

# Family Creating Inequality

## A Quantitative Analysis of Gender Gap in Post-Divorce Life

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### Abstract

This presentation focuses on the gender difference in post-divorce life in contemporary Japan. The data are drawn from the National Family Research of Japan (NFRJ) project, which is a series of surveys using probability samples across Japan conducted by the Japan Society of Family Sociology. The main focus is on the gender effect on equivalent household income among divorced people. Results indicate strong negative effect of two variables: (1) presence of young children and (2) discontinuous occupational career due to childbirth or childrearing. These are the two main factors in the low standard of living for divorced women. The results thus show that the family process has created gender inequality and the family law/policy has failed to remove the inequality. Further discussion arises as to two topics: (1) formulation of the law/policy aiming at gender equality from the viewpoint of distributive justice; and (2) implications of our findings for sociological research on the power structure within family.

**Keywords:** equality of opportunity, remarriage, full-time regular employee, financial provision on divorce

## 1. Gender and Distributive Justice

### 1.1. “Equality of opportunity” principle

“Equality of opportunity” principle is based on the idea that the factors of inequality can be classified into two categories according to whether individuals should be responsible for the factor or not. Roemer [1996: 242] refer to the factors for which individuals are not responsible as “circumstances”. According to the equality of opportunity principle, inequality is unjust if it is caused by such circumstances. Otherwise, individuals is responsible for the cause of inequality, hence it is with justice and acceptable. This principle is of great importance to determine distributive justice in a society from macro-level viewpoint.

The equality of opportunity principle is, however, weak and unstable when it comes to formulation of policy to realize the principle. It is different from such fundamental human rights as anti-discrimination or the minimum level of the living standard, since it has not been built in the constitutional order in modern societies.

That is because it is difficult for us to establish a consensus about what is (or isn't) included in circumstances. According to liberal thought, circumstances should include everything beyond individuals' control.

.....circumstances are influential in the formation of a person's conceptions of life plans, or conceptions of a successful life: these might include a person's family background (education and wealth thereof, number of siblings), her ethnic, national, and cultural background, her health (physical and mental), and her intelligence or talent [Roemer 1996: 242]

In reality, however, even though social theorists nominate some factors to be regarded as circumstances, it rarely happens that we establish social consensus that the factors create inequality of opportunity and that we must take measures against the effect of them to remove injustice. In fact, there have been inequalities caused by factors obviously beyond individuals' control: by genetic properties, by ethnicity, and by class origins, and so on. The Government of Japan has no machinery to research the reality of such inequality and to formulate policies against them.

## 1.2. Gender equality law in Japan

Gender inequality is an exceptional case. We have already established political organization to promote equality of opportunity between both sexes. The Basic Law for a Gender-equal Society (Law No. 78 of 1999) provides that the following should be achieved.

.....both women and men shall be given equal opportunities to participate voluntarily in activities in all fields as equal partners in the society, and shall be able to enjoy political, economic, social and cultural benefits equally..... [Gender Equality Bureau n.d.: Section 2]

The Basic Law also provides that the state, local governments, and citizens are responsible to achieve the goals above. These are the statements that sex should be included in circumstances and inequality caused by sex should be eliminated. Based on the Basic Law, Gender Equality Bureau was established in the Cabinet Office. Which is a high-level organization in the administrative structure with a large power. Gender Equality Bureau has conducted extensive investigation of various systems in the society from gender perspective to formulate policies to promote gender equality.

## 1.3. Family as a distribution system

The family is a system of distribution. It is therefore not negligible when you study distributive justice. It is especially important when you study gender equality. In this paper, we focus on inequality after divorce.

## 1.4. Measurement of economic benefits

To evaluate equality of opportunity, you need to measure advantages distributed among people. It is difficult. Welfare economists would say that you can achieve such measurement by counting utility that people enjoy. But it is unmeasurable. You can measure means through which people gain utility. But it may be inappropriate to investigate unequal distribution by counting means, when they are dispensable or substitutable.

A realistic solution is to measure means indispensable for almost all people to live their lives. In this paper, we use equivalent household income. This is a scale of household income adjusted for household size. It has been traditionally used to make approximation for individuals' standard of living.

## 2. Data

We use National Family Research of Japan 2003 (NFRJ03) data. Details are in Table 1.

## 3. Marital Experience and Equivalent Household Income

NFRJ03 recorded household income (before tax) during the past year. Answer was collected using pre-coded choices that classified household income into 18 classes. Most of the classes were divided by the interval of 1,000,000 yen.

We converted household income using an equivalent scale [OECD 2001]. Let  $h$  and  $l$  denote the upper limit and lower limit of the chosen class for household income question (in a unit of 10,000 yen). And let  $n$  denote the number of household members. Then

$$\text{Equivalent household income} = \frac{h + l}{2\sqrt{n}}$$

Equivalent household income has a skewed distribution. To normalize it, we take natural logarithm.

Table 2 shows difference in equivalent household income (after taking natural logarithm) among households with a variety of size. There is no great correlation between household size and equivalent household income.

There is a difference in equivalent household income by sex. As Table 3 shows, men's income is slightly higher than that for women (by 0.09). Table 3 also shows the result of decomposition by marital experiences. Men's income is almost independent of marital experiences. In contrast, women's income varies with marital experiences. Women's income is low if they have experienced marriage dissolution (by divorce or death). As a result, there is inequality in income between women and men for those experienced marriage dissolution.

## 4. Factors of the Economic Gender Gap in Post-Divorce Life

In this section, we focus on the gender gap among those who have experienced divorce. What are the causes of the gap?

We detect some gender differences in contribution to household income and household members' composition. See Table 4, 5, 6.

There is also a gender difference in employment status. Men hold positions as full-time regular employees with higher probability than women (Table 7).

We conduct a regression analysis (Table 9) to explore the effect of these factors. Model 1 is a simple model with only independent variables of age and sex: Sex (being female) has a significant negative effect on log equivalent household income (-0.346). We add education in Model 2: Education has a significant positive effect of increasing income (0.102). In Model 3 we added characteristics of household composition: Experience of remarriage increase income (0.246) and the presence of children under 13 reduce income (-0.373). Model 4 is the final model, with a variable of employment status added: Full-time regular employment has a significant positive effect (0.282). The direct effect of sex decreases as the model is developed (-0.346, -0.274, -0.183, and -0.121), the effect is taken over by experience of remarriage, by the presence of child under 13, and by the status of full-time regular employee. In Model 4, sex no longer has significant effect at 0.05 level (although the sign of its coefficient is negative).

## 5. Discussion

### 5.1. Findings from our analysis

Results show the negative effect of living with young children and the positive effect of being full-time regular employee on equivalent household income. These findings follow the same line of the previous studies by Nagase [2004], Tamiya+Shikata [2007], Tanaka [2008].

The effect of young children is a reflection of the gender imbalance in taking custody of the children after divorce. As is well known, the mothers take custody for almost 80% of infancy of divorced parents in contemporary Japan. This is the first cause of lowering the standard of living for divorced women.

The second cause is the low percentage of full-time regular employment for women. It is also well-known most women give priority to childcare and to other household responsibilities over their own occupational careers.

We can think of these causes as outcomes of marital life.

However, as for the third cause ---the difference in the probability of remarriage--- we are not sure what

mechanism brings about such gender difference. Further research should be conducted to reveal details about the mechanism.

## 5.2. Law/policy implications

These problems overlap the debate on financial provisions on divorce by family law scholars. Suzuki [1992] argued the gap of earning capacity between the divorcing couple should be equitably redistributed if the gap emerged from division of labor in marital life. Motozawa [1998] expanded Suzuki's idea and argued the institution of making financial provision on divorce exists for the reason that we should make compensation such an irreversible change within marital life as presence of children and as gain/loss in earning capacity. Their idea has been gotten great support from family law scholars. It may be possible for us to obtain a solution through an appropriate design of financial provision system on divorce.

On the other hand, we have no evidence about whether marital life effects the gender difference in the probability of remarriage. It is rather probable that men are more likely to remarry than women do, because of the different treatment they receive within the marriage market. If so, such difference is not an outcome from choices the couple has made in their marital life. Such a traditional measure as financial provision on divorce in family law cannot give a desirable solution. This is a case of micro-macro problem, where accumulation of appropriate solution at micro-level does not solve the problem at macro-level. However, if we are aiming at the elimination of inequality of opportunity, we must formulate another policy to achieve justice at macro level.

## 5.3. Perspectives for intra-family distribution

When we use equivalent household income, there is a problem that it does not care inequality within the household. The scale for equivalent household income is constructed under the assumption of equal distribution among household members. This assumption is unrealistic. In real households, it is often the case that power is unevenly distributed within household and the power is used to make unequal distribution. Our analysis totally ignored this respect of inequality.

Theoretically speaking, it is expected that power relationship between wife and husband should be influenced by the option to fulfill their needs outside the marital relationship [Katz 1997] [Ott 1992] [Matsunobu 2008]. We thereby have a theoretical conjecture that equalization in post-divorce life promotes equality between husband and wife in marital life (Figure 1). It is, however, a subject of empirical research whether the theoretical conjecture hold in real family processes.

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Reference list includes kanji titles and names that would otherwise be difficult to identify. In triangle brackets <> are ISBN, ISSN, URL, or NCID (see <http://webcat.nii.ac.jp>). [J] is for Japanese literature.

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## Tables and Figures

**Table 1.** Synopsis of NFRJ03

<b>Survey name</b>	National Family Research of Japan 2003 (第2回全国家族調査)
<b>Survey organizer</b>	Japan Society of Family Sociology, NFRJ Committee (日本家族社会学会 全国調査委員会)
<b>Survey company</b>	Central Research Service Inc. (中央調査社)
<b>Survey area</b>	All over Japan
<b>Subjects</b>	Japanese nationals living in Japan and born between 1926 and 1975 (28 to 77 years old as of the end of 2003)
<b>Sampling method</b>	Stratified two-stage random sampling.
<b>Sample size</b>	10,000 (response 6,302, response rate 63.02%)
<b>Survey period</b>	January to February 2004
<b>Survey method</b>	Leave and pick-up
<b>Published reports</b>	The first report in 2005 and the second report (2 volumes) in 2006
<b>Data availability</b>	Deposited at the SSJ Data Archive by the University of Tokyo (Survey Number 0517)
<b>Website</b>	<a href="http://www.wdc-jp.com/jsfs/english/nfrj.html">http://www.wdc-jp.com/jsfs/english/nfrj.html</a>

**Table 2.** Log equivalent household income by household size

Number of people in the household	Mean	Standard deviation	(N)
1	5.483	0.851	(365)
2	5.633	0.704	(1465)
3	5.731	0.647	(1343)
4	5.742	0.575	(1311)
5	5.682	0.578	(683)
6	5.632	0.563	(356)
7+	5.565	0.549	(205)
Total	5.675	0.649	(5728)

Natural logarithm of annual household income (in 10,000 yen) in the last year (taxes included).  $R^2=0.012$  ( $p < 0.01$ ).

**Table 3.** Log equivalent household income by sex and marital experience

	Unmarried	Divorced*	Widowed*	Married	Total
Male	5.697	5.631	5.688	5.736	5.722
	0.681	0.694	0.726	0.611	0.629
	(278)	(206)	(86)	(2139)	(2709)
Female	5.655	5.302	5.287	5.702	5.632
	0.682	0.760	0.765	0.617	0.664
	(192)	(253)	(244)	(2329)	(3019)
Total	5.680	5.450	5.392	5.718	5.675
	0.681	0.749	0.774	0.614	0.649
	(470)	(459)	(330)	(4468)	(5727)

Mean, standard deviation, and (*N*) in each cell. \*: Including those who have remarried.

Results of ANOVA:  $p < 0.01$  for all of the main and interaction effects (by Type III SS).

$R^2=0.034$  ( $p < 0.01$ ).

**Table 4.** Contribution to household income (among those who experienced divorce)

	$c = 0$	$0 < c \leq 0.25$	$0.25 < c \leq 0.5$	$0.5 < c \leq 0.75$	$0.75 < c < 1$	$c=1$	Total	( <i>N</i> )
Male	2.0	2.0	2.5	9.8	12.3	71.6	100.0	(204)
Female	13.9	17.1	13.9	11.9	2.0	41.3	100.0	(252)
Total	8.6	10.3	8.8	11.0	6.6	54.8	100.0	(456)

$c =$  Respondents personal income / household income. Percentage in each cell. Cramer's  $V = 0.463$  ( $p < 0.01$ ).

**Table 5.** Remarriage or co-residence with parents (among those who experienced divorce)

	Remarried	Not remarried		Total
		Without parent	With parent	
Male	53.1	30.8	16.1	100.0
	(119)	(69)	(36)	(224)
Female	33.0	46.7	20.4	100.0
	(89)	(126)	(55)	(270)
Total	42.1	39.5	18.4	100.0
	(208)	(195)	(91)	(494)

% (*N*). Cramer's  $V = 0.205$  ( $p < 0.01$ ).

**Table 6.** Presence of children under 13 (among those who experienced divorce)

Male	2.2 (224)
Female	14.4 (270)
Total	8.9 (494)

% (*N*) of those who have not remarried and live with children under 13.

Cramer's  $V = 0.213$  ( $p < 0.01$ )

**Table 7.** Percentage of full-time regular employees (among those who experienced divorce)

Male	42.9 (224)
Female	24.1 (270)
Total	32.6 (494)

% (*N*). Cramer's  $V = 0.199$  ( $p < 0.05$ ).

**Table 8.** Descriptive statistics for regression analysis (for those who experienced divorce)

	Male		Female	
	Mean	SD	Mean	SD
Log equivalent household income	5.633	0.698	5.309	0.760
Age:				
28–37	0.118		0.193	
38–47	0.246		0.301	
48–57	0.281		0.261	
58–67	0.241		0.181	
68–77	0.113		0.064	
Education*	12.493	2.355	11.936	1.898
Remarried	0.562	0.497	0.325	0.469
One-person household	0.232	0.423	0.141	0.348
Living with parent	0.236	0.426	0.217	0.413
Child under 13	0.020	0.139	0.153	0.360
Full-time regular employee	0.438	0.497	0.257	0.438
(N)	(203)		(249)	

\*: Years of standard requirements. SD: Standard deviation.

**Table 9.** Regression analysis of log equivalent household income (for those who experienced divorce)

	Model 1		Model 2		Model 3		Model 4	
Constant	5.840**	(0.075)	4.526**	(0.222)	4.435**	(0.229)	4.350**	(0.226)
Age (reference: 48–57):								
28–37	–0.156	(0.107)	–0.131	(0.103)	–0.042	(0.105)	–0.045	(0.103)
38–47	–0.208*	(0.092)	–0.233**	(0.088)	–0.165	(0.088)	–0.176*	(0.086)
58–67	–0.327**	(0.099)	–0.210*	(0.097)	–0.222*	(0.095)	–0.147	(0.096)
68–77	–0.512**	(0.133)	–0.329*	(0.131)	–0.379**	(0.129)	–0.261*	(0.131)
Female	–0.346**	(0.069)	–0.274**	(0.067)	–0.183**	(0.070)	–0.121	(0.071)
Education			0.102**	(0.016)	0.098**	(0.016)	0.092**	(0.016)
Remarried					0.246**	(0.088)	0.266**	(0.087)
One-person household					0.009	(0.108)	0.025	(0.106)
Living with parent					–0.098	(0.090)	–0.082	(0.089)
Child under 13					–0.373**	(0.128)	–0.352**	(0.127)
Full-time regular employee							0.282**	(0.072)
$R^2$	0.087**		0.161**		0.221**		0.247**	

Coefficient (standard error). \*\*:  $p < 0.01$ . \*:  $p < 0.05$ .  $N=452$ .

**Figure 1.** Theoretical conjecture upon the effect of reduced inequality in post-divorce life

