The perceived importance of family-friendly policies to childbirth decision among Hong Kong women

Wong C-K, Tang K-L, Ye S. The perceived importance of family-friendly policies to childbirth decision among Hong Kong women

Declining fertility is a problem in many advanced industrialised countries, calling for government action. While positive findings have been established between family policies and fertility levels in European countries, empirical studies on family-friendly policies and their impact on fertility levels have been few and far between in East Asia. Based on a random telephone survey of 645 young women, this study examined the perceived importance of family-friendly policies to childbirth among Hong Kong women of childbearing age. Also investigated was whether public policies could have an impact on the decision to have a child. The findings give support to both the risk-society theory and the rationality theory; family-friendly policies such as tax credits, extended childcare and flexitime enhance the risk management capacity of women and reduce the cost of child rearing. The study also found that demographic factors such as age, education, and having children or not are significant to the intent to bear children.

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Introduction

The work–family conflict has been a major societal concern in the developed countries (Bjorkland, 2006; Crompton & Lyonette, 2006; Edlund, 2007; Williams, 2001). In recent decades, the workforce participation of women (both married and single) has increased substantially throughout the industrialised countries. As a result, parents in these countries are struggling to balance the demands of employment with the needs of their families (Gornick, Heron & Eisenbre, 2007). Experiences from some advanced countries (e.g. Canada) show that it is very difficult for women to balance work and family life, leading to work–family conflicts (Duxbury, Higgins & Lee, 1994). A recent estimate from the European Union shows that some 6 million women find it difficult to work full time because of their family commitments. To achieve a better balance between working life and family life, the European Union has proposed a package of policy measures, including extended maternity leave and full salary during the leave period (European Commission, 2008).

Parallel to and as a partial corollary to the work–family conflict, industrialised countries are plagued by the persistence of below-replacement fertility rates (fewer than 2.1 children per woman) (Vos, 2009). A case in point is Europe where low levels of fertility have been noted, with southern, central and eastern Europe and Germany at the lowest end of the fertility spectrum; Belgium, The Netherlands and Switzerland at the medium level; and the Nordic countries, France, Ireland and the UK at the highest fertility level. Declining fertility rates are worrisome to governments, because they threaten economic growth and drain government resources for pensions and health services.

As a typical modern society, Hong Kong (a Special Administrative Region [SAR] of China) is characterised by heavy workloads, a faster work pace and longer working hours, all of which contribute to the work–family conflict (Losoncz & Bortolotto, 2009). Concomitantly, the crude birth rate (the number of live births per 1,000 population) in Hong Kong has reached a very low level, dropping sharply from 16.8 in 1981 to 7.4 in 2009 (CIA World Factbook, 2009; Legislative
Council Secretariat, 2004). This rate is lower than that in mainland China (12.4), Taiwan (10.1), Singapore (10.3), South Korea (10.2), Japan (8.9), the UK (11.7) and the United States (14.0). Indeed, it is the lowest in the world. In terms of the total fertility rate (widely seen as a better measure of fertility), Hong Kong had a rate of 97.6 per 100 women (in the period 2004–2009), which is well below the replacement level of 210 per 100 women (CIA World Factbook, 2009). A critical issue with respect to the low birth or fertility rate is its consequences for the ageing of the population, resulting in increased dependency and reduced productivity, and affecting the sustainability of social policy and economic development (d’Addio & d’Ercole, 2005). Therefore, raising the birth rate in Hong Kong has become an imperative population policy that has recently drawn popular attention (Hong Kong SAR Government, 2007–08).

In the context of the declining trend in fertility rates over the past decades, demographers have argued that there is a change in attitude among married couples in that they now prefer to have fewer children (Yip & Lee, 2002), which opens the way for the spread of knowledge of the means for controlling conception. This change of attitude is the result of the development process where the change in the status of women fosters the growth of new individualistic aspirations and personal independence, and brings about changes in the attitude towards having a small family (Family Planning Association of Hong Kong, 1999). In their empirical study of Hong Kong data, Yip and Lee (2002) argued that the decline in the birth rate is because of the changes in marital structure (i.e. late and fewer marriages).

While such an analysis has shed light on key demographic variables and the conditions under which fertility declines, there has been a relative underemphasis of the socio-economic factors that are at play in shaping people’s attitudes and behaviour. We argue in this article that the decline in the birth rate in Hong Kong is not ephemeral, as it reflects the accumulation of risks in society. More than holding that the decline in the birth rate is a gradual incidence of demographic transition, the risk-society theory addresses economic and technological advancements as breeding not only environmental risks, but also social and moral risks (Beck, 1992; Strydom, 2002). A notable social risk is mass unemployment, accompanied by the seemingly less threatening risk of the destabilisation of job security because of deregulation and contingent employment. For working women, there is the added difficulty of trying to balance family life and working life (Beck, 1986; Taylor-Gooby, 2004). In summary, the issues are concerned with the loss of income, unstable employment and the lack of family-friendly employment, especially for women. The other factor that undermines the decision to bear and raise children is the dissolution of traditional norms. Individual women of childbearing age may not have to live up to the same normative expectations regarding childbirth as their counterparts did in the past. This relative lack of normative guidance is not entirely a risk, but it is a cultural factor that influences the individual’s tendency to avoid risks.

Irrespective of the underlying factors governing the low birth and total fertility rates, the decline in fertility has prompted the Hong Kong government into action. There is an assumption that selected public policies and public discussions would either put a stop to or reverse such a trend. In fact, advanced industrial countries show a considerable variation in the nature and extent of societal supports that governments have provided for dual-earner families (Gornick et al., 2007). In East Asia, most governments wish to reverse the trend of declining fertility and have devised policy packages or measures. Since 1 July 2006, the Hong Kong government has endeavoured to implement a 5-day working week policy, and the Hong Kong Legislative Council has also encouraged employers to adopt family-friendly policies (FFPs) such as paternal leave.

Overseas studies (see, e.g. Crompton & Lyonette, 2006) have been conducted to examine the variations in public policies that focus on the work–family balance and the possible impact of these policies. However, except for some preliminary studies (Lo, 2005), there is a relative dearth of studies in East Asia. Hence, although public efforts are being made, we are still ignorant of their effects on the birth decisions of Hong Kong women. What are their views on these policies? Do their views differ by demographic characteristics? And how are these policies related to women’s birth decisions? To fully understand these questions and to identify means for promoting childbirth, it is necessary to conduct local studies in addition to learning from overseas experience. Based on a representative sample survey, the findings from the present study should clarify the impact of policies on childbirth in Hong Kong and inform the formulation of future policies that are likely to succeed in raising the birth rate and lowering the social risks associated with childbearing.

**Literature review**

A host of theoretical perspectives has cropped up to explain the demographic transition from a high birth and death rate to a low birth and death rate. One of the earliest theories to explain declining fertility in developed and developing societies comes from rational choice proponents. According to the rationality theory, the fertility decision is deemed to be a psychological process whereby the individual decision maker seeks to maximise utility while taking into account resource limitation and cost constraints (Bagozzi & van Loo,
behaviour is contrary to rationality assumptions what the economic model predicts, and often, their mental value is negative (Friedman, Hechter & Kanazawa, 1994). Cultural norms and climates matter, they argued that high-income couples are high-wage couples, which makes time-intensive commodities, such as children, relatively more expensive than they are for low-wage couples. Likewise, Easterlin and Crimmins (1985) advanced a three-factor model to explain the use of birth control measures in marriage: demand, supply and cost. In particular, their theory emphasised the supply side: people are motivated to practise contraception when the potential supply of surviving children exceeds the demand for them. The rational choice approach has not gone unchallenged. Some scholars have argued that it cannot explain why people continue to have children when their net instrumental value is negative (Friedman, Hechter & Kanazawa, 1994). Cultural norms and climates matter, and they affect the fertility decision (Leithaeg, 1983). Others have argued that people behave differently from what the economic model predicts, and often, their behaviour is contrary to rationality assumptions (Bagozzi & van Loo, 1979).

Unsurprisingly, there are alternative theories that see fertility as impacted by social factors at the macro-level, such as labour force participation rates, sexual income differentiation and relative economic status. Practically, these are societal forces that are beyond individual control, exerting influence on people's behaviour. Importantly, the fertility decision is a multifaceted phenomenon under the influence of complex social, economic and psychological forces. Parallel to this, there is a case for formulating a holistic and integrated review of various factors (psychological, social, economic and public policy) that impact on fertility in specific socio-economic localities. Such an integrated lens can be provided by the risk-society theory, as discussed below.

In post-industrial societies, families, the labour market and the government have all increasingly been exposed to drastic social and economic changes—principally the dissolution of the family and the globalisation of the economy. These are structural changes that have a fundamental impact on both society and individuals. People’s behaviour and views about life, work and family life have had to change accordingly. Hence, the risk-society theory is relevant to understanding declining birth rates in that the risks stemming from economic and technological changes depreciate the value of the family and children through several different mechanisms, including automation and employment insecurity (Beck, 1986, 1999). On this account, we have studied the decline in the fertility rate as a response to the risks associated with postmodern society. The scenario is that individuals in such a society might not enjoy the protection of the family that they once had in the traditional society. Divorce, for example, has become commonplace. The need to gain market competitiveness in a global economy means that firms have to lower costs, partly by shifting costs to the society or to the state. This raises the question of whether it is feasible for individuals or families to turn to the state for security and financial assistance. However, the once secure social protection of the old welfare state no longer exists because the state has become a target of reform due to permanent fiscal austerity (Esping-Andersen, 2002; Pierson, 2001). In addition, this post-industrial world is also a world full of uncertainties and worries (Beck, 1986; Giddens, 1991, 1994). Hence, risk management has become the most important response pattern that individuals use to direct their thinking and actions in order to maintain a greater sense of certainty or control. The most important sphere of human life—reproduction—has become a major issue, drawing the close attention of policy makers because it affects the supply of human labour.

From this risk response or management perspective, it is not hard to find a general trend among women of childbearing age in advanced countries concerning their reluctance to give birth. However, under certain conditions, the birth rate can increase because of specific institutional arrangements. For example, secure employment has a significant effect on childbirth. One OECD study (Adsera, 2003) found that public sector employment, by providing employment stability and generous paternal benefits, boosted the fertility rate among women in the 25–29 and 30–34 age groups. In a US study on the welfare of the poor, employment, education, marriage and living with parents appeared to encourage childbirth (Martin, 2003). Another OECD study (d'Addio & d'Ercole, 2005) also identified factors that contribute to declining fertility rates as education, the employment of women and the shift of values towards less traditional roles for women in society and the family. Apparently, the empirical evidence suggests that government policies can in fact influence fertility rates but that these policies need to be class-specific because individual women from different social backgrounds may have different strategies for coping with risks. For example, employment may be a
childbirth stimulant for lower class women but a constraint for middle-class women, because they each have different levels of control over resources.

Managing risks, based on the risk-society theory (Beck, 1992; Giddens, 1991, 1994), provides a promising theoretical anchor point for understanding women’s behaviour and expectations towards childbirth. The traditional norm of childbearing as a maternal role and a natural responsibility may conflict with women’s risk management strategies. This raises the question of whether there is a positive role that the state could play in boosting fertility rates. Increasing the birth rate has become a common issue in the post-industrial world.

The risk-society theory supposes that societal changes are a paramount force; however, institutional divergence because of policy differences produces different outcomes. For instance, the Nordic countries generally have higher fertility rates and levels of employment for women largely because of their pro-natal policies (d’Addio & d’Ercole, 2005), whereas the high percentage of women working in southern European countries has led to low fertility rates because of insufficient maternal benefits and childcare policies. Cross-country analysis points to the effect of state intervention in easing women’s anxiety about bearing and rearing children. In other words, empirical evidence from Europe suggests that the traditional negative correlation between female workforce participation and fertility could be turned into a positive correlation if sufficient incentives and caring measures were made available (Esping-Andersen, 2002: 65; Hoem & Hoem, 1997). From the perspective of the risk-society theory, the state could help mitigate the risks facing women through policies to balance their work and family life.

Hence, the risk-taking or risk aversion behaviour of women can be understood from the perspective of economic theory, which places a premium on the calculative rationality of individuals. As noted above, economic theory views childbirth as a matter of the rational calculation of costs and benefits (Grossbard-Shechtman, 1993; McDonald, 2002). When the child is a valued benefit and is not too costly, childbirth is likely. While the benefits and costs of childbirth have played a long-standing role, they are critically susceptible to the influence of economic and technological advancements, as in the form of the risk society. Pro-natal policies in a risk society are critical – enhancing conditions or variables that encourage childbirth and child rearing. According to the risk-society theory, economic and technological advancements increase the costs and depreciate the benefits of childbirth (Beck, 1986; Strydom, 2002). The costs stem from unemployment, job insecurity, unstable employment and difficulty in trying to balance work and family life, all of which can be attributed to global economic development and competition. As such, the power of traditional norms concerning women’s role in society and the family might not have an appreciable impact on childbirth decisions. The OECD study by d’Addio and d’Ercole (2005) only provided evidence on the decline of traditional norms and did not include evidence on the impact of such norms on the birth rate. Nevertheless, the risk-society theory explains the responses of individual childbearing women towards the uncertainty, worry or panic created by the advancement of the risk society (Beck, 1986, 1999). Put simply, the avoidance of childbirth becomes a risk-aversive behaviour if there are insufficient pro-natal policies, other factors being equal.

The prospect theory (Molm, 1997) informs us as well that worry exerts an overwhelmingly adverse effect on childbirth. This theory suggests that risk aversion is far more influential than the countervailing force of attraction to an incentive for or a benefit from childbirth. Individual women tend to place more weight on the costs and risks of childbirth than on the benefits of having children and are less likely to adhere to the belief that women need to have children in order to feel fulfilled. Economic theory, coupled with the prospect theory and underscored by the risk-society theory, suggests that the most effective way to raise the birth rate is to reduce the costs and risks of childbearing.

Thus, it is necessary to look closely at the social risk factors confronting women of child-rearing age. From the risk-society theory, the principal social risks reside in job insecurity, the unbearable or uncertain costs of childbearing, and the difficulties of balancing family and work life. These risks depreciate the value of childbirth and make having children a risk-taking behaviour (Beck, 1986; Strydom, 2002). However, as mentioned above, it is necessary to look at the varying social backgrounds of individual women in terms of their responses to childbirth and child rearing. Economic theory suggests that women who are unemployed and have insufficient income are the most unlikely to be able to afford the cost of childbearing. Thus, measures to promote employment, job security and occupational equality would offset these risks and make childbearing less costly for lower-class and working-class women. However, because of economic considerations, not all countries welcome such labour market-oriented policies. Instead, some have opted for the deregulation of the labour market to advance its competitiveness while employing welfare measures, although more redistributive, to buffer the risks associated with employment. Welfare provisions, such as childcare facilities, and maternal benefits, such as child subsidies, are obviously pro-natal policies (Horvath-Rose & Peters, 2001; Martin, 2003) because they reduce the costs of risk taking. These provisions are especially helpful to
individuals at the bottom of the social ladder who are at risk of dropping out of the labour market.

Support for childcare and child rearing through services, subsidies and tax credits would partly reduce the cost of child rearing. There is some evidence in support of the contribution that childcare policies make to the birth rate, most of which is found in the Nordic countries (d’Addio & d’Ercole, 2005). Apparently, low-income individuals are in need of financial support for childcare (Monroe & Tiller, 2001), whereas middle-class people prefer support in the form of childcare services (Lewis, 2003). Because of the differences in education, the latter tend to obtain employment and therefore face the difficulty of balancing work and family life. For middle-class people in particular, childcare can be stressful and might depreciate their quality of life (Lee, Law & Tam, 1999). Thus, difficulty in providing childcare represents a risk factor that adds to women’s anxiety over the cost of child rearing. However, because affordable childcare is available to middle-class families in the form of domestic helpers imported from the countries neighbouring Hong Kong, the stress of childcare is relieved to a greater extent.

Empirically, researchers asking the question “Would family-friendly policies bring about a rise in fertility?” would find some hopeful conclusions from cross-country data. Esping-Andersen (1999) summed up the general finding in this area when he concluded that gender-friendly policies could promote higher fertility in rich countries. A recent estimate from Bjorklund (2007) suggested that generous family policies are associated with about a 0.4 increase in the fertility rate. His report further commented that even minor reforms, such as changes in the parental leave system and child allowances, are associated with important changes in fertility rates. Earlier, empirical studies by Gauthier and Hatzius (1997) and Ferrarini (2006) provided support for the claim that family policy has a substantial impact. Critics of such findings contend that more conclusive evidence is needed before a causal relationship could be estimated between such policies and fertility levels.

These empirical studies have certain limitations, however, namely, that they have used a specific dependent variable (often the total fertility rate) and that their findings are based entirely or in large part on European or American countries’ family policies, thereby excluding developed countries in other parts of the world. A case in point is East Asia where fertility has been declining, and the governments of Singapore, Hong Kong and Taiwan have been trying to influence the birth decision through public policies. This gap in the current research on fertility and public policies is lamentable, limiting the universality of these findings. Given the globalised nature of the demographic transition and the increasing transfer of public policies among nations, there is a pertinent need to look at the impact of FFPs beyond the Anglo-Saxon and Scandinavian countries.

Based on a comprehensive review of the literature, the present study investigated the perceived importance of a series of FFPs for childbirth among Hong Kong women of childbearing age. The study extensively examined how perceptions differ among various demographic groups in terms of age, education, marriage, having a child or not, income and intent to bear children. It is hoped that the findings of the present study will offer new insights into the relationship between FFPs and fertility. These findings could help policy makers to evaluate the effectiveness of the current FFPs and to decide whether there is need for a policy shift.

Methods

Sample and procedure

Given the nature of the issue investigated, the sample for the present study involved women who were 20–39 years old and who spoke either Cantonese or Putonghua. Participants in the present study were interviewed by trained telephone interviewers in the Telephone Survey Research Laboratory, Hong Kong Institute of Asia-Pacific Studies, The Chinese University of Hong Kong, at some time between 1800 hours and 2230 hours from 2 to 17 June 2008. Both the yellow pages and computers were used to generate random telephone numbers for the interviews. A series of residential telephone numbers were extracted randomly from the yellow pages. The last two digits were then deleted and replaced with several random numbers generated by computer to ensure coverage of unregistered numbers. Among the 21,000 telephone numbers obtained, 11,151 were invalid ones (e.g. no answer, unallocated, fax numbers or non-resident numbers). Among the 9,849 valid telephone numbers, 8,771 were not used by the intended participants. Therefore, the study successfully identified and contacted 1,078 suitable interviewees, 645 of which completed the entire interview process. A response rate of 59.83 per cent was thus obtained.

Measures

Importance of FFPs to fertility. Eight FFPs were used in the interview to capture participants’ general attitudes. These included:

1 The widely adopted childbearing age range is 15–49. However, according to the report of ‘Demographic Trends in Hong Kong 1981–2006’ published by the Census and Statistics Department of Hong Kong SAR, the fertility rates have always been much lower among the age groups of 15–19, 40–44 and 45–49 (e.g. 3.2, 5.2 and 0.3 per cent, respectively, in 2006) than among the other age groups (e.g. from 25.0 per cent to 71.6 per cent in 2006). The study thus has focused on the age range 20–39.
1. Fully launched childcare services for children younger than 3 years old;
2. Fully launched childcare or after school care services for children between 3 years and 12 years old;
3. Established paternity leave;
4. Increased current statutory maternity leave;
5. Fully launched flexible work hours;
6. Fully launched voluntary switch in work shift or position, or a decrease in work hours;
7. Fully launched 5-day week; and
8. Tax reductions or subsidies to encourage child-bearing.

Participants were asked to rate the importance of each FFP in their decision of whether or not to have children. Responses were made on a 4-point Likert scale, with 1 being ‘not important at all’ and 4 being ‘very important’.

Demographic information. The study also collected the participants’ demographic characteristics including age, education, employment status, job types, personal income, marital status, having children or not, and the intent to bear children. Key demographic details about the sample are presented in Table 1.

Statistical analysis

Correlation analysis is a powerful tool for the preliminary exploration of the relationships among the variables of interest. It was used to test not only the relationships among the eight FFP items, but also the relationships between the FFPs and the demographic variables.

Because the eight items were different aspects or components of the FFPs, the responses to these items are likely to reflect the participants’ general attitudes towards the FFPs. Principle component analysis (PCA) was thus applied to extract fewer factors with most of the variance in the items retained. Based on the principle component scores, subsequent analyses such as ANOVA and regression should generate more meaningful and representative results.

ANOVA was used to decompose the differences in responses to the FFPs across groups of women with different demographic characteristics including age, education, income, marriage, having children or not, and intent to bear children.

Because the participants indicated their intent to bear children as either a ‘yes’ or a ‘no’, which was subsequently coded as a binary variable, logistic regression was employed to predict the degree of intent from the demographic variables mentioned above.

Results

Analysis of FFPs

Descriptive analysis results of the eight FFPs are presented in Table 2. As the table shows, the means of the ratings on FFPs fell between 2.0 and 2.5, the latter of which is the median point of the whole range (i.e. from 1 to 4). The result suggests that the FFPs were generally
perceived as moderately important by Hong Kong women when they decided whether or not to bear children. It is also noted that, among these eight FFPs, ‘tax reductions or subsidies’ was rated as the most important FFP for the childbirth decision (M = 2.49), followed by ‘childcare for children younger than 3 years old’ (M = 2.46), ‘flexible working hours’ (M = 2.45), ‘voluntary switch in work or position, or decrease in work hours’ (M = 2.43), ‘maternity leave’ (M = 2.42) and ‘childcare for children between 3 and 12 years old’ (M = 2.41); ‘five-day week’ (M = 2.36) and ‘paternity leave’ were regarded as the least important (M = 2.26).

As the results in Table 3 show, there were positive and high correlations among the eight FFPs (r_{min} = 0.456, r_{max} = 0.763, r_{avg} = 0.581), suggesting that different FFPs played a similar role in the participant’s birth decision. Importantly, the eight FFPs were similarly correlated with six investigated demographic variables. As can be seen in Table 4, age and intent to bear children were most strongly correlated with the perceived importance of the eight FFPs (i.e. women who intended to bear children rated the FFPs as more important, while older women rated them as less important). In addition, education also demonstrated a moderate effect (i.e. higher education led to a higher rating on the importance of FFPs on the childbirth decision).

Because the eight FFPs were correlated highly with each other and similarly with the demographic variables, we were provided with a sound basis for combining these eight FFPs into a single one for subsequent analyses. A principle component was extracted via PCA and accounted for 63.48 per cent of the variance in the eight FFPs, supporting the appropriateness of using the combined score in subsequent analyses.

In addition to the principle component score, the simple sum score was also calculated. Correlations of both scores with various demographic variables are presented in Table 4. As the table shows, the two scores were correlated with a coefficient close to 1, and their correlations with the demographic variables and the eight FFPs were almost the same. Thus, to facilitate future comparison and to make the results easier to understand and interpret, the simple sum score was adopted in the subsequent ANOVA.

Because the six demographic variables were substantially correlated, the correlation between an FFP and any one of the variables was likely to be confounded by the other variables. Thus, to test the unique

| Table 3. Correlations among family-friendly policies (FFPs). |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|
| FFP 1 | FFP 2 | FFP 3 | FFP 4 | FFP 5 | FFP 6 | FFP 7 | FFP 8 |
| FFP 2 | 0.755** | 1 | | | | | |
| FFP 3 | 0.481** | 0.563** | 1 | | | | |
| FFP 4 | 0.522** | 0.583** | 0.670** | 1 | | | |
| FFP 5 | 0.473** | 0.523** | 0.489** | 0.619** | 1 | | |
| FFP 6 | 0.549** | 0.560** | 0.537** | 0.826** | 0.763** | 1 | |
| FFP 7 | 0.456** | 0.515** | 0.567** | 0.576** | 0.684** | 0.707** | 1 |
| FFP 8 | 0.459** | 0.510** | 0.558** | 0.581** | 0.636** | 0.640** | 0.641** | 1 |

Note: ** p < 0.01.

| Table 4. Correlations of demographic variables and family-friendly policies (FFPs). |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|
| FFP a | FFP b | Age | Education | Income | Married | Have children | Intent to bear children |
| FFP a | 0.9996** | 1.00 | | | | | |
| Age | -0.204** | -0.206** | 1.00 | | | | |
| Education | 0.132** | 0.131** | -0.301** | 1.00 | | | |
| Income | -0.017 | -0.016 | 0.245** | 0.542** | 1.00 | | |
| Married | -0.065 | -0.063 | 0.631** | -0.294** | 0.147** | 1.00 | |
| Have children | -0.059 | -0.058 | 0.609** | -0.338** | 0.046 | 0.786** | 1.00 |
| Intent to bear children | 0.319** | 0.318** | -0.392** | 0.312** | 0.074 | -0.286** | -0.374** | 1.00 |
| FFP 1 | 0.746** | 0.729** | -0.084* | 0.111** | -0.048 | -0.087* | -0.054 | 0.227** |
| FFP 2 | 0.792** | 0.781** | -0.121** | 0.106** | -0.017 | -0.090* | -0.058 | 0.236** |
| FFP 3 | 0.758** | 0.760** | -0.125** | 0.027 | 0.022 | 0.017 | 0.007 | 0.196** |
| FFP 4 | 0.816** | 0.820** | -0.211** | 0.129** | -0.027 | -0.090* | -0.067 | 0.270** |
| FFP 5 | 0.813** | 0.820** | -0.203** | 0.116** | 0.022 | -0.043 | -0.050 | 0.244** |
| FFP 6 | 0.844** | 0.850** | -0.178** | 0.096* | -0.032 | -0.042 | -0.041 | 0.220** |
| FFP 7 | 0.805** | 0.811** | -0.141** | 0.086* | -0.019 | 0.009 | -0.023 | 0.274** |
| FFP 8 | 0.793** | 0.796** | -0.241** | 0.159** | 0.005 | -0.074 | -0.082* | 0.360** |

Note: * p < 0.05; ** p < 0.01.
FFP a, simple sum score; FFP b, principle component score.
effects of the six demographic variables, they were used as the independent variables in the ANOVA of the FFPs. Because three-way (or more) interactions are especially difficult to interpret and lack practical significance in most cases, only the main effects and the two-way interactions were examined in the initial model. Similar to the backward procedure in multiple regression, non-significant effects were removed one by one until the remaining effects were all significant. Following the guidelines provided by the Publication Manual of the American Psychological Association (American Psychological Association, 2001), the effect sizes of each difference are reported along with the significance level. As for the partial eta squared (partial $\eta^2$) generated by SPSS, a value of 0.01, 0.06 and 0.14 represents small, medium and large effect sizes, respectively (Cohen, 1992; Green, Salkind & Akey, 2000; Stevens, 1996). The final model is presented in Table 5. As can be seen, the significant factors were age, having children and the intent to bear children. It was noted that age and having children had relatively small effect sizes, while the intent to bear children had a medium effect size.

To get a full picture of these differences, the means for each combination of the three variables were plotted in Figures 1 and 2, which represent the results among women with and without children, respectively. In both figures, those who intended to bear children rated the FFPs as being more important than those who did not. Age only had a clear negative effect on the attitude towards the FFPs among women who had no children and did not intend to have any. Interestingly and importantly, among those who currently had no children, the relationships between perceived importance of FFPs and age were remarkably different between those who intended to bear children and those who did not, while such difference was not observed among those with children.

Analysis of intent to bear children

Because fertility is one of the main concerns of the present study, we also focused on the factors that might contribute to women’s birth decision. As discussed earlier, logistic regression was used to predict women’s intent to bear children from the demographic variables including age, education, income, marriage, and having children or not. The regression employed a backward (conditional) procedure to estimate the equation. Results for the final solution are presented in Table 6. As shown, age and having children were negative predictors of intent to bear children, while education made

Table 5. ANOVA for perceived importance of family-friendly policies.

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>Sig.</th>
<th>Partial $\eta^2$</th>
</tr>
</thead>
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<td>Age</td>
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<td>6.550</td>
<td>0.000</td>
<td>0.031</td>
</tr>
<tr>
<td>Have children</td>
<td>1</td>
<td>10.115</td>
<td>0.002</td>
<td>0.016</td>
</tr>
<tr>
<td>Intent to bear children</td>
<td>1</td>
<td>56.259</td>
<td>0.000</td>
<td>0.083</td>
</tr>
<tr>
<td>Error</td>
<td></td>
<td>619</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>625</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected total</td>
<td></td>
<td>624</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6. Logistic regression of intent to bear children.

<table>
<thead>
<tr>
<th>Predictors</th>
<th>B</th>
<th>SE</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-0.491</td>
<td>0.106</td>
<td>21.464</td>
<td>1</td>
<td>0.000</td>
<td>0.612</td>
</tr>
<tr>
<td>Education</td>
<td>0.758</td>
<td>0.156</td>
<td>23.711</td>
<td>1</td>
<td>0.000</td>
<td>2.134</td>
</tr>
<tr>
<td>Have children</td>
<td>-0.816</td>
<td>0.237</td>
<td>11.816</td>
<td>1</td>
<td>0.001</td>
<td>0.442</td>
</tr>
<tr>
<td>Constant</td>
<td>-2.313</td>
<td>0.756</td>
<td>9.356</td>
<td>1</td>
<td>0.002</td>
<td>0.099</td>
</tr>
</tbody>
</table>

df, degrees of freedom; SE, standard error.
a positive contribution. With the equation, 70.5 per cent of the reports by women about their intent to bear children were successfully predicted.

To further understand the effects of age, education and having children on women’s intent to bear children, the probability of expressing a positive intent was calculated with the equation presented in Table 6. The probability score was saved and plotted against age, education and having children. As shown in Figures 3 and 4, the intent to bear children declined as age increased, while women with higher education always reported a higher intent to bear children, regardless of their age. It was also found that women with children expressed less intent to bear children, whatever their educational background and age ranges were.

**Conclusion and discussion of implications**

Low fertility rates have raised concern all over the world. In East Asia, there is a lack of studies of how public policies, such as FFPs, could impact on the decision to have a child. This article provides an initial assessment of the possible impact of FFPs on fertility in the case of Hong Kong’s young women. Our empirical study has singled out several factors, such as age, education and having children, which have a bearing on women’s intent to bear children. As noted previously, our study found that the intent to bear children is negatively correlated with age, while women with higher levels of education always reported a higher intent to bear children. It was also found that women with children expressed less intent to bear another child.

Importantly, it is in the area of perceived assistance from public policies in the form of FFPs that we can find some support for a positive fertility decision on the part of the respondents. To recap, it was found that FFPs have varying impacts on the decision to give birth. Ranked high are such measures as ‘tax reductions or subsidies’, ‘childcare for children younger than 3 years old’, ‘flexible working hours’ and ‘voluntary switch in work or position, or decrease in work hours’, while ‘the five-day week’ and ‘parental leave’ (implemented only in Hong Kong by a few corporations) seem to be least important in the decision to bear children.

In Western societies, studies well document that, in general, FFPs such as childcare are associated with improvements in productivity and performance (Dex & Smith, 2002). Notably, some studies go further, supporting a positive relationship between fertility and FFPs. For instance, the possible impact of tax credits on fertility has been studied and positively documented (De la Rica & Ferreo, 2003). Similar studies done in the United States came to the same conclusion (Whittington, Alm & Peters, 1990). However, other studies have cast doubt on this positive relationship (Ohinata, 2008). Although tax credits did not affect when married couples had their first child, among couples who already had one child, a second child was born sooner as a result of tax credits. In summary, mixed findings are reported in the literature. Our findings on the significance of tax credits add to the literature as they are uniquely based on women’s perceptions in Hong Kong.

In Hong Kong, the overall development of FFPs has been slow. The SAR government referred to these policies in the annual Policy Address (2005–2006) and shortly thereafter introduced the 5-day workweek for civil servants. A number of government departments, along with private sector employers and social service agencies, have established employee assistance programmes to give advice and provide counselling services for stress and emotional management. The government is well aware of the benefits of these policies: productive workforce, fulfillment of corporate social responsibility and retention of employees in a competitive environment for skilled labour (Cheung, 2010).
2006). Nevertheless, there are few targeted measures aiming at encouraging women to bear more children. However, a handful of large private organisations have adopted a broader array of policies, for example, paternal leave, which have an impact on childbearing. As noted in our findings, the policies of parental leave and the 5-day workweek do not seem to give a strong boost to the childbearing decision.

Unlike in other countries, the Hong Kong government faces no strong pressure to implement FFPs. Generally speaking, Hong Kong employers’ awareness of these policies remains low (Siu & Phillips, 2007). In the same study, though, there is evidence of stronger support among employees for a wider adoption of these policies. However, as Hong Kong is going down the path of a developmental state that uses social and public policies in the service of economic development (Tang, 2000), it is expected that more potent empirical evidence affirming the value of FFPs from the stakeholders as well as pressure from continuing low fertility would drive the government to take some positive steps in this direction.

In terms of the relevance of the theories to fertility decision making in Hong Kong, our study gives some support to the idea of risk aversion, i.e. the risk-society theory. Measures such as extensive childcare provision, reduced working weeks, and the availability of maternity leave and parental leave would all lower the risks that young women are exposed to after giving birth. Alternatively, one could see the availability of these family-friendly measures as enhancing their capacity to manage risks.

Additionally, there seems to be an economic rationality among the respondents when it comes to fertility decision making. The rationality theory states that people calculate the benefits (including psychological gains) of an additional child as outweighing the economic costs (Coleman, 1998; McDonald, 2002). Policies could raise the benefit thresholds or reduce the costs in order to induce higher fertility. Hence, young women constantly make judgements about the costs and benefits of having children. In our study, tax credits, extensive childcare and flexitime are all policies that reduce the costs of child rearing. Furthermore, maternity leave, parental leave and a reduced working week for participants would allow parents to manage the daily risks their babies might face.

Scholars such as Vos (2009) argue rightly that in addressing the dilemma of low fertility in Europe, a combination of institutional and human factors are important, both the government’s policies and individuals’ micro-level decision. The crux of the matter is that women and men must choose to have children. Our study in part affirms this close interplay of FFPs and the decision on fertility from the perspective of women.

As noted, conflicting theories from various disciplines have cropped up to explain the phenomenon of declining fertility levels. Among them, theories of risk aversion, rational choice and risk society have been applied by researchers to explain the fertility situations in various countries. Each of them has provided insights into the issue of low fertility. But as some researchers caution, one must not look at these theories as mutually exclusive (McDonald, 2002). They are overlaps between different theories. Further, their explanatory power would increase if variables from other theories are included in the empirical model. Some empirical studies have combined the relevant ideas of a particular theory into an integrated model. This is true of our own study as well, which draws heavily upon the risk-society theory and prospect theory. In terms of theoretical exploration, there is a closely related point. Notwithstanding the utility of these theories, scholars rightly lament that insufficient scholarly attention has been paid to how the various factors and public policies are personally experienced and understood by women when deciding upon matters related to having children (Hakim, 2003). As this study has shown, data showing subjective perception of importance of FFPs to childbirth decision shed light on our understanding of female decision making. As far as East Asia (Hong Kong included) is concerned, it is in this direction that the future study of fertility decisions should move.

In terms of research, although several key factors were found to be important for FFPs and the intent to bear children, they explained only part of the variance in the data. For example, only 70.5 per cent of the reports of the childbearing intention were correctly classified. To better understand the childbearing decision-making process, more variables need to be investigated from other perspectives. For example, for those who already have children, the previous child-rearing experience (e.g. how challenging and rewarding were their child-raising experiences, how supportive were their spouses etc.) could be a significant determinant as well. Taking these variables into account may help to achieve a more accurate prediction of women’s childbearing intention.

**References**


Childbirth decision among Hong Kong women


