has failed.

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 most straightforward way to avoid having children is not to marry (Jones, 2004: 17; see also Raymo, 2003). Therefore factors relating to reluctance to begin raising a family (to be discussed later in the paper) also work against marriage.

### *Understanding singlehood in Singapore*

Singlehood in Singapore is still on the rise, if measured by the proportion of females single at ages in their 20s. However, if measured by the proportion of females single in 5-year age groups in the 30s and 40s (see Figure 2), or by the singulate mean age at marriage, there has been little increase in singlehood since around 1990. Indeed, when controlled by education, prevalence of singlehood for women has remained steady at all ages above 30 since 2000 (see Table 1; also Jones, 2004, Table 1). When compared with trends in other East Asian countries, levels of singlehood in Singapore, while high, are distinctive in showing no increase. The striking differences between trends in Singapore and other low fertility countries of East Asia are apparent in Figure 2.

Trends in age-specific marriage rates show more clearly what has been happening in Singapore (Figure 3). For both males and females, marriage rates have declined at ages 20-24 and 25-29, indicating delays in marriage, but have increased somewhat at ages above 30. The “stock” of unmarried Singaporeans aged in their 30s and 40s has grown substantially because of the decline in marriage rates at the younger ages, but higher marriage rates than previously at ages above 30 are limiting the further growth of this “stock”.

A study by the author and colleagues (Jones et al., forthcoming) has investigated both the policy context of non-marriage and the circumstances and attitudes of unmarried Singaporeans in their 30s and 40s. It argues that Singapore’s institutional context and policy approaches may have played a role in dampening the rise in singlehood. 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.

In Singapore, 85% of the population lives in government-provided housing (Housing and Development Board (HDB) high-rise apartments, generally between 12 and 40 storeys), and housing policy is directed towards maintaining a stable society based on home-owning families as conventionally defined (Chua 1995; Teo 2010). Singlehood is discouraged by the rules of eligibility for HDB housing; singles must be over the age of 35 to be eligible to purchase this subsidized form of housing. Various inducements are offered to those planning to marry to get into the waiting list. Under the Fiance/Fiancee Scheme, courting couples who intend to marry may apply for a 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, as they only need to produce their marriage certificate within three months of getting the keys to their flat.<sup>14</sup> They are also allowed to buy a HDB flat from the resale market (which involves a mark-up in price but allows for flexibility in timing). First-time HDB flat 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 the building of their flats (Wong and Yeoh, 2003: 18).

A mild 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 is only available to the unmarried or divorcees if they are over the age of 35.

Overall, then the Singapore government's housing policies are definitely oriented towards encouragement of marriage, and of earlier rather than later marriage.

Turning from housing policy to the direct involvement of the government in match-making, the Singapore government began this involvement in 1984 with the formation of the Social Development Unit (SDU) to assist partnering among university graduates. Subsequently, a SDS (Social Development Service) was formed to assist those with lower educational qualifications (Quah, 2003: 21-23). In 2009 the two 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*, 29/1/2009).

The efforts of the SDU tended to be scoffed at internationally; locally, there was a certain stigma about being known to be seeking a partner through the government's matchmaking efforts. However, it is widely accepted in Singapore that the demise of earlier traditions of

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<sup>14</sup> However, there is not much point in making such an application unless the intention to marry the current partner is quite firm, because the HDB website states sternly that "you are not allowed to delete the name of your fiancé/fiancée so as to include a new fiancé/fiancée ..... even if consent has been given by your ex-fiance/fiancee".<sup>14</sup> In other words, the newly constituted couple intending to marry must return to the back of the queue.

matchmaking, combined with long working hours and limited opportunities to socialize, left a void in possibilities of finding a suitable partner. Similar concerns are frequently expressed in Japan (Retherford, Ogawa and Matsukura, 2001: 87-8). The Singapore government's matchmaking efforts have become more sophisticated over time. There is now a strong emphasis on the internet by the SDN, whose website "Love Byte. A world of possibilities. Just a click away" lists four kinds of dating services provided by the government agency. In the same website, the Social Development Unit announces new initiatives to raise standards in the local dating industry. An accreditation scheme has been introduced and seed funding provided to qualifying companies to upgrade and professionalize themselves.

It is very hard 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 graduates registered with the SDU married, or 15 per cent 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, the fact remains that 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 may have played a role.

### *Findings from interviews with Chinese Singaporeans*

Despite the "stalling" of the increase in singlehood since 1990, Singapore has one of the highest singlehood rates in East and Southeast Asia. The trend of singlehood among Chinese Singaporeans follows the general trend of singlehood in Singapore, but the percentage single among ethnic Chinese (see Tables 2 and 3) is even higher than for the population of Singapore as a whole. Singlehood among Chinese Singaporeans has still been on the rise since 1990, if measured by the proportion of females single in 5-year age groups in the 30s and 40s and the proportion of males single in 5-year age groups at ages 40-49.

We have conducted a qualitative study to better understand why high proportions of Chinese Singaporean men and women remain single in their 30s and 40s and the policy issues that flow from this, drawing upon in-depth interviews and focus group discussions conducted with never-married ethnic Chinese between the ages of 30 and 44 from a broad range of socioeconomic and educational backgrounds (Jones, Zhang and Chia, forthcoming). The section below will draw on some findings from in-depth interviews with 23 never-married ethnic Chinese (11 women and 12 men), 17 of them with tertiary education but earning a wide range of incomes, though most respondents (16 out of 23) earned between S\$2,000 and S\$5,000 a month.<sup>15</sup> Co-residence with parents is the prevailing living arrangement of

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<sup>15</sup> At the time of the survey, the Singapore dollar was equivalent to approximately US\$0.77.

unmarried singles in Singapore; among the 23 respondents, 21 lived in their parents' houses while two respondents lived in their siblings' houses. Twenty respondents had had at least one serious relationship with the opposite sex, while three respondents had never been in any serious relationship. As for their current relationship statuses, four were in a serious relationship at the time of interview, three were in casual and multiple dating relationships, and the remaining 16 were not in any relationship (one was actively looking for a marriage partner, two were actively looking for dating partners, while the majority were not actively looking). Among the 23 respondents, only three intended to get married in the near future.

Our study suggests that one possible explanation for later and less marriage in Singapore is changing attitudes about the desirability of marriage, linked with the increasing social acceptability of premarital sex and cohabitation. This is not surprising, given the evidence from other countries in the region of an increase both in pre-marital sexual activity and in cohabitation among the rising proportions who are single at ages well beyond traditional ages at marriage. There is ample evidence that sexual activity among singles is increasing in the region (for Japan, see Retherford, Ogawa and Matsukura, 2001: 88-91). As far as cohabitation is concerned, second demographic transition proponents argue that increasing cohabitation could be expected in situations where secularism and individualism is increasing. This is indeed happening in Japan (Retherford, Ogawa and Matsukura, 2001; Raymo, Iwasawa and Bumpass, 2008; Tsuya, 2006; Lesthaeghe, 2010, Table 3 and 4) and Taiwan (Lesthaeghe, 2010, Table 5). In Japan and Korea a significantly higher proportion of young people accept cohabiting relationships than is the case for older people.

Cohabitation is not a traditional practice in Singapore, and information about cohabitation among never-married Singaporean adults is limited. Nevertheless, our study suggests that cohabitation as a new form of couple relationship is acceptable to many singles and may not be rare in practice, especially for male respondents. Fifteen out of the 23 respondents stated that cohabitation is acceptable to them, some of them mentioning that cohabitation has some benefits in terms of providing couples with a good chance to establish emotional bonds, letting them see how it works to live together before getting married, and at the same time still allow each partner to have plenty of freedom. In fact, several of our respondents reported that they had cohabitated with their partners before or were cohabitating with them at the time of interview.

#### *Changing attitudes towards the desirability of marriage*

Unlike Japan, where many women seem to have lost faith in marriage, the national survey data in Singapore show a general desire to marry (Chan, 2002; MCYS, 2009). For instance, 85 per cent of singles surveyed in the Study on Marriage and Parenthood 2007 indicated an intention to get married (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