Religion and the Use of Family Policy Measures in Japan, South Korea and Singapore

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Introduction

These days, the Japanese Government's support measures for work-life balance has been occupying a larger share in its policy responses to Japan's very low fertility.　Even though these support measures may have some effects on facilitating marriages and childbearing, they are not directly encouraging them.　Moreover, some scholars criticize the support measures for work-life balance for its tendency to favor only those couples in which both spouses work on a regular basis and consequently to increase socioeconomic inequality (Mackie 2002, Henninger et al. 2008).

While religion is a "forgotten" variable in Japanese social surveys except in internationally comparative surveys, it has been known to affect various socioeconomic and demographic attitudes and behaviors in many other societies.　The present author has been studying the relationship between religion and demographic attitudes and behaviors (e.g., Kojima 1999, 2001, 2006a, 2006b, 2007, 2011, 2012a, 2012b, 2012c, 2013b, 2014b).　More recently, Kojima (2014a) analyzed the effects of religion on fertility attitudes and behaviors and revealed its effect on fertility behaviors in South Korea and Singapore and its effects on the discrepancy in Japan.　Recently, Skirbekk et al. (2015) indicate that Buddhism is either negatively or insignificantly related to fertility in various societies of Asia.

Japan, South Korea and Singapore are relatively secular and have high percentages of population without religion, but the majority religion used to be Buddhism in the first two societies and Singapore also has a relatively high percentage of Buddhists. While South Koreans are considered to have more Confucian values than other Asians, the society seems to be in the process of Christianization.　In the case of Singapore, religion and ethnicity (called "race" in Singapore) may have independent effects on demographic behaviors (Kojima 2012a), but they have not been analyzed much

possibly because of the limited access to microdata and the sensitivity.

This study presents the results of a comparative analysis of the effects of religion on the use of different types of family policy measures (leaves, facilities and services) in Japan, South Korea and Singapore, drawing on microdata from the 2009 Survey on Comparative Study of Family Policies in East Asia (South Korea, Singapore and Japan), which was conducted by the Section for Measures against Declining Birthrate, Director-General for Policies on Cohesive Society, Cabinet Office (Japanese Government). This is an extension of the author's more general work in Japanese (Kojima 2013a).

Literature Review

There do not seem to be too many multivariate analyses which relate religion to the use of family policy measures at the individual level. Kälvemark's (1980) historical study on the use of Swedish marriage loan seems to be one of the oldest study on the actual use of a family policy measure, but it is descriptive and does not analyze the effects of religion. There are a few studies which analyze the effect of religion on the choice of childcare modes (e.g., Lehrer 1983), but there do not seem to be any studies on the effect of religion on the take-up of parental leave and other leaves related to childbearing and childrearing. Actually, there seem to be few studies on the correlates of the take-up of parental leave (e.g., Whitehouse 2005) and no studies examining the effects of religion.

In Japan there are also a few studies on the correlates of the use of childcare services (e.g., Kojima 1998, Shimizutani and Noguchi 2004) and a few studies on the correlates of the take-up of parental leave (e.g., Kojima 1995, Abe 2002, Soma 2004), but there seem to be no studies relating religion to the use of childcare services or the take-up of parental leave.

Moreover, all these studies focus on the women who continue working until childbearing and ignore the women who discontinued their work before childbearing, those who have never worked and those who have never experienced marriage and/or childbearing. Thus, there should be studies on what kind of characteristics are held by those women, among all women and all mothers, who continued working after marriage and childbearing and used the services, facilities and leaves for families. At the same time, there should be studies on what kind of characteristics are held by those men, among all men and all fathers, who themselves or their spouses have used the services, facilities or leaves for families. In this connection, we expect those women and men (or their spouses) with religion are more likely to use family policy measures than those without religion.

Kojima (2013a) analyzed the same data set for this study with comparable

pre-determined model without restriction of cases to respondents with children unlike this one, even though the question on the use of family policy measures is asked to those respondents who have children.   Thus, the analysis was for all the respondents in order to clarify the effects of religion on both childbearing and the use of measures.   However, he could not find too many significant effects of religion. According to Kojima (2013a), in Japan Buddhism has almost no significant effect on the use of family policy measures.   In South Korea religion also has barely significant effects, but Buddhist women tend to have used family policy measures, while Protestant men tend not to have used them.   In Singapore Protestant and Catholic men are more likely to have used family policy measures, but among women the effects of Christianity are not consistent and the effect of Taoism is observed despite small number of cases.

This may be because the family status is not directly controlled for in the previous study.   Kojima (2014a) indicates that Korean Protestant women and Singaporean Muslim women are more likely to have a large family after controlling for marriage while Japanese Buddhist women are more likely to have an excess of desired family size than the actual one.   Thus, in the comparable predetermined model in this study, the cases are restricted to parents (fathers and mothers) and the number of children is controlled for.

Data and Methods

The microdata used in this study derive from the 2009 Survey on Comparative Study of Family Policies in East Asia (South Korea, Singapore and Japan), which was conducted by the Section for Measures against Declining Birthrate, Director-General for Policies on Cohesive Society, Cabinet Office (Japanese Government).   The Section conducted a similar comparative survey in 2005 (also in 2010) in Japan, South Korea, France, Sweden and the US, but the 2009 survey focused on East Asia in a broader sense and added a few questions relevant to the region and deleted a few irrelevant ones.   Singapore was included because it has been conducting an active pronatalistic family policy during the past three decades and it exhibits diversity in terms of ethnicity and religion.

The details about the survey procedure are found in CAO (2009), which includes Kojima's (2009a) preliminary analysis on partnership behaviors.   The survey in Japan used the two-stage stratified sampling to randomly select municipalities and the area sampling based on age and sex quota in the sampled municipalities to obtain one thousand (male and female) respondents aged 20-49.   The respondents of surveys in other countries seem to be selected in a similar manner.   The thirteen policy-related dependent variables to be analyzed in this study derive from the following questions

(excluding the choices 13) and 15)):

(5) Service Usage
[ASK RESPONDENTS WHO HAVE CHILDREN]
Q36 Which of the following services have you or your spouse (or cohabiting partner) used in raising children?   Please choose **as many answers as you wish**.

1) Maternity leave from work
2) Childcare leave
3) Paternity leave (fixed leave period for fathers only)
4) Shorter working hours
5) Nursing leave for children
6) Children or daycare center
7) In-home childcare (babysitters, etc.)
8) Domestic worker (maids, etc.)
9) Childcare centers established by companies for employees
10) Preschools
11) After-school program
12) Public support for childcare in the community
13) Others ─ Please specify
14) None (DO NOT READ)
15) Don't know

The methods used in this study are the bivariate analysis and the binomial logit analysis (SAS/LOGISTIC Procedure).   For the bivariate analysis, independent variables are religion: Buddhist and No Religion for Japan; Buddhist, Catholic, Protestant and No Religion for South Korea; and Buddhist, Catholic, Protestant, Muslim, Taoist, Hindu and No Religion for Singapore.   The mean of dependent variables for each religion by sex will be presented below.   For the binomial logit analysis with stepwise selection for Japan, Catholic, Protestant and Shintoist are also included as candidates.   The interaction of 5-year age group and each religion (as well as having religion and no religion) are also included as candidates, together with various kinds of demographic variables (excluding those directly related to family formation) and socioeconomic variables).

The binomial logit analysis with comparable pre-determined models for parents of each sex (fathers and mothers) include, as independent variables, Buddhist and Buddhist aged 35-39, 40-44 and 45-49, with Others as a reference category for Japan, Buddhist and Christian with Others for South Korea and Buddhist, Catholic, Protestant, Muslim and Hindu with Others for Singapore.   The interaction terms for

Buddhist and age are included for Japan because Buddhism is the only major religion chosen by the non-majority of respondents and because the interaction was found to have significant effects on fertility attitudes (Kojima 2006a). The models also include, as control variables, age (35-39, 40-44 and 45-49 with 20-34 as a reference category), number of children (2 Children and 3 or more Children with 1 Child), education (High and Low with Medium), and urban/rural residence (Metropolitan and Rural with Medium Size City) for Japan and South Korea and nationality (Permanent Resident with Others) for Singapore.

    Control variables also include region for each country: Hokkaido/Tohoku, Kanto/Shinetsu excluding Tokyo, Tokyo, Kinki, Chushikoku/Kyushu/Okinawa with Tokai/Hokuriku as a reference category for Japan; Seoul and Gyeonggi-do with Others for South Korea; and North, East, South Central, West with North-East for Singapore.   The logit analysis with comparable pre-determined models in this study is limited to those respondents with at least one child (parents) because the author's previous analysis (Kojima 2013a) did not limit cases for the examination of effects among the adults of reproductive age as a whole.

Results

1. Bivariate Analyses

    Tables 1a and 1b show the mean proportion of respondents having used each family policy measure by sex and religion in the three societies.   Since the proportion of women who discontinue their work after marriage or childbearing is relatively high in Japan (Kojima 2009b), there are only five measures with the proportion above 10% for both sexes: 10) Preschool (26.9%), 6) Childcare Center (23.9%), 1) Maternity Leave (15.2%), 2) Childcare Leave (10.5%) and 12) Public Childcare Support in Community (11.5%).   Except for 6) Childcare Center, 10) Preschool and 12) Public Childcare Support in Community, the percentages are lower in Japan than in Singapore.   In South Korea, except for 10) Preschool of which proportion is 34.8% and the highest among the three societies and except for 14) None, all other proportions are below 10% mark and relatively low.   In Singapore, not only the proportions for 10) Preschool (23.4%) and 6) Childcare Center (14.2%) are relatively high, but also those for 1) Maternity Leave (34.7%), 2) Childcare Leave (15.4%), 3) Paternity Leave (14.4%), and 8) Domestic Worker (15.2%) are much higher than in the other two societies.   Even though the proportions for 4) Shorter Working Hours, 7) In-Home Childcare and 9) Childcare Center for Employees are relatively low in Singapore, they are still much higher than in the other two societies.   On the other hand, the proportion for 5) Nursing Leave for Children is very low in all the three societies.   While women tend to have higher proportions than men except for 12) Public Childcare Support in

Table 1a Proportion having used family policy measures by sex and religion in the three countries

Country Sex Religion	1) Maternity Leave	2) Childcare Leave	3) Paternity Leave	4) Shorter Working Hours	5) Nursing Leave for Children	6) Childcare Center	7) In–Home Childcare
Japan							
Male	14.6%	10.6%	2.2%	2.4%	1.6%	21.7%	0.8%
(N)	508	508	508	508	508	508	508
Buddhist	16.9%	11.9%	2.3%	2.3%	0.9%	23.3%	0.9%
No Religion	13.0%	10.3%	2.3%	2.3%	2.3%	20.3%	0.8%
Female	15.9%	10.4%	1.2%	2.2%	1.2%	26.3%	1.6%
(N)	491	491	491	491	491	491	491
Buddhist	16.5%	10.7%	1.5%	2.4%	1.9%	24.8%	1.0%
No Religion	14.2%	9.9%	0.8%	2.4%	0.8%	26.9%	2.0%
S. Korea							
Male	5.5%	2.7%	1.0%	1.8%	1.4%	7.8%	1.2%
(N)	510	510	510	510	510	510	510
Buddhist	9.6%	6.0%	2.4%	3.6%	2.4%	10.8%	2.4%
Catholic	–	–	–	–	–	5.9%	2.9%
Protestant	3.9%	2.0%	–	–	–	5.9%	1.0%
No Religion	5.5%	2.4%	1.0%	2.1%	1.7%	7.9%	0.7%
Female	8.8%	3.5%	1.6%	3.9%	2.1%	9.3%	3.1%
(N)	486	486	486	486	486	486	486
Buddhist	11.6%	6.3%	2.7%	5.4%	3.6%	10.7%	2.7%
Catholic	9.1%	–	–	9.1%	–	11.4%	2.3%
Protestant	10.3%	3.2%	0.8%	2.4%	2.4%	10.3%	2.4%
No Religion	6.4%	3.0%	2.0%	3.0%	1.5%	7.4%	3.9%
Singapore							
Male	31.2%	14.8%	16.2%	6.1%	1.0%	14.8%	4.7%
(N)	506	506	506	506	506	506	506
Buddhist	30.2%	13.8%	18.0%	5.3%	1.1%	16.4%	6.3%
Catholic	50.0%	12.5%	21.9%	9.4%	–	21.9%	3.1%
Protestant	51.0%	24.5%	20.4%	2.0%	–	26.5%	6.1%
Muslim	29.2%	12.4%	16.9%	7.9%	–	7.9%	–
Taoist	16.7%	4.2%	4.2%	8.3%	–	12.5%	4.2%
Hindu	23.3%	16.7%	20.0%	–	3.3%	3.3%	–
No Religion	25.0%	17.4%	9.8%	8.7%	2.2%	14.1%	7.6%
Female	38.2%	16.1%	12.6%	7.3%	1.4%	13.6%	6.5%
(N)	492	492	492	492	492	492	492
Buddhist	38.3%	17.0%	10.1%	6.9%	0.5%	12.2%	5.9%
Catholic	31.3%	12.5%	21.9%	3.1%	6.3%	6.3%	3.1%
Protestant	41.3%	8.7%	10.9%	6.5%	–	10.9%	8.7%
Muslim	34.2%	13.2%	15.8%	7.9%	2.6%	10.5%	3.9%
Taoist	47.6%	28.6%	14.3%	4.8%	–	33.3%	19.0%
Hindu	32.1%	14.3%	10.7%	14.3%	–	21.4%	–
No Religion	42.4%	19.2%	12.1%	6.1%	2.0%	15.2%	9.1%

Source: The author's analysis of microdata from the CAO 2009 Survey

Community in South Korea and except for 3) Paternity Leave and 6) Childcare Center in Singapore, the relative position for each sex is not consistent in Japan.

In Japan Buddhists are more likely than those without religion to have used 1) Maternity Leave, 2) Childcare Leave, 3) Paternity Leave, 6) Childcare Center and 10) Preschool, while they are less likely to have used 7) In-Home Childcare, 8)Domestic Worker, 9) Childcare Center for Employees, 11) Afterschool Program and 12) Public Childcare Support in Community.

In South Korea Buddhists are the most likely to have used 1) Maternity Leave, 2) Childcare Leave, 3) Paternity Leave, 5) Nursing Leave for Children, 6) Childcare

Table 1b   (Continued)

Country Sex Religion	8) Domestic Worker	9) Childcare Center for Employees	10) Preschool	11) After–School Program	12) Public Childcare Support in Community	14) None	% Distribution
Japan							
Male	0.2%	1.4%	25.2%	6.9%	9.8%	7.5%	100.0
(N)	508	508	508	508	508	508	508
Buddhist	0.0%	0.9%	27.4%	6.4%	9.6%	7.8%	43.1
No Religion	0.4%	1.9%	23.4%	7.7%	10.0%	7.3%	51.4
Female	0.6%	1.2%	28.7%	9.0%	13.2%	11.6%	100.0
(N)	491	491	491	491	491	491	491
Buddhist	–	1.0%	30.1%	8.7%	10.2%	11.2%	42.0
No Religion	1.2%	1.6%	28.5%	8.7%	16.6%	11.9%	51.5
S. Korea							
Male	2.5%	0.6%	29.6%	4.5%	1.8%	16.3%	100.0
(N)	510	510	510	510	510	510	510
Buddhist	6.0%	1.2%	32.5%	4.8%	1.2%	13.3%	16.3
Catholic	5.9%	–	26.5%	11.8%	2.9%	17.6%	6.7
Protestant	–	1.0%	24.5%	4.9%	1.0%	22.5%	20.0
No Religion	2.1%	0.3%	31.0%	3.4%	2.1%	14.8%	56.9
Female	3.7%	1.0%	40.3%	7.2%	1.2%	15.2%	100.0
(N)	486	486	486	486	486	486	486
Buddhist	8.0%	2.7%	54.5%	16.1%	0.9%	18.8%	23.1
Catholic	2.3%	–	40.9%	11.4%	–	13.6%	9.1
Protestant	3.2%	0.8%	38.1%	2.4%	3.2%	12.7%	25.9
No Religion	2.0%	0.5%	34.0%	4.4%	0.5%	14.8%	41.8
Singapore							
Male	14.6%	1.8%	20.4%	7.1%	0.8%	7.7%	100.0
(N)	506	506	506	506	506	506	506
Buddhist	8.5%	1.1%	23.8%	9.0%	1.1%	5.3%	37.4
Catholic	34.4%	3.1%	31.3%	18.8%	–	9.4%	6.3
Protestant	38.8%	6.1%	28.6%	2.0%	–	6.1%	9.7
Muslim	9.0%	–	14.6%	6.7%	2.2%	9.0%	17.6
Taoist	8.3%	4.2%	8.3%	4.2%	–	4.2%	4.7
Hindu	13.3%	–	16.7%	–	–	23.3%	5.9
No Religion	15.2%	2.2%	15.2%	5.4%	0.0%	7.6%	18.2
Female	15.9%	4.1%	26.6%	10.6%	2.0%	9.6%	100.0
(N)	492	492	492	492	492	492	492
Buddhist	13.8%	3.7%	24.5%	9.0%	1.6%	8.5%	38.2
Catholic	31.3%	0.0%	28.1%	3.1%	–	12.5%	6.5
Protestant	34.8%	10.9%	30.4%	13.0%	–	2.2%	9.4
Muslim	6.6%	3.9%	35.5%	14.5%	3.9%	18.4%	15.5
Taoist	23.8%	14.3%	33.3%	9.5%	9.5%	0.0%	4.3
Hindu	7.1%	–	32.1%	25.0%	–	17.9%	5.7
No Religion	13.1%	2.0%	18.2%	7.1%	2.0%	7.1%	20.1

Source: The author's analysis of microdata from the CAO 2009 Survey

Center, 8) Domestic Worker, 9) Childcare Center for Employees and 10) Preschool, while Catholics are the most likely for 4) Shorter Working Hours and equally as likely for 7) In-Home Childcare and 11) After-School Program.   Protestants are the most likely for 12) Public Childcare Support in Community and 14) None.

    In Singapore Buddhists often have the average levels.   Protestants are the most likely to have used 1) Maternity Leave and 8) Domestic Worker, while Catholics are the most likely for 3) Paternity Leave, 5) Nursing Leave for Children and 10) Preschool.   Muslims are the most likely for 4) Shorter Working Hours. Taoists are

the most likely for 6) Childcare Center, 7) In-Home Childcare, 9) Childcare Center for Employees and 12) Public Childcare Support in Community.   Hindus are the most likely for 11) After-School Program and 14) None.   Those without religion are the most likely for 2) Childcare Leave.

2. Logit Analyses with Stepwise Selection for Adults Aged 20-49

Before examining the results of logit analyses on the use of family policy measures with comparable pre-determined models for parents, we might look at the results of logit analyses with stepwise selection for respondents by sex in Tables 2a through 2c for adults of reproductive age (without family formation variables), drawing on Kojima (2013a).   Only the effects of independent variables (religion and its interaction with age) in bold characters (and underlined ethnicity variables for Singapore) will be mentioned below even though they become significant only in combination with other selected variables.   We should note, in interpreting the results, that the effects of religion on family formation are included in the effects of religion in these tables.

In Japan the effects of religion and its interaction with age are quite limited. Among Japanese men, Buddhists aged 30-34 and men aged 30-34 without religion are more likely to have used 2) Childcare Leave by themselves or by their spouse. Buddhists aged 40-44 and men aged 35-39 with religion are more likely to have used 14) None of the measures.   Among Japanese women Buddhists aged 30-34 are more likely to have used 3) Paternity Leave by their spouse.

In South Korea the percentages of respondents having used each measure tend to be the lowest, but the effects of religion is much more clearly observed than in Japan.   Among Korean men those aged 40-44 without religion are more likely to have used 1) Maternity Leave by their spouse, while Buddhists aged 25-29 and men aged 30-34 without religion are more likely to have used 2) Childcare Leave by themselves or by their spouse.   Buddhists aged 25-29 and Buddhists aged 40-44 are more likely to have used 4) Shorter Working Hours.   Korean men aged 35-39 without religion are more likely to have used 6) Childcare Center, while Buddhists aged 25-29 are more likely to have used 9) Childcare Center for Employees.   Buddhists aged 25-29, 35-39 and 45-49 as well as Catholics aged 35-39 are more likely to have used 8) Domestic Worker.

Among Korean women Catholics aged 30-34 are more likely to have used 6) Childcare Center, while Buddhists aged 30-34, women aged 35-39 with religion and those aged 30-34 without religion are more likely to have used 8) Domestic Worker. Buddhists aged 45-49 and Catholics aged 40-44 and 45-49 are more likely to have used 11) After-School Program, while Protestants aged 35-39 are more likely to have used 12) Public Childcare Support in Community.

Table 2a   Correlates of having used family policy measures by sex in the three countries

Country Sex	1) Maternity Leave	2) Childcare Leave	3) Paternity Leave	4) Shorter Working Hours
Japan				
Male	20-24(−) 25-29(−) 45-49(−) Public Sector(+) High Income(+)	**30-34xBuddhist(+)** **30-34xNo Relgion(+)** Self–Employed(+) Professional(+) Public Sector(+) 45-49xPublic(+) 35-39xWW21-40H(+) 25-29xWW51-60H(+) 25-29xWW61H+(+) 35-39xRegular(+) 40-44xRegular(+) Commuting 15-29M(+)	35-39xWW61H+(+)	35-39xPublic(+) 25-29xWW51-60H(+)
Female	–	–	**30-34xBuddhist(+)** 35-39xPrivate(+)	30-34xSen High(+) Farmer(+) 35-39xPublic(+) 40-44xPrivate(+) 45-49xPrivate(+) High Income(+)
S. Korea				
Male	**40-44xNo Religion(+)** 35-39xPublic(+) Work Week 21-40H(+) 35-39xWW51-60H(+) 25-29xNon–Regular(+) Parent Coresidence(−) Chungcheongbuk–do(+)	**25-29xBuddhist(+)** **30-34xNo Religion(+)** 45-49xWW21-40H(+) 35-39xWW41-50H(+) 40-44xWW41-50H(+) 45-49xWW61H+(+)	Farmer(+) Professional(+) 35-39xWW41-50H(+) 25-29xWW51-60H(+) Parent 15-29M(+) Chungcheongbuk–do(+)	**25-29xBuddhist(+)** **40-44xBuddhits(+)** Parent 15-29M(+) Parent 2H+(+)
Female	35-39xWW51-60H(+) Parent Coresidence(−) Gwangju(+) Chungcheongbuk–do(+) Chungcheongnam–do(+) Jeju–do(+)	–	35-39(+) (?)	–
Singapore				
Male	20-24(−) 25-29(−) **30-34xBuddhist(−)** Self–Employed(+) 20-24xWW61H+(+) Parent Coresidence(−)	35-39(+) Parent Coresidence(−)	Parent Coresidence(−) West(+)	Permanent Resident(−) **35-39xTaoist(+)** **40-44xNo Religion(+)** 35-39xHigh Edu(+) 45-49xWW21-40H(+) 30-34xWW61H+(+) 45-49xWW61H+(+) Commuting 1H+(+) Parent 30-59M(+) Parent 1-2H(+) West(+)
Female	20-24(−) 25-29xHigh Edu(−) Work Week 21-40H(+) Work Week 41-50H(+) Parent Coresidence(−)	35-39xHigh Edu(+) Public Sector(+) 30-34xRegular(+) Commuting 1H+(+)	**30-34xBuddhist(−)** **40-44xBuddhist(−)** 30-34xHigh Edu(+) 35-39xWW<=20H(+) Parent Coresidence(−) South Central(+) West(+)	West(+)

Source: The author's analysis of microdata from the CAO 2009 Survey (Kojima 2013a:75-77)
Note: (+) significant and positive effect; (−) significant and negative effect; (?): questionable model validity

Table 2b   (Continued)

Country Sex	5) Nursing Leave for Children	6) Childcare Center	7) In-Home Childcare	8) Domestic Worker
Japan				
Male	30-34xSen High(+) 40-44xPublic(+) Work Week 61H+(+) 35-39xWW21-40H(+) 45-49xWW41-50H(+)	20-24(−) 25-29(−) Self−Employed(+) 40-44xWW41-50H(−) Parent Coresidence(−) Rural(+) Tohoku(+)	45-49xPublic(+) 40-44xWW41-50H(+) 40-44xWW61H+(+) Tokyo(+) (?)	−
Female	30-34xPublic(+) 35-39xPublic(+) 40-44xPublic(+) (?)	20-24(−) Work Week 21-40H(+) 45-49xWW21-40H(+) 35-39xWW41-50H(+) 40-44xWW41-50H(+)	30-34(+) 45-49xWW21-40H(+) 45-49xWW41-50H(+) Tokyo(+)	35-39xWW21-40H(+) (?)
S. Korea				
Male	Professional(+) 35-39xPublic(+) 25-29xWW21-40H(+) 40-44xWW51-60H(+) 40-44xRegular(+) Parent 15-29M(+)	**35-39xNo Religion(+)** Private Sector(−) 30-34xWW41-50H(+) 40-44xRegular(+) 45-49xRegular(+) Parent Coresidence(−) Gyeonggi−do(+) Chungcheongbuk−do(+) Gyeongsangnam−do(+) Jeju−do(+)	−	**25-29xBuddhist(+)** **35-39xBuddhist(+)** **45-49xBuddhist(+)** **35-39xCatholic(+)** 40-44xWW21-40H(+) 30-34xWW61H+(+) 40-44xWW61H+(+) Gwangju(+)
Female	−	40-44(+) **30-34xCatholic(+)** 35-39xHigh Edu(+) 45-49xSen High(+) High Income(−) City/Town(+) Daejeon(+) Chungcheongbuk−do(+)	35-39xSen High(+) 30-34xNon−Regular(+) Incheon(+) Gangwon−do(+) Chungcheongnam−do(+) (?)	**30-34xBuddhist(+)** **35-39xReligion(+)** **30-34xNo Religion(+)** 40-44xHigh Edu(+) 45-49xHigh Edu(+) 35-39xSen High(+) Gwangju(+) Daejeon(+) Jeollabuk−do(+)
Singapore				
Male	**45-49xBuddhist(+)** **35-39xHindu(+)** **35-39xNo Religion(+)** 25-29xWW<=20H(+) (?)	Chinese(+) **45-49xMuslim(+)** **30-34xReligion(+)** 40-44xHigh Edu(+) Self−Employed(+) 35-39xRegular(+) Parent Coresidence(−)	**Buddhist(+)** **35-39xTaoist(+)** **35-39xNo Religion(+)** **40-44xNo Religion(+)** Senior Highschool(−) 45-49xSen High(+) 40-44xWW51-60H(+) Commuting 1H+(+) Parent<15M(+) Parent 15-29M(+) East(+) South Central(+)	**Protestant(+)** **35-39xCatholic(+)** 40-44xHigh Edu(+) Self−Employed(+) Parent Coresidence(−) High Income(+)
Female	**40-44xCatholic(+)** **35-39xMuslim(+)** 25-29xWW21-40H(+) 35-39xNon−Regular(+) (?)	**30-34xTaoist(+)** **30-34xNo Religion(+)** 35-39xHigh Edu(+) 40-44xWW41-50H(+) Parent Coresidence(−)	**Taoist(+)** **35-39xBuddhist(+)** 45-49xWW21-40H(+) 40-44xRegular(+) High Income(+) East(+) South Central(+)	**45-49xCatholic(+)** **45-49xProtestant(+)** **35-39xTaoist(+)** Self−Employed(+) Professional(+) Work Week 41-50H(+) 35-39xWW<=20H(+) 30-34xWW51-60H(+) Parent Coresidence(−) Parent 15-29M(+) High Income(+)

Source: The author's analysis of microdata from the CAO 2009 Survey (Kojima 2013a:75-77)
Note: (+) significant and positive effect; (−) significant and negative effect; (?): questionable model validity

Table 2c   (Continued)

Country Sex	9) Childcare Center for Employees	10) Preschool	11) After–School Program	12) Public Childcare Support in Community	14) None
Japan Male	35-39xWW61H+(+) (?)	45-49(+) 35-39xHigh Edu(+) 45-49xPrivate(+) 40-44xRegular(+) (?)	40-44(+) Self–Employed(+) 35-39xPrivate(+) 45-49xWW41-50H(+)	35-39xHigh Edu(+) 30-34xWW41-50H(+)	**40-44xBuddhist(+)** **35-39xReligion(+)** 25-29xSen High(+) Commuting<15M(+) Parent 30-59M(+) Parent 1-2H(+)
Female	25-29xWW<=20H(+) 35-39xWW21-40H(+) 40-44xNon–Regular(+) (?)	–	–	30-34(+) Work Week41-50H(–) Parent Coresidence(–) Metropolitan(–) Tokyo(+) (?)	Private Sector(–) Regular Employee(–) Work Week 61H+(+) 45-49xNon–Regular(+) (?)
S. Korea Male	**25-29xBuddhist(+)** 35-39xPublic(+)	25-29(–) 30-34(–) Parent Coresidence(–) (?)	40-44(+) 45-49xWW21-40H(+) 35-39xWW41-50H(+) 45-49xWW41-50H(+) 45-49xWW51-60H(+) Busan(+) Daejeon(+) Ulsan(+)	Professional(+) 35-39xPrivate(+) 25-29xWW21-40H(+) 45-49xNon–Regular(+) (?)	45-49xSen High(+) Parent Coresidence(–) Rural(+) Seoul(+) (?)
Female	Unemployed(+) 35-39xWW51-60H(+) (?)	25-29(–) Parent Coresidence(–) (?)	35-39(+) **45-49xBuddhist(+)** **40-44xCatholic(+)** **45-49xCatholic(+)** 40-44xWW41-50H(+) 35-39xWW51-60H(+) Commuting<15M(+) Busan(+) Ulsan(+) Jeju–do(+)	**35-39xProtestant(+)** Gangwon–do(+) Chungcheongnam-do(+) Gyeongsangbuk–do(+)	25-29xPrivate(–) 35-39xWW21-40H(+) Parent Coresidence(–) Rural(+) Seoul(+) Jeollabuk–do(+)
Singapore Male	**45-49xProtestant(+)** **35-39xTaoist(+)** **35-39xNo Religion(+)** 40-44xHigh Edu(+) 35-39xWW21-40H(+) 45-49xWW21-40H(+) Parent<15M(+) Parent 2H+(+) Low Income(+)	Parent Coresidence(–)	30-34(–) Self–Employed(+) Professional(+) 40-44xWW21-40H(+) 45-49xWW21-40H(+) 35-39xRegular(+) Parent 1-2H(+)	30-34xWW51-60H(+) 40-44xWW61H+(+)	45-49(+) Permanent Resident(+) Malay(+) 45-49xSen High(+) 40-44xPrivate(+) High Income(–)
Female	**Protestant(+)** **45-49xBuddhist(+)** **30-34xMuslim(+)** **45-49xMuslim(+)** **30-34xTaoist(+)** **40-44xTaoist(+)** Senior High School(–) 25-29xHigh Edu(+) Regular Employee(+) 35-39xWW41-50H(+) 40-44xWW41-50H(+) South Central(+) West(+)	20-24(–) 25-29(–) **No Religion(–)** **25-29xMuslim(+)** Parent Coresidence(–) East(+)	Permanent Resident(–) **Hindu(+)** 40-44xWW21-40H(+) 45-49xWW21-40H(+) East(+) West(+)	Permanent Resident(+) **35-39xTaoist(+)** **35-39xNo Religion(+)** Parent 1-2H(+) Low Income(+) West(+)	Professional(–) Regular employee(–) 40-44xWW51-60H(+) Medium Income(+) North(+)

Source: The author's analysis of microdata from the CAO 2009 Survey (Kojima 2013a:75-77)
Note: (+) significant and positive effect; (–) significant and negative effect; (?): questionable model validity

In Singapore religion have even larger effects on the use of family policy measures than in South Korea possibly because of higher level of use and its cultural diversity.   Among Singaporean men Buddhists aged 30-34 are more likely to have used 1) Maternity Leave by their spouse, while Taoists aged 35-39 and men aged 40-44 without religion are more likely to have used 4) Shorter Working Hours by themselves or by their spouse.   Buddhists aged 45-49, Hindus aged 35-39 and men aged 35-39 without religion are more likely to have used 5) Nursing Leave for Children by themselves or by their spouse, while Muslims aged 45-49 and men aged 30-34 without religion are more likely to have used 6) Childcare Center.   Buddhists, Taoists aged 30-39 and men aged 35-39 and 40-44 without religion are more likely to have used 7) In-Home Childcare, while Protestants and Catholics aged 35-39 are more likely to have used 8) Domestic Worker.   Protestants aged 45-49, Taoists aged 35-39 and men aged 35-39 without religion are more likely to have used 9) Childcare Center for Employees.   In addition, ethnicity have significant effects only on 6) Childcare Center and 14) None only among men: Chinese men are more likely to have used 6) Childcare Center; and Malay men are more likely to have chosen 14) None.

Among Singaporean women Buddhists aged 30-34 and 40-44 are less likely to have used 3) Paternity Leave by their spouse, while Catholics aged 40-44 and Muslims aged 35-39 are more likely to have used 5) Nursing Leave for Children by themselves or by their spouse.   Taoists aged 30-34 and women aged 30-34 without religion are more likely to have used 6) Childcare Center.   Taoists and Buddhists aged 35-39 are more likely to have used 7) In-Home Childcare, while Catholics aged 45-49, Protestants aged 45-49 and Taoists aged 35-39 are more likely to have used 8) Domestic Worker. Protestants, Muslims aged 30-34 and 45-49 and Taoists aged 30-34 and 40-44 are more likely to have used 9) Childcare Center for Employees, while women without religion are less likely and Muslims aged 25-29 are more likely to have used 10) Preschool. Hindus are more likely to have used 11) After-School Program, while Taoists aged 35-39 and women aged 35-39 without religion are more likely to have used 12) Public Childcare Support in Community.

3. Logit Analyses with Pre-determined Models for Parents Aged 20-49

Tables 3 through 5 show the results of binomial logit analyses on the use of family policy measures among parents of each sex (fathers and mothers) in Japan, South Korea and Singapore.   The results reveal the effects of religion after controlling for age, number of children, education, urban-rural residence (ethnicity and nationality for Singapore) and region (different for each society) on the use of selected family policy measures.   The common dependent variables include 1) Maternity Leave, 2) Childcare Leave, 6) Childcare Center, 10) Preschool and 11) After-School Program as well as 14) None, which have relatively high frequencies in all the three societies.

Table 3   Determinants of having used family policy measures among parents by sex in Japan: binary logit analysis

Indep. Variable Category	Japanese Fathers							
	1) Maternity Leave	2) Childcare Leave	6) Childcare Center	10) Preschool	11) After–School Prog.(?)	14) None	12) Public CC Support	% Distribution
Constant	−2.1135 ***	−1.6405 *	−0.9252 #	−3.3956 ***	−3.0874 **	0.3122	−2.1177 **	–
Age Group								
35-39	0.3172	0.9444	−0.3093	1.3427 *	1.2033	−0.5397	0.0366	29.3
40-44	0.1253	0.5179	−0.3271	1.9169 ***	1.9604 *	−1.6353 #	−0.1717	24.5
45-49	−1.5713 #	−0.1491	0.0610	1.8077 **	0.5288	−0.5049	−2.1096 #	20.0
No. of Children								
2 Children	−0.0698	−0.4921	0.0212	1.7198 ***	0.4942	−1.1099 *	0.1325	54.8
3+ Children	0.5829	0.4517	0.2744	1.4045 **	0.5480	−1.4871 *	−0.7150	22.4
Education								
Low Education	−0.8710	−1.6969	0.7614	0.1760	−0.5839	−1.0924	0.6279	5.5
High Education	0.4942	0.0340	0.3318	0.4015	−0.0802	−0.5712	1.4207 **	57.2
U/R Residence								
Metropolitan	−0.5230	−0.9139 #	−0.0209	0.1513	0.2327	0.2014	−0.6006	20.3
Rural	−0.4524	−0.2606	0.6226	0.2449	−0.2826	−1.3570 #	0.1987	13.8
Region								
Hokkai/Tohoku	1.1289 #	0.5310	0.5674	0.7431	−0.0148	−1.3901 #	−0.8123	16.9
Kanto/Shinestu	0.7557	−0.4051	−0.0365	0.2441	−0.3467	−0.7636	0.3978	27.9
Tokyo	1.0036	0.0392	0.2795	−0.0371	−1.4087	−0.5937	0.0609	5.5
Kinki	0.4924	0.1047	0.0215	0.5762	−0.6205	−0.4215	−0.5657	14.1
Chushi/Kyushu	1.1881 #	0.5153	0.5653	0.0478	−0.3299	−0.1119	−0.0062	21.4
Religion								
Buddhist	0.9258 #	0.9030	0.3455	0.4468	−10.9878 $	−2.2559 *	0.2868	45.9
Age x Religion								
35-39 x Buddhist	−1.3752 #	−1.1465	−0.4040	−0.6754	10.8903 $	2.7139 *	−0.3037	14.8
40-44 x Buddhist	−0.4847	−0.6477	−0.4900	−1.1099	10.5016 $	4.4957 **	−2.4137 #	10.0
45-49 x Buddhist	−0.3244	−2.8809 *	−0.7925	−0.4124	11.3088 $	2.0951	1.1542	11.7
N	290	290	290	290	290	290	290	290
LLR	29.9850 *	31.3960 *	16.4857	62.0329 ***	22.1539	34.1819 *	41.6636 **	–
d.f.	18	18	18	18	18	18	18	–

Indep. Variable Category	Japanese Mothers							
	1) Maternity Leave	2) Childcare Leave	6) Childcare Center	10) Preschool	11) After–School Prog.	14) None	12) Public CC Support	% Distribution
Constant	−0.8215 #	−0.9353 #	−0.6144	−2.4521 ***	−2.1192 **	−0.9334 #	−0.4824	–
Age Group								
35-39	−0.6966	−0.4253	0.3679	1.4160 ***	0.7504	−0.6210	−0.8318 #	26.1
40-44	−0.6737	−0.5248	0.1138	1.2154 **	1.2814 *	−0.9947	−1.0359 #	24.6
45-49	−0.3846	0.1405	1.1098 *	0.6866	1.3892 *	−0.7864	−1.5531 #	13.8
No. of Children								
2 Children	−0.0688	−0.8101 *	0.1214	1.0033 **	0.3381	−0.3597	−0.2621	50.1
3+ Children	−0.0678	−0.3767	0.4285	0.9325 **	0.5170	−0.4878	−0.3467	22.4
Education								
Low Education	−0.7956	0.0026	0.7698	0.2928	−0.2814	0.2175	−0.0127	4.0
High Education	0.4884 #	0.8038 *	−0.4632 #	0.2516	−0.4617	−0.2286	−0.1581	55.6
U/R Residence								
Metropolitan	−0.6915 #	−0.4232	−0.8895 **	0.1742	−0.4996	0.9727 **	−1.1392 *	23.8
Rural	−0.8137	−0.9143	0.2746	−0.0474	−0.9993	0.4446	0.4386	9.7
Region								
Hokkai/Tohoku	0.1784	−0.6564	0.3195	0.1003	−0.2739	−0.7570	0.3545	17.5
Kanto/Shinestu	0.1244	−0.6287	−0.2018	0.0032	−0.8169	−0.0593	0.0249	24.9
Tokyo	−0.4708	−0.6822	0.8712	0.9744 #	0.3810	−1.5650 #	2.4106 ***	7.7
Kinki	−0.9802 #	−1.4236 *	−0.1409	0.4427	−0.4284	0.3866	−0.7727	14.3
Chushi/Kyushu	−0.1691	−0.4734	0.4020	0.3366	−0.6611	−0.7513	−0.3706	20.6
Religion								
Buddhist	−0.1904	0.6301	−0.1203	0.4491	−0.1109	0.0150	−0.5521	41.3
Age x Religion								
35-39 x Buddhist	0.3210	−0.6325	−0.4478	−0.3508	0.0248	0.0004	0.7195	8.9
40-44 x Buddhist	0.6510	−0.5916	0.1988	−0.1830	−0.0411	0.0999	−0.2618	12.3
45-49 x Buddhist	−0.0617	−2.3179 #	−1.1484	−0.5003	−0.7472	1.4084	0.3638	6.9
N	349	349	349	349	349	349	349	349
LLR	21.0842	28.8520 #	25.3466	48.3547 ***	17.9085	27.7167 #	46.3746 ***	–
d.f.	18	18	18	18	18	18	18	–

Source: The author's analysis of microdata from the CAO 2009 Survey
Note: # p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001, $ few cases; (?): questionable model validity

Table 4　Determinants of having used family policy measures among parents by sex in South Korea: binary logit analysis

Indep. Variable Category	Korean Fathers						
	1) Maternity Leave	2) Childcare Leave	6) Childcare Center	10) Preschool	11) After–School Prog.(?)	14) None	% Distribution
Constant	− 1.3201 *	− 3.6832 **	− 0.9964 #	− 1.8677 ***	− 15.1288 $	− 0.0555	–
Age Group							
35-39	0.4094	− 0.8431	0.1904	2.4157 ***	11.1853 $	− 1.6617 **	26.0
40-44	0.0580	− 0.4938	− 0.3910	2.0016 ***	11.7552 $	− 0.8478 #	30.4
45-49	− 0.5628	− 0.4264	0.0280	2.0624 ***	11.6679 $	− 0.8658 #	29.3
No. of Children							
2 Children	− 0.8717 #	− 0.2633	− 0.1418	0.4023	0.6286	− 0.2367	64.1
3+ Children	− 1.0917	− 0.8860	− 0.3524	0.2588	− 0.5282	− 0.4339	8.4
Education							
High Education	0.2238	1.7539 *	0.0733	0.6901 *	− 0.8675 #	− 0.8043 **	60.4
U/R Residence							
Metropolitan	− 1.0987 #	0.5618	− 1.4206 **	0.3455	2.2088 **	0.1632	47.3
Rural	1.1612	2.2358 #	− 0.9255	− 1.2399	0.8611	1.7865 *	3.7
Region							
Seoul	0.5467	− 1.4624	0.0016	− 1.2404 **	− 2.2097 **	1.2379 **	21.6
Gyeonggi–do	− 0.5167	− 1.1040	− 0.0767	− 0.5075	0.7688	0.7952 #	22.7
Religion							
Buddhist	0.4200	0.5518	0.1354	− 0.1988	0.0288	− 0.4003	18.7
Christian	− 0.6816	− 0.4216	− 0.4761	− 0.6019 #	0.8022	0.6650 *	26.0
N	273	273	273	273	273	273	273
LLR	17.7088	17.5144	16.4441	55.5024 ***	30.2354 **	44.8974 ***	–
d.f.	12	12	12	12	12	12	–

Indep. Variable Category	Korean Mothers						
	1) Maternity Leave	2) Childcare Leave	6) Childcare Center(?)	10) Preschool	11) After–School Prog.	14) None	% Distribution
Constant	− 1.3917 *	− 2.7651 **	− 2.5078 ***	− 0.2369	− 3.3375 ***	− 1.6066 **	–
Age Group							
35-39	− 0.1697	0.8755	0.2268	1.0608 **	1.0726	− 1.1947 *	32.9
40-44	− 0.6911	0.1864	0.1479	1.6633 ***	0.4838	− 0.9738 *	29.5
45-49	− 0.8667	0.4399	− 0.3924	1.0946 *	1.3506 #	− 0.7087	22.1
No. of Children							
2 Children	− 0.0032	− 0.6478	0.6287	− 0.2426	− 0.5914	0.5428	67.4
3+ Children	0.9280	− 0.0265	1.4023 *	− 0.9021 #	− 0.5695	1.4019 *	10.9
Education							
High Education	0.2434	0.0085	0.7602 *	0.1853	− 0.0928	− 0.3423	40.7
U/R Residence							
Metropolitan	− 1.4408 **	− 0.5103	− 1.5291 **	0.1164	0.9897 #	0.3961	46.6
Rural	− 0.7852	− 0.0477	− 13.9625 $	− 2.3272 **	0.6784	2.5992 ***	4.7
Region							
Seoul	− 0.0107	0.2429	0.2729	− 1.5872 ***	− 0.7305	1.4633 ***	21.4
Gyeonggi–do	− 0.9036 #	− 1.0017	0.0178	− 0.4001	0.2180	0.8571 #	23.3
Religion							
Buddhist	0.6771	0.5479	0.4204	0.6184 #	0.9797 *	− 0.0289	27.6
Christian	0.8559 #	− 0.1191	0.4145	0.4614	0.0795	− 0.4581	32.9
N	322	322	322	322	322	322	322
LLR	23.2527 *	6.5423	30.5138 **	55.4242 ***	20.4921 #	45.2648 ***	–
d.f.	12	12	12	12	12	12	–

Source: The author's analysis of microdata from the CAO 2009 Survey
Note: # p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001, $ few cases; (?): questionable model validity

Table 5　Determinants of having used family policy measures among parents by sex in Singapore: binary logit analysis

Indep. Variable	Singaporean Fathers								
Category	1) Maternity Leave	2) Childcare Leave	6) Childcare Center	10) Preschool	11) After-School Prog.(?)	14) None	3) Paternity Leave	8) Domestic Worker	% Distribution
Constant	−0.4496	−0.8331	−1.9464 **	−1.8820 **	−5.9211 ***	−1.5242 *	−2.4430 **	−0.8140	–
Age Group									
35-39	0.0629	0.2778	0.3901	1.2465 **	2.1920 *	−0.1604	−0.2787	−0.9632 *	25.5
40-44	−0.2743	−0.9828 *	0.2033	0.8290 #	1.6552 *	1.0379 #	−0.8419 #	−0.9830 *	30.6
45-49	−0.5761	−0.8488 #	−0.2785	0.7263	1.7696 *	1.4784 *	−0.7721 #	−1.0424 *	21.1
No. of Children									
2 Children	0.1026	0.4762	−0.0038	0.4897	0.5309	−0.0146	0.3808	0.5599	41.5
3+ Children	−0.0376	0.8358 #	−0.5178	0.4069	0.0272	−0.4889	0.5865	0.8136 #	19.6
Education									
Low Education	−0.2320	−0.7029	0.4004	0.5342	0.3219	0.0010	−0.2956	−1.3261 **	45.5
High Education	0.3550	0.2494	1.0953 *	0.1605	−0.2991	−0.9629 #	0.2041	0.2079	37.5
Nationality									
Permanent R.	−0.7207 #	−0.6092	−0.3980	−1.1447 *	−2.4646 *	1.5174 **	−0.4967	−1.3932 **	17.1
Region									
North	1.2364 *	−0.0355	0.4336	−0.5865	0.0218	−0.2459	0.0600	1.0365	16.7
East	1.1325 *	−0.6684	1.0272 #	0.5914	2.4588 *	−1.2461 #	0.8812	1.1528 *	25.1
South Central	0.7290	0.7255	0.1149	−0.3702	2.5396 *	−0.9278	1.0017	0.5592	19.6
West	0.6042	0.7492	0.5868	0.1098	3.0296 **	−1.0991 #	2.3474 ***	0.6905	25.5
Religion									
Buddhist	0.2877	0.0790	0.1247	0.4070	0.2637	−0.7253	1.1706 *	−0.5524	34.9
Protestant	0.9124 #	0.3302	0.2280	0.3541	−1.7057	−0.4094	0.7992	1.0839 *	12.0
Catholic	0.5728	−1.2177 #	−0.4286	0.4397	1.3733 #	−0.2385	0.3424	0.8791	9.1
Muslim	0.1458	−0.2913	−0.6768	−0.5851	−0.1702	0.1553	0.6204	−0.5161	18.2
Hindu	−0.5773	−0.0344	−2.1155 #	0.4148	−10.8208 $	0.6137	1.2853 #	0.2576	7.3
N	275	275	275	275	275	275	275	275	275
LLR	29.2162 *	38.3395 **	36.3263 **	38.5216 **	53.6585 ***	32.5319 *	48.6362 ***	57.7589 ***	–
d.f.	17	17	17	17	17	17	17	17	–

Indep. Variable	Singaporean Mothers								
Category	1) Maternity Leave	2) Childcare Leave	6) Childcare Center	10) Preschool	11) After-School Prog.	14) None	3) Paternity Leave	8) Domestic Worker	% Distribution
Constant	1.3389 *	−0.1019	−1.7866 **	−1.6636 **	−3.4657 ***	−3.2955 ***	−2.7039 ***	−2.1085 **	–
Age Group									
35-39	−0.7067 *	−0.7315 #	−0.4978	0.1023	−0.3294	0.7369	0.0684	−0.1427	22.1
40-44	−0.5678 #	−1.2794 **	−0.1575	0.2511	0.2087	0.2949	−1.1075 *	−0.2834	23.3
45-49	−0.4234	−1.5950 ***	−1.0856 *	0.1026	0.2884	0.6710	0.0421	0.1243	25.6
No. of Children									
2 Children	0.1963	0.0482	0.9690 *	0.3509	0.8105	0.0513	0.3372	0.8893 *	45.9
3+ Children	0.3660	−0.0968	1.3020 **	0.9478 **	0.6572	−0.4801	0.1214	0.8982 #	29.1
Education									
Low Education	−0.6540 #	−0.4115	−0.6546	0.1227	0.5464	0.1490	−0.2557	−0.5177	25.0
High Education	0.4862	0.7168 #	0.5088	0.4596	0.3845	−0.6047	0.8151 #	1.4919 ***	
Nationality									
Permanent R.	−0.8164 *	−0.9236 *	−1.2054 **	−0.1553	−1.2829 *	0.7699 #	0.3828	−1.3365 **	20.1
Region									
North	−0.1909	0.8335	0.2447	−0.2367	−1.0965	1.0930 #	0.5412	0.4613	14.0
East	0.2888	−0.0930	0.7935	0.6426	0.7221	−0.4496	−0.3104	−0.1622	14.0
South Central	−0.8032 #	0.4430	0.9668 #	−0.3198	−0.6598	1.0918 #	0.9098	0.7999	24.1
West	−0.2337	0.0519	0.9254 #	0.2858	1.4242 *	0.2319	1.9878 ***	0.1084	18.9
Religion									
Buddhist	−0.0036	0.0357	−0.1297	0.3602	0.0625	0.4086	−0.1492	0.2632	35.5
Protestant	0.0022	−1.1032 #	−1.0389 #	0.6489	0.5542	−0.8489	−0.3598	1.1590 *	8.4
Catholic	−0.8210	−0.9272	−1.4637 #	0.6124	−1.1121	0.6612	0.5813	0.7283	6.7
Muslim	−0.8939 *	−0.9453 #	−1.2397 *	0.3294	0.3358	1.2119 *	0.2918	−1.2768 *	18.6
Hindu	−1.4034 **	−1.1198 #	−0.2281	0.1397	1.5504 *	1.3640 #	−0.7782	−1.3441	7.0
N	344	344	344	344	344	344	344	344	344
LLR	46.9871 ***	48.5095 ***	42.4355 ***	25.6270 #	47.4590 ***	31.4260 *	54.5450 ***	81.3124 ***	–
d.f.	17	17	17	17	17	17	17	17	–

Source:　The author's analysis of microdata from the CAO 2009 Survey
Note:　# p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001, $ few cases; (?): questionable model validity

For the analysis on Japan 12) Public Childcare Support in Community is an additional dependent variable and for the analysis on Singapore 3) Paternity Leave and 8) Domestic Worker are additional dependent variables.

　　1) Japan

　　Table 3 shows the results for Japanese fathers (upper panel) and mothers (lower panel).　Its upper panel shows that Buddhist fathers (their spouses) aged below 35 are more likely to have used 1) Maternity Leave while Buddhist fathers aged 35-39 (their spouses) are less likely.　Buddhist fathers aged 45-49 are less likely to have used 2) Childcare Leave while Buddhist fathers aged 40-44 are less likely to have used 12) Public Childcare Support in Community.　On the other hand, Buddhist fathers aged below 35 are less likely to have chosen 14) None while Buddhist fathers aged 35-44 are more likely.　Therefore, Japanese Buddhist fathers aged 35-49 or their spouse are less likely to have used these family policy measures than fathers aged 35-49 without religion or their spouse.

　　The lower panel of Table 3 does not necessarily indicate the matching results for Buddhist mothers largely because, in most cases, the effect of Buddhism is not significant.　It is also possibly because of age difference between spouses and their difference in religious affiliation.　The only significant and matching result is the negative effect of Buddhist mothers aged 45-49.　Kojima (2013a) revealed that Buddhist women are less likely to have used 6) Childcare Center.　Similar tendencies can be found for Buddhist men, but the effects of Buddhism have not become significant in this study (even in the model without interaction, which is not shown here) possibly because the results in Table 3 control for the number of children (and, implicitly, marriage) and possibly because the number of cases has been reduced particularly for male respondents (from 508 to 290 for males and from 491 to 349 for females).

　　2) South Korea

　　Table 4 shows the results for South Korean fathers (upper panel) and mothers (lower panel).　In this model for South Korea education (control variable) includes only "High Education" due to the very low frequency of "Low Education" among Korean respondents.　Christian fathers are less likely to have used 10) Preschool and more likely to have chosen 14) None.　Buddhist mothers are more likely to have used 10) Preschool and 11) After-School Program, while Christian mothers are more likely to have used 1) Maternity Leave.　The results are largely similar to those for Korean men and women in Kojima (2013a).

　　3) Singapore

　　Table 5 shows the results for Singaporean fathers (upper panel) and mothers (lower panel).　This model for Singapore includes nationality instead of urban/rural residence.　Buddhist fathers are more likely to have used 3) Paternity Leave while

Buddhism has no significant effects among mothers.   Protestant fathers (their spouses) are more likely to have used 1) Maternity Leave and 8) Domestic Worker, while Protestant mothers are also more likely to have used 8) Domestic Worker and less likely to have used 2) Childcare Leave and 6) Childcare Center.   Catholic fathers (their spouses) are more likely to have used 11) After-School Program but less likely to have used 2) Childcare Leave, while Catholic mothers are less likely to have used 6) Childcare Center.

Table 5 also indicates that Muslim mothers are more likely to have chosen 14) None and less likely to have used 1) Maternity Leave, 2) Childcare Leave, 6) Childcare Center and 8) Domestic Worker, while Islam does not have any significant effects among fathers.   Hindu fathers (their spouses) are more likely to have used 3) Paternity Leave and less likely to have used 6) Childcare Leave, while Hindu mothers are more likely to have used 11) After-school Program and 14) None and less likely to have used 1) Maternity Leave and 2) Childcare Leave.

The paternity leave seems to be more often used by Buddhist and Hindu fathers, while the childcare leave and the childcare center seems to be more often used by mothers without religion.   The domestic worker seems to be more often used by Protestants and less often used by Muslims.   As a whole, Muslim and Hindu mothers are least likely to have used family policy measures while mothers without religion are most likely.   Compared with the results in Kojima (2013a), the effects of Christianity are largely similar, but the effects of Islam and Hinduism are very different possibly due to the control for family formation and the reduction of cases.   Perhaps, the effects of Islam and Hinduism are also mediated by the labor force participation patters of women through the reproductive age.

Consequently, the effects of religious affiliation is rarely significant and large in all the three societies, particularly in Japan and South Korea.   Thus, the effect of each religion is not always in the same direction for parents of each sex except that the positive effect of Protestantism on the use of the domestic worker in Singapore.   For the same reason, the effect of the same religion does not seem to be in the same direction across societies.

Conclusion

In sum, there do not seem to be too many commonalities among Japan, South Korea and Singapore, except the one that religion does not have too significant and large effects on the use of family policy measures by parents of both sexes.   It is partly because of the small number of cases, partly because of the limited role of Buddhism and no religion in the three Asian societies and partly because of the difference in the religious composition of each population.   In the three societies, the

effects of religion seem to be often mediated by age and, possibly, by other demographic variables.   In the case of Singapore, religion seems to more often have significant effects due to the diversity in the religious composition of its population as well as the nationality and the ethnicity.   The directions of effects of the same religion on parents of both sexes are not always the same in each society and across societies.

While Tables 2a through 2c have revealed that coresidence with parents (distance to parents) of respondents consistently have large and negative effects on the use of family policy measures among both sexes and across the three Asian societies, they have not been discussed in this study partly because of its focus on the effects of religion and partly because of its incorporation of the effects of non-marriage.   But they may also incorporate the effects of religion or religiosity and they seem to show, in some cases, the effects of complementarity of (intergenerational) family strategy (regarding living arrangements with parents) and family policy measures to reconcile women's work with family formation (Kojima 1998).   In addition, the effects of interaction between educational level and age as well as the effects of interaction between work-related variables and age, which seem to reflect the life course strategies, are also relatively large.

Therefore, the use of family policy measures in the public sphere should be reflecting life course strategies of individuals and families in the intimate sphere, which can be affected by religion, in the three Asian societies.   The education and labor force participation of women can be also affected by religion which often prescribes gender roles.   Therefore, further analyses should take into account the effect of relations between generations and sexes by incorporating the effects of religion or religiosity.

In this connection the respondents who have never used family policy measures are of interest.   They are more likely to be Buddhist fathers aged 35-44 in Japan, Christian fathers in South Korea and Muslim and Hindu mothers in Singapore, according to Tables 3-5.   It can be the matter of supply and/or demand.   The religious values may reduce the demand for family support services while religious networks may supplement or replace the supply of government services.   Tables 2c, 3 and 4 suggest that it is more of the matter of demand in Japan, but it may be more of the matter of supply in South Korea.   In the case of Singapore it can be the matter of both demand and supply according to Tables 2c and 5.

Pronatalistic family policy measures in Singapore seem to be targeted toward families with specific working life patterns of spouses, which are less compatible with certain religious values.   It may be also less accessible to certain religious groups due to other kinds of population policies than the pronatalistic family policy, including spatial distribution policy and international migration policy.   The public housing policy may equalize the ethnic composition of residents across regions, but it may not

equalize the religious, demographic (e.g., age and nationality) and socioeconomic composition, resulting in the mismatch of supply to the demand for certain religious groups.   Since it is undesirable and difficult for any government to directly affect religious values, it would be easier for the government of each Asian society to make family policy more universalistic but, at the same time, responsive to the specific needs of religious (and other) groups to increase the actual use of its measures while harmonizing them with other types of population policy measures.

References

Abe, Masahiro (2002) "Who Takes the Childcare Leave?: Obstacles in the Popularization of Childcare Leave." The Institute for Research in Household Economics, ed., *Stagnating Economy and Changing Lives: Report of the Japanese Panel Survey of Consumers (Wave 9)*. Tokyo: The Institute for Research in Household Economics, pp. 61-76 (In Japanese).

CAO/Cabinet Office of the Japanese Government (2009) *Report of Comparative Study of Family Policies in East Asia (South Korea, Singapore and Japan)* (in Japanese).

Henninger, A., C. Wimbauer and R. Dombrowski (2008) "Demography as a Push toward Gender Equality?: Current Reforms of German Family Policy." *Social Politics*, Vol. 15, No. 3, pp. 287-314.

Kälvemark, Ann-Sofie (1980) *More Children of Better Quality?: Aspects on Swedish Population Policy in the 1930's*. Stockholm: Almqvist & Wiksell International.

Kojima, Hiroshi (1995) "Marriage, Childbearing, Childrearing and Employment." Hiroshi Ohbuchi, ed., *Women's Life Cycle and Work Behavior*. Tokyo: Ministry of Treasury's Printing Office, pp. 61-87 (in Japanese).

Kojima, Hiroshi (1998) "Family Policy and Family Strategy: with a special reference to mother's employment and childcare." Shigeru Maruyama et al., eds., *Family Autonomy*. Tokyo: Waseda University Press, pp. 76-105 (in Japanese).

Kojima, Hiroshi (1999) "Sustainable Urbanization, Women's Status and Religion in Southeast Asia: An Overview." National Institute of Population and Social Security Research, ed., *Sustainable Urbanization, Women's Status and Religion in Southeast Asia*. Tokyo: National Institute of Population and Social Security Research (Research Materials, No. 296), pp. 1-18.

Kojima, Hiroshi (2001) "Sustainable Urbanization and Religion in Southeast Asia." *Global Environmental Research*, Vol. 5, No. 1, pp. 73-83.

Kojima, Hiroshi (2006a) "A Comparative Analysis of Fertility-Related Attitudes in Japan, Korea and Taiwan." *F-GENS Journal (Ochanomizu University)*, Vol. 5, pp. 324-336.

Kojima, Hiroshi (2006b) "Variations in Demographic Characteristics of Foreign 'Muslim' Population in Japan: A Preliminary Estimation." *Japanese Journal of Population*, Vol. 4, No. 1, pp. 115-130.

Kojima, Hiroshi (2007) "L'augmentation rapide de population musulmane au Japon: une dynamique démographique." Association Internationale des Démographes de Langue Française (AIDELF), éd., *Les migrations internationale: observation, analyse et perspectives*. Paris: AIDELF/PUF, pp. 433-439.

Kojima, Hiroshi (2009a) "An Analysis of Survey Results." Section for Measures against Declining Birthrate, Director-General for Policies on Cohesive Society, Cabinet Office, ed., *Report of Comparative Study on Family Policies in East Asia (South Korea, Singapore and Japan)*, pp. 372-404 (in Japanese).

Kojima, Hiroshi (2009b) "Work and Famiry Formation Attitudes and Behaviors in East Asia; A Comparative Analysis of the JGSS, TSCS, WMFES and EASS." *Waseda Studies in Social Sciences*, Vol. 10, No. 1, pp. 47-73 (in Japanese).

Kojima, Hiroshi (2011) "Religion and Attitudes toward Family Policies in Japan, South Korea and Singapore." *Waseda Studies in Social Sciences*, Vol. 12, No. 2, pp. 23-48.

Kojima, Hiroshi (2012a) "Religion and Partnership Behaviors in Japan, South Korea and Singapore: A Comparative Analysis focusing on the Effects of Religion by Age." Presentation at the 40th World Congress of the International Institute of Sociology (IIS), 16-19 February, New Delhi.

Kojima, Hiroshi (2012b) "Differences in Demographic Behaviors between Muslims and Non-Muslims in a Non-Muslim Society: A Case Study of Singapore." N. Fukami and S. Sato, eds., *Islam and Multiculturalism: Between Norms and Forms*. Tokyo: Organization for Islamic Area Studies, Waseda University, pp. 63-70.

Kojima, Hiroshi (2012c) "Correlates of Cross-Border Marriages among Muslim Migrants in Tokyo Metropolitan Area: A Comparison with Seoul Metropolitan Area." *Waseda Studies in Social Sciences*, Vol. 13, No. 1, pp. 1-17.

Kojima, Hiroshi (2013a) "Correlates of the Utilization of Childrearing Support Measures in East Asia." *Jinko Mondai Kenkyu [Journal of Population Problems]*, Vol. 69, No. 1, pp. 67-93 (in Japanese).

Kojima, Hiroshi (2013b) "Data and Estimates of Population by Religion in the World." Y. Hayase and H. Kojima, eds., *Religion and Population in the World*. Tokyo: Hara Shobo, pp. 1-29 (in Japanese).

Kojima, Hiroshi (2014a) "The Effects of Religion on Fertility-Related Attitudes and Behavior in Japan, South Korea and Singapore." *Waseda Studies in Social Sciences*, Vol. 15, No. 1, pp. 1-26.

Kojima, Hiroshi (2014b) "Religion and Health in East Asia." *Waseda Studies in Social Sciences*, Vol. 15, No. 2, pp. 1-32 (in Japanese).

Lehrer, Evelyn (1983) "Determinants of Childcare Mode Choice: An Economic Perspective." *Social Science Research*, Vol. 12, pp. 69-80.

Mackie, Vera. 2002. "Embodiment, citizenship and social policy in contemporary Japan." Roger Goodman (ed.), *Family and Social Policy in Japan*. Cambridge, UK: Cambridge University Press, pp. 201-229.

Shimizutani, Satoshi, and Haruko Noguchi (2004) *Economic Analysis of Long-Term Care and Childcare Service: Empirical Analysis of Microdata and Policy Proposals*. Tokyo: Toyo Keizai Shimposha (in Japanese).

Skirbekk, V., M. Stonawski, F. Fukuda, T. Spoorenberg, C. Hackett and R. Muttarak (2015) "Is Buddhism the low fertility religion of Asia?" *Demographic Research*, Vol. 32, No. 1.

Soma, Naoko (2004) "'Disparity' among women regarding childcare leave: drawing on 'disparity in

the intention to use it' and the 'disparity in take-up'." Yuki Honda, ed., *Women's Work and Parent-Child Relationship: Mothers' Mobility Strategies*. Tokyo: Keiso Shobo, pp. 59-79 (in Japanese).

Whitehouse, Gillian (2005) "Access to Parental Leave in Australia: Evidence from Negotiating the Life Course." *Australian Journal of Social Issues*, Vol. 40, No. 4, pp. 489-503.