
Female Labor Participation and the Sexual Division of Labor: A Consideration on the Persistent Male-Breadwinner Model

Junya Tsutsui

Ritsumeikan University

In Japan, the female labor participation rate has been rising since the 1980s, but there has still been no great change in the division of housework between men and women in the home. To make sense of this puzzle, this paper will argue that the sexual division of labor has basically been maintained. In terms of paid work, the increased employment rate of Japanese women is not necessarily the result of policy-based support; rather, it can be attributed to factors such as continued employment due to a growing tendency to stay unmarried, and an increase in non-regular employment among married women. The rigidity of working styles is hindering women's participation in regular employment. In terms of unpaid work in the home, meanwhile, the husband's housework has not replaced the wife's housework, and this is obstructing women's commitment to their work. To weaken the persistent sexual division of labor and break through the barriers between women and employment, we will not only need to change systems of childcare leave and other family support; informal codes of behavior connected with the ideal image of working styles and the family will also need to be addressed.

I. Social Change Involving Women and the Position of the Sexual Division of Labor

Assuming that the distribution of paid work in the labor market and unpaid work in the home are linked to some extent, it would be natural to think that if one of them changed, the other would change as well. If more women were to engage in wage labor and spend more time at work, the distribution of labor power spent on housework, childcare and nursing care in the home should also change. If one changes but the other seems not to, some kind of explanation is required.

As the figures in this paper will show in greater detail, the employment rate of women in Japan reached a record high in 2013, after the postwar trend toward "housewifization" had been reversed. The ratio of women engaged in employed labor is in a continuous upward trend. Behind this lie both structural changes and changes in policy. In terms of economic structure, there have been changes in the domestic industrial structure associated with globalization, namely a shift from manufacturing to service industries. In terms of population structure, one could point to the thriving labor demand in health and welfare industries associated with population aging. And in terms of policy, we have seen new de-

* The data for this secondary analysis, National Family Research of Japan 08 (Japan Society of Family Sociology), was provided by the Social Science Japan Data Archive, Center for Social Research and Data Archives, Institute of Social Science, The University of Tokyo.

velopments including the Equal Employment Act and the system of childcare leave. By contrast, there has only been a minimal increase in the time spent by men on housework.

At first glance, certainly, there appears to be a kind of puzzle here (again, the figures will reveal the detailed picture). For although more women in Japan are now engaged in paid work, no great change can be seen in the way unpaid work in the home is distributed. What factors could we call upon to explain this puzzle? The answers might conceivably include the following.

Firstly, the fact that, for most couples, women's paid work is not enough to support a dual earner budget. Women's income is only ever enough to supplement that of the "main breadwinner," i.e. the male partner, and for this reason women take responsibility for numerous unpaid chores.

The next possibility that could be considered is that the division of roles in the home does not reflect changes in the status of women in the paid work market. In this case, women would be positioned in the so-called "second shift" (Hochschild 1989), whereby they expend considerable labor in paid work yet are still burdened with the majority of unpaid work in the home.

In the following section, various data will be used to show that both of these answers to the puzzle are applicable. To summarize briefly, in terms of female labor over the last 20 years or so, the employment rate has increased overall, but this can be explained (in the 1990s) by women's continued employment due to a tendency to stay unmarried, and (in the 2000s) mainly by the employment of married women in non-regular work. As further background trends behind these, the destabilization of male employment could be suggested. On the other hand, there has been no great change in the distribution of unpaid work in the home; no tendency for the time spent by men on housework to increase significantly can be seen over the last five years, even during periods of childcare. In other words, the sexual division of labor whereby "the man is the main breadwinner while the woman is responsible for the home" appears to have been basically maintained in Japan.

So why is the sexual division of labor being maintained, despite the presence of structural factors that encourage women's employment? In this paper, factors that hinder female labor participation will be sought in both working styles and home life (the division of housework). Specifically, the first point will be that Japanese working styles are far more rigid than in other industrialized nations, making it difficult to balance these with home life. Next, it will be shown that there is a tradeoff, in that women's additional labor reduces the welfare of home life, and moreover that the contribution to housework by Japanese men is at an extremely low level, even when limited to equal breadwinner couples.

II. Social Change in the Employment Environment and Women's Workplace Advancement

1. Background to the Rise in the Female Employment Rate

The “housewifization” of Japanese women is thought to have peaked in the mid-1970s. This is when the generation born in 1943–47 would have been in the second half of their 20s; according to the Labour Force Survey, the labor force participation rate of this generation was about 43% at this time. Up to the 1970s, many women were engaged in family businesses (self-employed or farm work). Large numbers of men took up employed labor in urban areas during the period of high economic growth, and most of the women who married these men became full-time housewives. But after the 1970s, the female labor participation rate gradually started to rise again. The difference now was that this did not take the form of self-employment, farm work, or assisting in these; the labor force participation rate rose because of women's progressive advancement into employed labor.

Changes in the social structure underlying the increase in employed women were the conversion of the industrial structure and population aging. In the manufacturing industry, production bases were moved overseas in the trend toward globalization, while the weight of service industries increased domestically, causing an increase in clerical and sales positions. Meanwhile, labor demand in medical and welfare positions increased as a result of population aging. According to the Ministry of Health, Labour and Welfare (MHLW) “Employment Referrals for General Workers,” the annual new job openings-to-applicants ratio for positions in the social welfare sector was 0.16 in 1996 but had risen to 1.33 just 15 years later in 2011. And according to the MHLW's Survey of Institutions and Establishments for Long-term Care, the number of care workers combining full-time with part-time work increased from 549,000 to 1,334,000 between 2000 and 2010. Because women account for a high proportion of care work providers, we may infer that population aging has had no small impact on women's working styles. According to the MHLW's *Actual Situation of Working Women in 2012*, even just in the single year from 2011 to 2012, the number of women working in “medical and welfare” industries increased by as many as 210,000. Since the number of women in employment increased by 100,000 in the same year, this shows that, while employment in other industrial sectors was either level or decreasing, the medical and welfare sector was virtually alone in acting as a receptacle for women's employment.

As well as this structural change, however, system reform by the government has also been a significant force in changing women's working styles. In particular, there is no doubt that the Act on Securing, Etc. of Equal Opportunity and Treatment between Men and Women in Employment (Equal Employment Act) as implemented in 1986, followed by amendments in 1999 and 2007, played an important part in improving the female employment rate and the status of working women. The Child-Care and Family-Care Leave Act, implemented in 1992 and amended in 2001, must also have had an impact in this respect.

Besides these, the effect of the introduction of the long-term nursing care insurance system in broadening the care work market surely cannot be ignored either.

Due to these changes in the social environment—specifically, changes in the industrial structure and population composition, along with the creation and enhancement of various programs—the female labor participation rate is actually in an increasing trend. In April 2013, the employment rate of women aged 15 to 64 passed 62%, the highest since 1968.¹ Of course, this figure is still low compared to the male employment rate, which consistently exceeds 90%, and is also still low compared to levels in western countries. Yet, considering the basic trend of increase in the employment rate in recent years, we may be inclined to assume that Japanese women are gradually participating more actively in the labor market, and that, given time, this figure must surely rise further.

But if we take a close look at the facts behind this figure, we realize that this assumption is actually quite dubious. This is because the rise in the female labor participation rate since the 1980s is far removed from a situation that can simply be described as “more active participation by women in the labor market.” In the next section, we shall examine the realities of female labor that only become evident if we study the relevant figures closely.

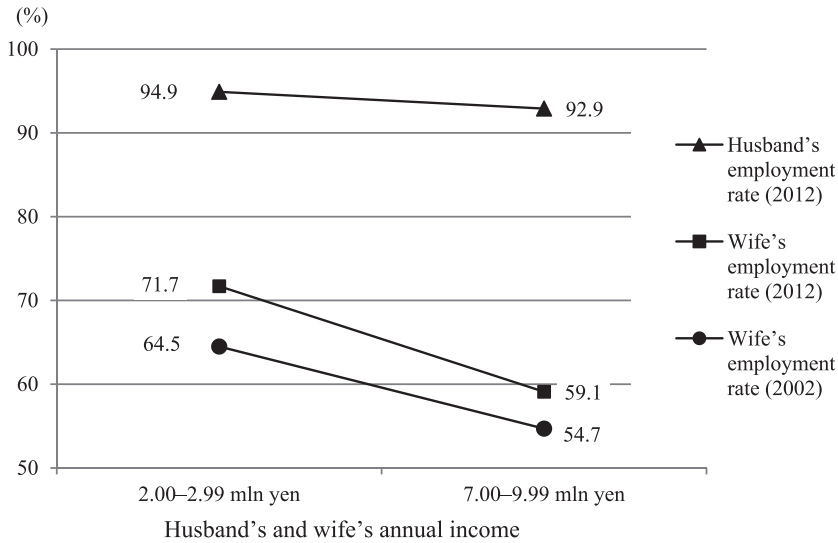
2. Facts behind Women’s Workplace Advancement

Seen in terms of “equal treatment,” the improvement in the employment rate certainly seems to indicate a desirable change, but this employment rate hides certain underlying facts. With regard to married couples, for example, if working has the same meaning for women as it does for men, we would of course expect the ratio of dual earner couples to increase. But as well as this, the wife’s choice of employment should become less influenced by the husband’s income. However, the so-called “Douglas-Arisawa’s law,” whereby female employment rates fall as male incomes rise, has remained largely intact at least over the ten years from 2002 to 2012, even though the female employment rate certainly seems to have shifted upwards (Figure 1).² From this, we may infer that women still regard their own labor or income as secondary to those of men. The increase in the female employment rate has not significantly undermined the sexual division of labor whereby “men maintain a living while women mainly take care of housework,” at least.

Meanwhile, with signs of a general uncertainty over employment and a slump in wage rates for men too, lower male incomes must also be a causative factor encouraging women’s employment. This is evident in the fact that the proportion of users of the spousal

¹ Based on Historical Data from the Labour Force Survey (<http://www.stat.go.jp/data/roudou/longtime/03roudou.htm>) (Japanese only; English version <http://www.stat.go.jp/english/data/roudou/lngindex.htm>).

² Of course, married women’s employment choices can still be explained by Douglas-Arisawa if the selection of marriage partner has an effect, even if there is no effect from the husband’s income (women with low employment aspirations marry men with high incomes). Takeuchi (2004) has obtained results that support the selection hypothesis by analyzing panel data.



Source: Rearranged from the *FY2013 White Paper on Gender Equality*, Figure 1-Toku-22a. The original data are from the *Labour Force Survey (Detailed Tabulation)*. Limited to couples with a wife aged between 25 and 54.

Figure 1. Employment Rate of Husbands and Wives by Couples' Annual Income

tax deduction program is lower among lower-earner couples.

The next problem is the causal relationship between employment and marriage. From the viewpoint of single women, there may be a causal relationship, in that they delay marriage because they want to continue working, but we may also consider the opposite—that is, they stay at work because they are unable to marry (Yamada 2007, 9). In fact, this tendency is even suggested in actual survey data (Sakaguchi 2009). The majority of the increase in employment rates of women between their late 20s and early 30s, particularly in the ten years from 1990 to 2000, is usually explained via the tendency to stay unmarried (MHLW, *Actual Situation of Working Women in 2010*, p. 10). What becomes clear here is a life pattern for women whereby they live together at home with their parents, for example, and experience non-regular employment in several workplaces while continuing to search for a marriage partner. Given the progressive tendency to stay unmarried, single women in employment are pushing up the female employment rate.

In the ten years between 2002 and 2012, conversely, we find that changes in the female labor force participation rate are mainly explained by the rise in the participation rate of married women (MHLW, *Actual Situation of Working Women in 2012*, p. 5). In that case, this change in the female labor participation rate is a product of women's workplace advancement that cannot be explained by the tendency to stay unmarried. Rather, we may be inclined to see it as being due to the development of systems of childcare leave and the expansion of short-hour working systems. But such a view is not necessarily valid. This is

because, if we look at the working styles of married women with children in terms of their employment formats, we find that at least between 1997 and 2007, the growth in the non-regular employment rate was more remarkable than that of regular employment (MHLW, *Actual Situation of Working Women in 2010*, p. 17).

As concerns continued employment around the birth of the first child, the rate has not increased even though the rate of taking childcare leave has increased. More precisely, the continued employment rate has increased for regular employment but not for non-regular employment (Gender Equality Bureau, Cabinet Office *White Paper on Gender Equality 2013*, Figure 1-3-4). Although the non-regular employment rate is increasing as a whole, this cancels out growth in the continued employment rate.

3. The Underlying Sexual Division of Labor

Although the female employment rate is in a rising tendency overall, if we look at the underlying facts, one reason why women's and men's working styles are by no means equal is the persistent sexual division of labor. As confirmed above, the ratio of interrupted employment due to childbirth has decreased for women in regular employment, but women's employment in general continues to be significantly affected by specific life stages. Analysis for the MHLW's Longitudinal Survey of Adults in the 21st Century shows that the female regular employment rate was 64.2% before marriage but fell to 43.6% after marriage, and to 19.8% after the birth of the first child (Gender Equality Bureau, Cabinet Office, *White Paper on Gender Equality 2013*, Figure 27).

Behind this lies the present reality that the working style required for regular employment is too rigid. Of the standards taken into account by companies when hiring regular employees in mid-career, particular importance is placed on the conditions that "continuous employment can be expected for a certain period of time" and "the employee should be able to work full-time"—conditions that are disadvantageous to women, with their heavy burden of domestic work (MHLW, *Actual Situation of Working Women in 2011*, Outline Version, Figure 17).

On the other hand, what sort of changes are seen for unmarried women, as opposed to married women? Firstly, there is no great change in the labor force participation rate. The results of the Labour Force Survey for women in the second half of their 20s show that the labor force participation rate for unmarried women was 90.9% in 2002, and this had only increased slightly to 91.4% ten years later in 2012. But looking at the underlying facts, there has of course been an increase in non-regular employment.

Meanwhile, judging from the "ideal and intended life course" of unmarried women in the 14th Japanese National Fertility Survey by the National Institute of Population and Social Security Research, there was no noticeable change in the "ideal life course" of women under 35 between 1997 and 2010, when "Managing both work and family" and "Return-to-work" together accounted for around 75%. By contrast, a consistent change is seen in the "intended life course." Specifically, the options of "Full-time housewife" and "Re-

turn-to-work” tended to decrease, while “Managing both work and family” and “Single and working” tended to increase. Based only on the increase in the “Managing both work and family” option, this could be interpreted as a recognition that environments in which it is easier for women to work continuously have become more widespread. On the other hand, judging from the increase in the “Single and working” option, the conjecture that the destablization of men’s employment is having an impact would also hold true. That is, it is possible that the number of single women who cannot feel reality in marriage has increased because the number of men with stable jobs who would be candidates for marriage has decreased, and that an increasing number of women, even if married, anticipate that they could not achieve a stable living with their husband’s earnings alone.

As shown above, if we study the underlying realities behind the “increase in the female employment rate” in detail, we find facts other than the increase in the number of women who are economically active. Firstly, there still seems to be no significant change in the arrangement consisting of “a man in stable employment and a woman who supplements this (with non-regular employment and domestic work).” On that basis, the reality that emerges is that, as employment deteriorates regardless of gender, unmarried women remain in employment while reducing their prospects of marriage, and married women also provide labor in a bid to supplement struggling household budgets; but that they continue to choose non-regular employment due to the rigid working styles of regular employment and the weight of family burdens.

III. Rigidity of Working Styles

What should be our starting point for change to achieve the target of “changing the present reality of the sexual division of labor”? There could be several views on this. Research on the division of housework and the input of labor has been conducted using a simultaneous decision model from an economics-based viewpoint (Mizuochi 2007). When seen generally from the viewpoint of policy initiatives, however, establishing or amending systems connected with labor often seem to be assumed as the starting point. This is because it would be difficult to establish a law directly governing people’s behavior inside the home.

The systems of childcare leave and short-hour work in childcare periods could be considered specifically in the context of promoting women’s employment. But these systems in themselves (particular that of childcare leave) have already been developed to a certain extent, even in comparison with other countries. As will be discussed below, systems of support targeting only those times that are particularly burdensome for working women may cause the sexual division of labor to be maintained as a whole. We also need to search for the possibility of changing the sexual division of labor (including the division of housework in the home) in future, for example, by reforming systems to include life stages other than childcare periods. Specifically, this would involve permanently reducing labor hours to make it easier to perform routine housework (including by men), and promoting

more flexible working styles so that paid work can be adapted to home circumstances (for example, taking time off to deal with formalities at a public office or a bank, or dealing with the sudden illness of a child).

On flexible working styles, the analysis by Yamaguchi (2009) provides a reference point. While Yamaguchi's research explains fertility rather than female labor participation, it uses OECD indicators to analyze the "balance of childcare and work" and the "flexibility of workplaces and the labor market" as effects that increase fertility. The result is that the latter is shown to have a markedly higher effect. Focusing on the flexibility of working styles in the workplace, the autonomy of working styles has been shown to be extremely low in Japan compared to other countries (Tsutsui 2012). In this paper, this will be illustrated by referring to the data, after limiting the attributes of the survey subjects.

Data ("Work Orientation") from the 2005 International Social Survey Programme include questions on the flexibility and autonomy of the subjects' workplaces and working styles. The inconvenience of Japanese working styles will be estimated using the answers to these questions.

There are three questions on the flexibility of working styles: "Which of the following statements best describes how your working hours are decided?" (= flexibility in time), "Which of the following statements best describes how your daily work is organized?" (= flexibility in work planning), and "How difficult would it be for you to take an hour or two off during working hours, to take care of personal or family matters?" (= flexibility in short breaks). Of these three questions, the number of respondents who selected answers suggesting that flexibility is most lacking or that there is no autonomy will be used as points expressing the "rigidity of work," and an international comparison will be made (limited to OECD member states and Taiwan³).

However, the autonomy and flexibility of work vary significantly, depending on factors such as occupation, job classification and sector (public or private). In managerial, specialist and technical positions, more autonomous working styles may be possible, while even in terms of occupations, it may be easier to decide flexible work processes in sales positions than in clerical posts.⁴ In that case, differences in occupation and sector composi-

³ Specifically, the questions are as follows. First, to the question "Which of the following statements best describes how your working hours are decided? (By working hours we mean here the times you start and finish work, and not the total hours you work per week or month.)," the three answer options are "Starting and finishing times are decided by my employer and I cannot change them on my own," "I can decide the time I start and finish work, within certain limits," and "I am entirely free to decide when I start and finish work" (flexibility in time). Next, to the question "Which of the following statements best describes how your daily work is organized?," the options are "I am free to decide how my daily work is organized," "I can decide how my daily work is organized, within certain limits," "I am not free to decide how my daily work is organized," and "Can't choose" (flexibility in work planning). Finally, the question "How difficult would it be for you to take an hour or two off during working hours, to take care of personal or family matters?" can be answered "Not difficult at all," "Not too difficult," "Somewhat difficult," or "Very difficult" (flexibility in short breaks).

⁴ Research on the autonomy of work has been amassed to some extent, including some viewpoints

tion would impact each country's "rigidity of work" score. Here, therefore, the respondents' occupations will be categorized using the major divisions of ISCO-889 (International Standard Classification of Occupations), and data on respondents classified as "clerical support workers" (which includes many office workers) will be used. The ages will be narrowed down to 20 to 59 years old, the engagement status to full-time, working hours to at least 20 but less than 60 hours per week, and the sector to the private sector.

As a result of applying the above limitations, the number of total observations is reduced to 778 (22 countries), and in some cases the estimation reliability of country-specific individual effects decrease. As one method of dealing with this problem, random effects were estimated here.⁵ Specifically, the method of random-effects ML estimation was applied, using "rigidity of work" points as explained variables, and gender, age and working hours as explanatory variables, and estimating the random effects at individual level on this basis.⁶ The results, with random effects added to fixed effects (fixed as gender: women, age: 36 as the median value, and working hours: 40 as the median value), are shown in Figure 2.

The group with high rigidity includes many formerly socialist countries, while by contrast there is strong autonomy of working styles in Scandinavian countries. Japan's score is 1.21, putting Japan in the group with the most rigid working styles of all countries from which data were obtained. The country with the highest level of autonomy was Sweden (0.5points), where most of the respondents meeting the conditions stated above (36-year-old women working 40 hours a week in clerical support positions) did not choose the rigid option for any of the three questions, revealing that working styles with considerable levels of autonomy and flexibility have been achieved.

The above confirms the existence of inflexibility and non-autonomy of working styles in Japan that cannot be explained in terms of jobs or sectors. It is not hard to imagine that this makes it difficult for married women who currently shoulder a large burden of work in the home to remain in continued employment.

that reflect classes (common to all countries), and others that explain by focusing on the diversity in each country. See Edlund and Grönlund (2010), among others.

⁵ Random effects estimation is a method of estimating the heterogeneity of individuals using the BLUP (Best Linear Unbiased Prediction) method (Robinson 1991). BLUP is characterized in that, when estimating random effects after removing fixed effects, the estimated individual averages (random effects) are shrunk to the overall average, reflecting the number of observations within the individual and the degree of intraclass correlation.

⁶ The detailed estimation results are unpublished but can be disclosed on request. Perhaps due to the narrowing of analysis subjects, there are no significant fixed-effects (the *p*-value of the experimentally input age-squared term was 0.219), while the intraclass correlation was also small. Nevertheless, moderate differences between individuals (countries) could be read from the estimated random effects.

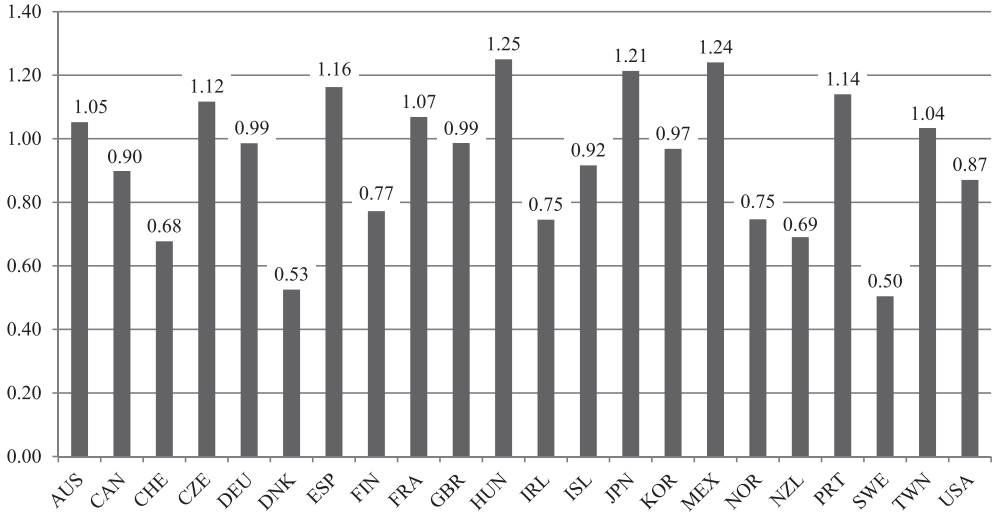


Figure 2. Estimates of “Rigidity of Work” Points (Random Effects)

IV. Barriers to the Division of Housework

1. Trends in the Sexual Division of Labor

In section II, we confirmed that the rise in the female labor participation rate alone cannot be used to judge that women are now sufficiently active in the form of wage labor. Certainly, the married female labor participation rate has been increasing since the turn of the century; for those in regular employment, particularly, the rate of taking childcare leave is in a rising trend and interruptions of employment associated with the birth of the first child are decreasing. But because the ratio of non-regular employment has increased, there are now more women overall who cannot benefit from the system. One factor behind this is the persistence of the sexual division of labor, i.e. the rationale that “the man is the main breadwinner, supplemented by the woman.”

At the level of attitudes, certainly, the model presented by the sexual division of labor could be said to be easing gradually. According to the “Public Opinion Poll on a Gender-Equal Society” conducted periodically by the Cabinet Office, the ratio of women who respond that they “Completely agree” or “Rather agree” with the perception that “the husband is expected to work outside the home, while the wife is expected to take on domestic duties” fell consistently between the start of surveys in 1979 and 2009. However, this trend was reversed in the 2012 survey, and there seems to be a growing tendency toward conservatism in attitudes. Though time will only tell whether this “reverse swing” will be sustained, it could reflect a kind of “resignation” toward the idea that the sexual division of labor has not changed in nature.

So what kind of changes have been observed in actual unpaid work in the home? Ac-

According to the Survey on Time Use and Leisure Activities, the time spent on housework by husbands with children aged under 6 increased by 7 minutes per week between 2006 and 2011. This brought husbands' housework time to a total of only 1 hour 7 minutes, which is still an extremely low level (*White Paper on Gender Equality 2013*).

2. The Relationship between Women's Working Hours and the Division of Housework

What causes this persistence in the sexual division of labor? In this section, one approach to this question will be proposed by analyzing microdata on housework activity.

If a married woman reduces her burden of domestic work to increase her labor input, the domestic welfare of the home will be maintained as long as the husband takes over the corresponding amount of housework. "Domestic welfare" means, for example, that good-quality meals can be prepared with a certain frequency, that the house can be kept to a certain standard of tidiness, and so on. If the level of domestic welfare were significantly reduced (in terms of the quality of housework, childcare and nursing care) because a married woman had increased her own working hours, she would have to judge whether to reduce her working hours or not to look for work in the first place. As confirmed above, particularly when engaged in regular employment, working styles are highly likely to be rigid, and domestic work needs to be redistributed accordingly.

Therefore, let us now consider how the respective frequency of housework done by each married partner changes when the wife takes on additional working hours. Specifically, we will look at whether a reduction in the wife's housework frequency will be matched by an increase in that of other family members, particularly the husband. However, if for example the wife is so busy that she can only prepare the evening meal on certain days, it may not be possible to maintain domestic welfare if the corresponding increase in housework by the husband only consists of cleaning. Research on the division of housework often explains various housework chores as totals of frequency and hours spent (Matsuda 2000; Matsuda and Suzuki 2002; Tsutsui 2005), but in this paper housework will be divided into individual tasks and the effect of the wife's additional working hours on the respective frequency of each will be estimated.

Families with children aged under 3 will be removed from this analysis. This is because, in the context of supporting women's employment, sharing domestic work might be more important during the period other than the child-care phase, where various formal or informal supports are available. Hagiwara (2006) draws on fieldwork to report several case studies in which a work-life balance was not achieved despite the development of women's employment support systems, when women were unable to continue employment at the end of their childcare leave.

Some researchers have highlighted a "welfare state paradox," whereby developed systems of childcare leave actually hinder women's active involvement in the private sector (Mandel and Semyonov 2006; Mandel and Shalev 2009). The same could be applied to

ways in which domestic work is divided. Specifically, this means that, if there is a female bias in taking childcare leave, it creates more freedom for housework and childcare to be performed by women during the period of leave. Therefore, the most demanding life stage for a married couple is “survived” without having to reorganize the sexual division of labor, and the system could conversely be maintained (Estes, Noonan, and Maume 2007).

From research so far, we know that men’s housework frequency increases in the childcare phase (Matsuda 2004). But how to reorganize the division of housework in normal life stages other than the childcare phase becomes an even greater issue if systems of childcare leave are developed (as systems). Nishimura (2009) states that, because the majority of women in Japan interrupt employment when giving birth, the post-childcare phase, if anything, poses the bigger problem in terms of their work-life balance.

The data for this analysis are taken from the 3rd National Family Research of Japan (NFRJ08) by the Japan Society of Family Sociology. This survey was conducted in January and February 2009, with 9,400 individuals (born between 1936 and 1980) selected using stratified two-stage sampling based on the Basic Resident Register as subjects. The response rate was 55.35%. From these, analysis was conducted on married men and women aged under 60 with no children aged under 3. However, the unit for analysis was not the individuals themselves but housework activity intrinsic to individuals.

The explained variable used in the analysis is housework frequency. In NFRJ08, questions are set on five household tasks, namely “Preparing meals,” “Cleaning up after meals,” “Grocery shopping,” “Washing clothes” and “Housecleaning (rooms, bathtubs, toilets).” Respondents are asked to state whether they and (if married) their spouse are engaged in each task “Almost everyday (6–7 times a week),” “4–5 times a week,” “2–3 times a week,” “About once a week” or “Rarely.” Here, scores of 6.5, 4.5, 2.5, 1 and 0 are given to each option.⁷ Meanwhile, inputting dummy variables of household tasks as explanatory variables enables us to grasp differences in frequency for each household task.

The explanatory variable is the wife’s weekly working hours (inclusive of commuting time) and its square. However, times in excess of 100 hours were removed as they are outliers for this analysis.⁸ Moreover, to make the results easier to understand, time is broken into units of 10 hours. For this analysis, we input the household task dummy variables (four) and the interaction term of working hours, making it possible to see whether the effect of the wife’s additional working hours on the marital division of housework differs according to the household task in question.

The survey data themselves are cross-section data, and bias arising from a correlation between the effects of working hours and unobserved individual effects cannot be removed.

⁷ It may not be realistic to attribute the value of 6.5 (times) to the option “Almost everyday” (since, assuming three meals a day, a maximum of 21 meals could be prepared in one week). On this point, the results should be approached with some reservation.

⁸ For the sake of confirmation, estimates were also made without removing data, but hardly any difference could be seen in the results.

Here, we input age (a dummy in 5-year stages) and educational background (a dummy variable based on 1 when both members of a married couple are university graduates), and removed bias caused by these two individual effects. Although not coming under individual effects, we also input a dummy variable representing the husband's employment status (not in employment, regular employment, non-regular employment).

Meanwhile, because the maximum number is five observations per subject, intra-individual correlation of error could occur. We adjusted the error by using mixed-effects ML estimation. The model specification of mixed-effects estimation is as shown below.

$$\begin{aligned} & \text{Housework frequency} \\ & = \beta_0 + \sum \beta_i \text{household task dummy}_i * \beta_2 \text{wife's working hours} + \\ & \quad r_{0j} + r_{1j} \text{wife's working hours} + \sum \beta_k X_k + e \end{aligned}$$

Here, the value of i is between 1 and 4 (household tasks other than the reference "Preparing meals"), and the value of k is also between 1 and 4 (educational background of husband and wife, husband not in employment dummy and husband non-regular employment dummy). On random effects at individual level, two types of between-individual variance are set (between-individual variance of intercepts and the effect of the wife's working hours, r_{0i} and r_{1i}). To make the variance of random effects easier to interpret, the wife's working hours are grand-mean centered. Meanwhile, the unstructured model that tolerates correlations between random effects is adopted for these variance components. From the model specifications, the results of mixed-effects estimation and fixed-effects estimation on the main effects of household tasks are consistent with each other. That is to say, the effects of household tasks are estimated as the average difference not between individuals (persons) but within individuals. However, since the wife's working hours are endogenous, a degree of reservation is required as a bias may possibly remain in the effects of interaction terms.

The descriptive statistics of the variables used are reproduced in Table 1, and the estimation results in Table 2. To make the results easier to understand, predictions of fixed-effects are shown in Figure 3.

The first observation to emerge from the estimation results is that the overall increase in men's housework frequency is smaller than the decrease in women's housework frequency when the latter increase their working hours. Certainly, the husband's frequency of performing all household tasks rises as the wife's working hours lengthen. But the results suggest that the husband is not covering for the decrease in the wife's input, so that as the wife increases her working hours, the level of domestic welfare falls.

Next, let us look at the detailed figures for each household task. On the wife's housework frequency, the tasks falling least in frequency when the wife increases her working hours are "Preparing meals" and "Cleaning up after meals." By contrast, the biggest fall in frequency is seen in "Grocery shopping" and "Housecleaning." On the husband's

Table 1. Descriptive Statistics of Variables Used to Estimate Housework Frequency

	Rarely	About once a week	2-3 times a week	4-5 times a week	Almost everyday (6-7 times a week)	Total
Women						
Preparing meals	23	12	61	75	1,500	1,671
Cleaning up after meals	17	20	52	98	1,477	1,664
Grocery shopping	24	139	487	329	689	1,668
Washing clothes	33	29	131	185	1,288	1,666
Housecleaning (rooms, bathtubs, toilets)	32	172	320	316	827	1,667
Men						
Preparing meals	898	223	126	42	88	1,377
Cleaning up after meals	746	246	173	73	142	1,380
Grocery shopping	493	561	233	52	50	1,389
Washing clothes	1,063	162	66	23	69	1,383
Housecleaning (rooms, bathtubs, toilets)	724	408	170	25	64	1,391
	N	Average	Standard deviation			
Wife's weekly working hours (including commuting time)	15,256	1.72	1.88			

Note: Here, only the descriptive statistics of main variables are given. Those of other variables (gender, age, educational background, husband's employment format) can be obtained on request.

part, the results show that "Washing clothes" and "Housecleaning" are slightly less likely to increase in frequency than "Cleaning up after meals," but the disparity among tasks is not so remarkable as in the wife's case.⁹

Based on the above results, wives must surely think twice about taking jobs with long working hours, since they are faced with a tradeoff situation between home and work because their husbands do not cover for the amount of housework frequency that they (the wives) have reduced. Moreover, considering the result that the wife's frequency of preparing meals does not decrease much even if she has long working hours, the hardship of wives who sacrifice their free time to perform housework becomes evident. In addition, at least from the results this time, we know that the husband's housework does not substitute for the

⁹ In Tsutsui (2013), the difference in the husband's and wife's frequency is analyzed for each household task. Since this method makes it possible to estimate the difference between a married couple within the same household, it offers the advantage that the heterogeneity between one married couple and another can be controlled. On the other hand, it also has the disadvantage in that it becomes harder to distinguish whether changes in disparity between frequencies are caused by the wife or by the husband. For example, even if the husband does little in the way of additional housework, the disparity in frequency certainly "improves" if the wife reduces her housework frequency commensurately. In other words, this would mean that the husband does relatively more housework, but that the domestic welfare (totalled frequency) would fall.

Table 2. Results of Estimation of Wife's and Husband's Housework Frequency Using the Mixed-Effects Model

	Women		Men			
	Coefficient	p-value	Coefficient	p-value		
Fixed effects						
Household tasks						
Preparing meals	(ref)		(ref)			
Cleaning up after meals	-0.032 ***	0.705	0.443 ***	0.000		
Grocery shopping	-1.530 ***	0.000	0.074 ***	0.368		
Washing clothes	-0.284 ***	0.001	-0.203 *	0.014		
Housecleaning (rooms, bathtubs, toilets)	-1.724 ***	0.000	-0.070 ***	0.397		
Wife's working hours	-0.191 ***	0.000	0.149 ***	0.000		
Wife's working hours (squared)	-0.047 **	0.006	0.031 *	0.048		
Household tasks×Wife's working hours						
Cleaning up after meals	0.057 †	0.084	0.034 ***	0.293		
Grocery shopping	0.047 ***	0.161	-0.059 †	0.066		
Washing clothes	-0.001 ***	0.983	-0.046 ***	0.154		
Housecleaning (rooms, bathtubs, toilets)	-0.209 ***	0.000	-0.086 **	0.007		
Household tasks×Wife's working hours (squared)						
Cleaning up after meals	0.018 ***	0.347	0.014 ***	0.371		
Grocery shopping	-0.034 †	0.078	0.021 ***	0.175		
Washing clothes	-0.002 ***	0.929	-0.016 ***	0.311		
Housecleaning (rooms, bathtubs, toilets)	0.024 ***	0.217	-0.007 ***	0.656		
Age class						
25-29	-0.315 †	0.062	0.254 ***	0.316		
30-34	-0.356 ***	0.001	-0.130 ***	0.376		
35-39	-0.062 ***	0.513	0.019 ***	0.882		
40-44	-0.018 ***	0.851	0.134 ***	0.287		
45-49	0.160 †	0.095	-0.038 ***	0.746		
50-54	0.129 ***	0.173	0.016 ***	0.890		
55-59	(ref)		(ref)			
Wife's educational background	-0.104 ***	0.123	-0.096 ***	0.241		
Husband's educational background	-0.157 *	0.015	0.195 *	0.020		
Husband's employment status						
Non-regular employment	(ref)		(ref)			
Not in employment	-0.229 ***	0.127	0.770 **	0.003		
Others (including regular employment)	0.228 *	0.024	-0.296 †	0.068		
Intercept	6.121 ***	0.000	1.132 ***	0.000		
Random effects (standard deviation)						
Wife's working hours	0.321	0.270	0.383	0.247	0.168	0.363
Intercept	0.668	0.591	0.754	0.999	0.910	1.097
Wife's working hours×Intercept	0.473	0.337	0.589	0.266	0.109	0.410
Residual error	1.335			1.255		
Model statistical volumes						
N (number of individuals)	1,294			1,062		
N (number of observations)	6,452			5,246		
Logarithmic likelihood	-11697.388			-9439.7783		
Waldy ² (degree of freedom)	2291.08(24) ***			280.62(24) ***		

†p<.1 *p<.05 **p<.01 ***p<.001

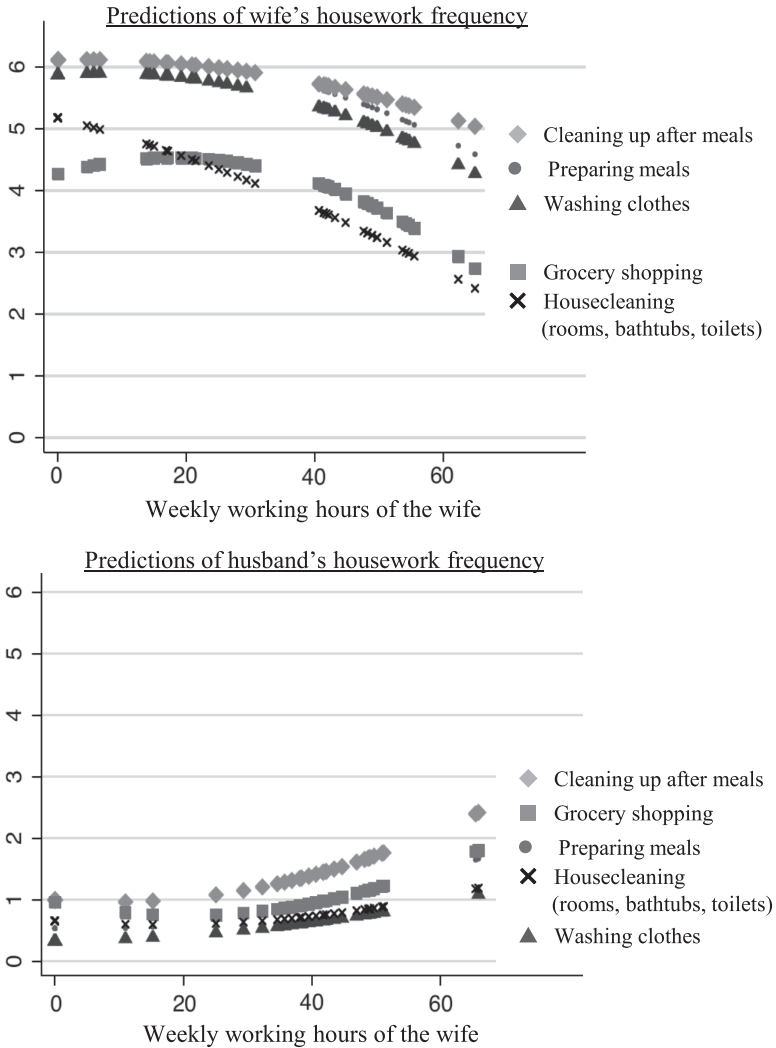


Figure 3. Predictions of Wife's and Husband's Housework Frequency for Different Weekly Working Hours of the Wife

wife's, but a point that cannot be known from a questionnaire survey is the quality of each partner's housework. If the husband took charge of preparing meals once a week, we cannot be sure that the family's satisfaction level would not fall. Given the background fact that men have not been engaged in housework for several decades at least, it would be only natural to assume that the husband has a lower quality of housework per unit of frequency than the wife does.

In previous research on the division of housework, analysis was often carried out mainly from the perspective of fairness or equality of burdens shared by married couples.

But when seen from the perspective of encouraging women's employment, the target is "a situation in which women can work without reducing the family's living standard." As such, we should perhaps also consider the need to focus our examination on overall volumes, as in the analysis in this section.

3. Is There Room to Improve Equality in the Division of Housework?

So then, let us now consider whether the kind of tradeoff observed above is a "zero sum exchange" in which there is no room for improvement. In this section, international comparative microdata will again be used to show that the view that men do not do "enough" housework is sufficiently persuasive.

The data used are from the 2012 International Social Survey Programme (Family and Gender Roles). The targeted countries are OECD member states plus Taiwan. The subjects of analysis were married couples (or cohabiting couples) who both work 30–45 hours a week, and an international comparison was made as to the difference in the division of housework by these couples (the difference between couples in the time spent on "housework other than childcare and leisure" per week). The age of subjects was limited to between 35 and 59, and cases in which the wife's (declared) income was higher were omitted, as were couples with preschool children.

As in the previous section, random effects (unobserved individual effects in each country) were estimated to find the difference between couples in housework time for each country. Specifically, the difference between couples in housework time was used as the explained variable, the ages of the husband and wife were input, and random-effects ML estimation was carried out. The table of estimation results is omitted here (disclosed on request), but Figure 4 shows the predicted values for segments taking account of random effects.

As Figure 4 shows, Denmark and Finland are the countries where the difference in housework time between dual earner partners is smallest. There, the difference is just over two hours. In Japan, by contrast, the wife spends upwards of 10 hours more on housework per week than the husband. In Japan, a significant disparity is found between men and women in the division of housework, even when working hours, income and various other conditions are made quite equal. In this sense, the view that "Japanese husbands do not do so much housework because they have long working hours and because the husband earns more than the wife in most married couples" clearly does not hold true.

So, why can such an unfair situation exist? There could be a variety of answers to this question, but since the inequality in the division of housework cannot be explained by disparity in working hours or income, the inference is that attitudes and shared norms have a significant effect. According to Fuwa (2004), in societies where there is gender inequality at the social (macro) level, factors at individual level (income, working hours, gender role attitudes) have a smaller influence on the performance of housework. If we assume there to be differences between countries in the effects of gender role attitudes, we may also have to

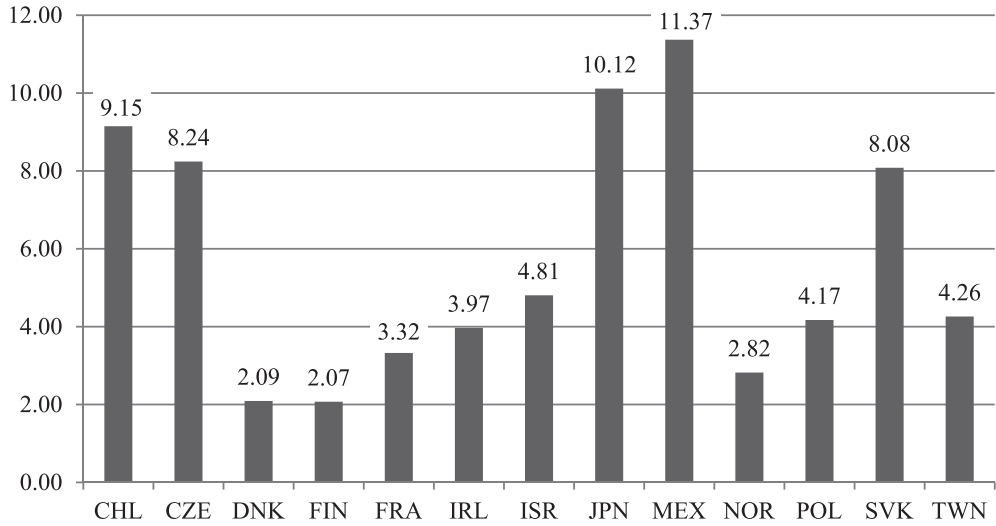


Figure 4. Difference in Married Couples' Weekly Housework Time in Dual Earner Couples (Wife's Housework Time – Husband's Housework Time)

consider the impact of a “sense of market rate,” for example, in the division of housework. Since people tend to refer to general norms or the attitudes of others around them when determining their value standards, there will be a difference from society to society in the scope of what is seen as being “taken for granted.” In fact, in countries where the division of housework between partners is unequal in the first place, the data suggest that unequal burdens of housework are less likely to produce a sense of unfairness within the individual (Fuwa and Tsutsui 2010).

V. Steps Toward Reforming the Sexual Division of Labor

The answer to the puzzle posed at the beginning of this paper—that “In Japan, the female labor participation rate has been rising, but there has been no great change in the division of housework between men and women”—is that the sexual division of labor has basically been maintained.

In terms of working styles, women are not becoming increasingly active in wage labor because programs to promote employment have been developed. Instead, more noticeable trends are extended periods of employment due to the tendency to stay unmarried, a sudden increase in demand for labor in welfare jobs as a consequence of population aging, and an increase in women's non-regular employment due to a destabilization of male employment, itself caused by recession. The expansion of the labor supply in a form not caused by backup from systems but dragged along by structural change, as it were, is not working toward creating “dual earner couples” in the real sense, because it is progressing

without breaking down the barrier of conventional “male (rigid) working styles.”

On the subject of unpaid work in the home, the decrease in housework frequency due to the increased labor input by married women is larger than the increase in housework frequency by their partners (husbands), and a certain decline in domestic welfare is seen when women work. Japanese married men perform an overwhelmingly small share of housework compared to men in other countries, even under the same conditions as dual earners. Here, one may highlight a deep-rooted norm for sexual division of labor.

To maintain standards of social services amid the inevitable flow of aging and population decline, utilizing female labor is an issue of pressing concern. Factors that encourage or hinder female labor participation can be broadly divided into policy factors and structural factors. To repeat, policy factors that encourage labor participation by Japanese women are systems of childcare leave and short working hours, while structural factors include the shift to service industries, population aging, and the destabilization of male employment. Conversely, systems that inhibit female labor participation, besides spousal tax deduction and the Class 3 insured persons system (whereby the whole amount of the basic pension is paid to the dependent spouse of an employee), are the rigidity of working styles in full-time labor and, as an informal system (custom), a division of housework that is disadvantageous to women. To encourage the supply of labor by women, we surely need to consider measures that would have the effect of breaking through the “barrier” of these formal systems and informal modes of behavior.

References

- Edlund, Jonas, and Anne Grönlund. 2010. Class and work autonomy in 21 countries: A question of production regime or power resources. *Acta Sociologica* 53, no. 3:213–28.
- Estes, Sarah Beth, Mary C. Noonan, and David J. Maume. 2007. Is work-family policy use related to the gendered division of housework? *Journal of Family and Economic Issues* 28, no. 4:527–45.
- Fuwa, Makiko. 2004. Macro-level Gender inequality and the division of household labor in 22 countries. *American Sociological Review* 69, no. 6:751–67.
- Fuwa, Makiko, and Junya Tsutsui. 2010. Kaji buntan ni taisuru fukoheikan no kokusai hikaku bunseki [A cross-national comparison of the perceived fairness of the division of household labor]. *Japanese Journal of Family Sociology* 22, no. 1:52–63.
- Hagiwara, Kumiko. 2006. Meiso suru ryoritsu shien: Ima, kodomo o motte hataraku to iu-koto [WLB support runs off-course: Working while raising children today]. Tokyo: Taro-Jirosha Editasu.
- Hochschild, Arlie Russel. 1989. *The second shift: Working parents and the revolution at home*. New York: Viking Press.
- Mandel, Hadas, and Moshe Semyonov. 2006. A welfare state paradox: State interventions and women’s employment opportunities in 22 countries. *American Journal of Sociol-*

- ogy 111, no. 6:1910–49.
- Mandel, Hadas, and Michael Shalev. 2009. How welfare states shape the gender pay gap: A theoretical and comparative analysis. *Social Forces* 87 (4): 1873–911.
- Matsuda, Shigeki. 2000. Otto no kaji, ikuji sanko no kitei yoin [Husbands' participation in domestic work]. *The Annual Review of Sociology*, no. 13:134–45.
- . 2004. Dansei no kaji sanko: Kaji sanko o kitei suru yoin [Men's participation in housework: Factors regulating participation in housework]. In *Gendai kazoku no kozo to henyō: Zenkoku kazoku chōsha (NFRJ98) ni yoru keiryō bunseki* [Structure and transformation of the contemporary family: Quantitative analysis based on national family research of Japan (NFRJ98)], ed. Hideki Watanabe, Akihito Inaba, and Naoko Shimazaki, 175–89. Tokyo: University of Tokyo Press.
- Matsuda, Shigeki, and Yukio Suzuki. 2002. Fufu no rōdo jikan to kaji jikan no kankei: Shakai seikatsu kihon chōsa no kohyō deta o mochiita fufu no kaji jikan no kitei yoin bunseki [Relation of labor time and domestic labor time of the couple: Primary factors of household division of labor in Japan through analysis of survey of time use and leisure activities]. *Japanese Journal of Family Sociology* 13, no. 2:73–84.
- Mizuochi, Masaaki. 2007. Fufukan de shigoto to kaji no kokan wa kanōka? [Are exchanges of work and housework between married partners possible?]. In *Taitōna fufu wa shiawaseka* [Are equal married couples happy?], 47–61. Tokyo: Keiso Shobo.
- Nishimura, Junko. 2009. Posuto ikujiki no josei to hatarakikata: Waku famiri baransu to sutoresu [Women and working styles in the post-childcare phase: work-family balance and stress]. Tokyo: Keio University Press.
- Robinson, Geoffrey K. 1991. That BLUP is a good thing: The estimation of random effects. *Statistical Science* 6, no. 1:15–32.
- Sakaguchi, Naofumi. 2009. Kintōhōgo sedai no josei no raifu kosu: Paneru deta ni yoru kenshō [Life course of women in the post-equal opportunity act generation: Verification based on panel data]. *Japanese Journal of Research on Household Economics*, no. 84: 7–16.
- Takeuchi, Mamiko. 2004. Josei shugyō no paneru bunseki: Haigūsha shotoku kōka no saikenshō [Panel analysis of women's decision to work: Re-examination of the effects of the husband's income]. *The Japanese Journal of Labour Studies* 46, no. 6:76–88.
- Tsutsui, Junya. 2005. Relative resource or available time?: The analysis of the Japanese household division of labor through multiple models. *Nenpo Shakaigaku Ronshū*, no. 18: 170–80.
- . 2012. Koteki sekuta kōyō ni okeru josei rōdo to waku raifu baransu [Women's labor and work-life balance in the public sector employment]. *Journal of Social Science* 64, no. 1: 155–73.
- . 2013. Gender segregation of housework. In *A quantitative picture of contemporary Japanese families*, ed. Shigeto Tanaka, 123–46. Miyagi, Sendai: Tohoku University Press.

- Yamada, Masahiro. 2007. *Shoshi shakai Nippon: Mo hitotsu no kakusa no yukue* [Japan—the childless society: Future of another disparity]. Tokyo: Iwanami Shoten.
- Yamaguchi, Kazuo. 2009. *Waku raifu baransu: Jissho to seisaku teigen* [Work-life balance: Demonstration and policy proposals]. Tokyo: Nippon Keizai Shinbunsha.