

Advancing Women with Interrupted Careers: Focusing on Women's Motivation for Autonomous Skill Development during Middle Age and Older

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Today, the typical life course of women, i.e., “being re-employed after career interruptions,” has not yet changed. However, women whose career has been interrupted are rarely taken up as the main target of intervention under women’s labor policy, especially in the context of women’s advancement in the workplace. On the other hand, previous studies on the third stage of women’s life cycle suggest that women are more motivated for autonomous skill development, such as self-development, in their middle and older age (age 45–64) after experiencing career interruptions. Based on the above, this study focuses on the self-development of women with interrupted careers in middle and older age, and tests the hypothesis that “middle-aged and older female workers who have experienced career interruptions are more likely to engage in self-development than female workers in their young and prime-age (age 25–44).” The main findings are as follows. First, the implementation rate of a self-development through interactions with others (hereinafter, the “interaction type” of self-development) is higher among married women in middle and older age than those in young and prime-age, and this is not due to career fluidity or job specialization. Second, this tendency is observed among middle-aged and older married women who have changed jobs and are currently working as regular workers or who are currently working as non-regular workers, and it is particularly pronounced in the former group. Therefore, in order to promote the advancement in the workplace of women whose career has been interrupted, it is effective to pay attention to their high level of motivation to engage in autonomous skill development in their middle and older age. Specifically, it is important from a policy perspective to create an environment in which such skill development can take place through personal involvement with others, and to adjust the evaluation mechanism in the external labor market so that women whose career has been interrupted can be positioned in core projects in the company.

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I. Introduction

Even today, the typical life course of women, i.e., “career interruptions due to life events such as marriage, childbirth, and child-rearing,” has not changed significantly¹ (Abe 2011; Imada and Ikeda 2006; Nishimura 2014; Yoshida 2021), but rather, the life course of “being re-employed after career interruptions” has taken root (Iwai 2013). As a result, many women today, due to experiencing career interruptions, have deviated from the scenario of “advancement through career internalization”² that the conventional women’s labor policy advocates.

Women whose career has been interrupted are rarely taken up as the main target of intervention under women’s labor policy, especially in the context of women’s advancement in the workplace. This is because typical Japanese employment practices emphasize long-term skill development and career formation in the internal labor market (within companies) (Koike 2005), and the normative career model of “long-term service in the same organization”³ is also emphasized in the context of women’s advancement (e.g., Takeishi and Takasaki 2020). If so-called “homegrown (*haenuki*) employees,” who have been in long service at the same company since being hired immediately upon graduation, are assumed to be the ideal human resources in a company, women’s experience of career interruptions due to life events, such as marriage, childbirth, and childcare, may function as a signal of low commitment to their work role, even if they have no choice but to give priority to their family role.⁴ That is why it has been considered important in the advancement of women to develop support measures for balancing work and life or measures for equal employment opportunities, and to foster “homegrown” female employees who have been with the company for a long time (Sato 2008). Furthermore, in academic research, emphasis tends to be placed on clarifying the factors that cause women to continue or interrupt their career. On the other hand, few studies have taken the viewpoint of how women who have experienced career interruptions can play an active role as core human resources in companies and the labor market.

Based on the above, this study discusses how women whose career has been interrupted can advance in the workplace. It is difficult from the aspect of corporate human resource management to expect women with interrupted careers to be “promoted as a consequence of career internalization.” In recent years, the aging of society and the extension of healthy life expectancy have lengthened working life spans, and it is difficult to cover all of an individual’s working life only by career formation in the internal labor market, so emphasis is also placed on career formation through workers’ autonomous occupational skill development, such as self-development (hereinafter referred to as “autonomous skill development”). In this study, it is considered that career formation through autonomous skill development may be rather effective in the context of advancement of women with interrupted careers who have deviated from the normative career model. As will be discussed in detail in the next and subsequent sections, previous studies on the third stage of women’s life cycle have shown that “women who have experienced career interruptions due to life events are more motivated for learning and work in the post-parenting and middle and older age periods.” In other words, if the proposition that “middle and older-aged female workers who have experienced career interruptions are highly motivated for autonomous skill development” is proven, it will be possible to position this new career formation process, which has been attracting attention in recent years, as one of the scenarios for advancement of women with interrupted careers.

Based on the tendency for women whose career has been interrupted to re-enter the workforce in middle and older age, as indicated by the M-shaped curve, Section II organizes previous studies on women’s re-employment and working styles in middle and older age, and presents the theoretical basis for the above proposition. Section III describes the data used and the analytical strategy. The results of the analysis are presented in Section IV, and then the suggestions and implications of this study are discussed in Section V.

II. Previous studies and background for the question of this study

1. Women's re-entry in the workforce

Many previous studies on women's re-entry in the workforce have focused on the employment status of highly educated women after leaving their job upon giving birth to their first child (Sakamoto 2009; Takeishi 2001; Higuchi 2007; Hirao 2005; Wakisaka and Okui 2005, etc.). Women with higher education start forming a family later in life due to longer schooling and later childbearing, and as a result, they tend to be older when they re-enter the workforce after leaving their job for childbearing, and find it difficult to be re-employed especially as regular workers (Sakamoto 2009; Takeishi 2001; Wakisaka and Okui 2005). Furthermore, not only among highly educated women but also as a general trend, the longer the period of unemployment after leaving a job due to a life event, the more difficult it is for women to be re-employed as regular workers, and the less they are motivated to be re-employed (Takeishi 2001; Fujita 2004). Based on these findings, previous studies suggest that it is important to eliminate the mismatch between job offerings and job seekers, such as by eliminating the labor demand-side practice of setting age limits for mid-career hires (Sakamoto 2009; Takeishi 2001; Wakisaka and Okui 2005). While most of the previous studies on women's re-entry in the workforce have focused on the possibility and process of re-entry in the workplace, i.e., "what factors enable women to be re-employed successfully after career interruptions," few studies have focused on how women who have once experienced career interruptions work after re-entering the workplace.

2. How women work after re-entering the workforce and in middle and older age

In one of the few exceptional studies, Takeishi (2001) divides the career patterns of university-educated women into three categories: continuous workers, re-employed regular workers, and re-employed non-regular workers, and points out that while there are significant differences in the content of work and career development depending on the current employment status, job satisfaction is higher among re-employed regular workers than among continuous workers.

Some of the most recent studies have pointed to the high level of work motivation among middle and older-aged female workers. Teramura (2020) points out that compared to men, middle and older-aged female workers are more motivated to work, more satisfied with their jobs, and have a greater sense of self-growth in their work. In addition, the Japan Institute for Women's Empowerment & Diversity Management (2019) points out that middle and older-aged women who feel that child-rearing is a constraint on working are more motivated for their current jobs. Furthermore, in a study of career development theory, it is pointed out that while men's occupational careers reach a peak in their 30s and then decline through their middle and older age period, women's occupational careers decline gradually in their young and prime-age period, but then rise in their late 40s onward and peak in their 50s⁵ (Shimomura 2013). These findings are not applicable only to women whose career has been interrupted, but given the fact that many women today follow a life course of being re-employed after career interruptions, as mentioned at the beginning of this paper, they are also applicable to middle-aged and older women who have experienced career interruptions and are then re-employed.

The above mentioned few studies that have paid attention to how women work after being re-employed have a limitation in that they have only examined general work motivation and job satisfaction; and have not clarified the actual situation of specific working styles of women with interrupted careers after re-entering the workplace.

3. High level of motivation to be active among middle-aged and older women in the third stage of their life cycle

In light of such limitation, this study focuses on the implementation of self-development as a concrete practice of autonomous skill development, which has been emphasized in recent years. Against the background

of the prolongation of working life, the government, in its basic design for the 100-year life society published in 2018, states that it will fundamentally expand “recurrent education, which enables workers to relearn, return to work, and change jobs at any age,” and explains the importance of career formation through workers’ autonomous skill development.⁶ Following this, in June 2022, the Ministry of Health, Labour and Welfare (MHLW) published the “Guidelines to Promote Learning and Recurrent Education in the Workplace,” pointing out the importance of not only company-led occupational skill development through OJT, which has been emphasized under typical Japanese employment practices, but also autonomous skill development through self-development and other means.⁷ Previous studies on the third stage of women’s life cycle suggest that women become more motivated to engage in such autonomous skill development in their middle and older age after career interruptions.

The life cycle is a concept that covers the temporal development of life phenomena, or life stages, over a person’s lifetime, focusing on the fact that the life of a person includes regular transitions, such as birth, growth, maturation, senility, and death (Morioka and Mochizuki 1997). In modern society, the improvement of mortality rates among children and young people has led to an increase in longevity, and as more people pass through the young and prime-age period to the middle and older age period, the life stages by age have become clearer, and in particular, life stages in the young to middle age periods have become universal (Morioka 1996). As a result of this universalization of life stages and clarification of the life cycle, the middle and older age period was not only discovered for the first time in modern society, but also extended along with the further progression of the declining birthrate, which greatly changed the life cycle especially for women (Ishikawa 1996). As the fertility rate declines extremely and the number of children a woman would have decreases, in women’s life course, the childbearing and child-rearing period shrinks, while the post-parenting period after completing their parenting role relatively expands.

Some studies have pointed out that women’s middle and older age period is a time when they experience the loss of parenting role as their children grow up and their social roles change dramatically, leading to a critical situation in their identity (Okamoto 1999; Naoi 1979). However, there is possibility that the identity crisis may make women more motivated to acquire new social roles. For example, as is evident in the discussion on the feminization of employment, even among baby boomers, who lived during the period of change in women’s life cycle, the employment rate increased rapidly in middle and older age, and there is a strong tendency for women freed from childcare to try to re-enter the labor market (Ochiai 2019). Furthermore, it has been pointed out that the re-employment probability is higher for women who engage in learning activities, such as self-development (Osawa and Suzuki 2012; Teramura 2021), from which it can be imagined that women acquire the occupational skills necessary to be re-employed in their middle and older age. As a classic study, Amano (1979), based on this trend, divided women’s life cycle into four stages: (1) the first stage in which they are in the process of education, (2) the second stage in which they raise the next generation, (3) the third stage in which they are released from child-rearing duties, and (4) old age. The study points out that middle-aged and older women in the third stage, when they are freed from housework and childcare, are more likely to engage in learning activities to redesign their lives. The motivation to engage in these learning activities and work may be related to self-development, which is a form of autonomous skill development that has been emphasized in recent years.

4. Question of this study

Previous studies on the working styles of women whose career has been interrupted have a limitation in that they simply focus only on the process of re-employment (Sakamoto 2009; Takeishi 2001; Higuchi 2007; Hirao 2005; Wakisaka and Okui 2005) or on abstract aspects, such as work motivation and satisfaction after re-employment (Takeishi 2001; Teramura 2020; Japan Institute for Women’s Empowerment & Diversity Management 2019). In addition, studies that focus on women’s self-development (Amano 1979; Osawa and Suzuki 2012; Teramura 2021) also only examine it as a factor for successful re-employment or as a general

learning activity. Therefore, previous studies have not sufficiently examined the realities of how the actual situation of specific working styles of women whose career has been interrupted in their careers after re-entering the workforce, and the policy implications of how women with interrupted careers are positioned in the context of women's advancement in the workplace are not clear.

Furthermore, previous studies on the third stage of women's life cycle suggest that as women in middle and older age experience the loss of their previously core social role of caregiving, they become motivated to engage in learning activities and work (Amano 1979; Ochiai 2019), and the most recent studies support this view (Teramura 2020; Japan Institute for Women's Empowerment & Diversity Management 2019). However, there is a limitation in that these studies treat this as a trend related to middle-aged and older women in general, while implicitly assuming a limited scope of targets, i.e., women who have experienced career interruptions due to life events.

Based on the above, this study examines a new scenario of women's advancement in the workplace by focusing on the actual situation of specific occupational skill development in the form of self-development in middle and older age with regard to women with interrupted careers, who have often been regarded as receiving low expectations for playing an active role as core human resources in the company. The question to be examined in this study is: Does the finding of previous studies on women in the third stage of their life cycle that "many women are motivated to work as a new social role after the loss of their social role of caregiving" also apply to the motivation to engage in autonomous skill development among women with interrupted careers in middle and older age? Based on the discussion in the previous studies mentioned above, the hypothesis that "middle-aged and older female workers who have experienced career interruptions are more likely to engage in self-development than female workers in their young and prime-age" can be derived from this question.

III. Methodology

1. Data

The data used in this study is from the "Survey on Occupation and Working Life" (hereafter referred to as the "Survey on Working Life") conducted by the Japan Institute for Labour Policy and Training (JILPT) in November 2019 (JILPT 2022a). This survey targeted 12,000 men and women, aged 25–64, randomly selected from the Basic Resident Register nationwide, regarding individual employment behavior, including retention in companies and leaving or changing jobs, in terms of both work and daily life. It is, so to speak, a labor survey version of the General Social Survey (GSS). The number of valid responses was 5,977 (49.8%). The "Survey on Working Life" can provide a multifaceted view of the occupational life of workers in various life stages. It is also the largest and most up-to-date data available as a social survey for apprehending the labor market and the occupational life of individuals since 2015, when the Act on the Promotion of Women's Active Engagement in Professional Life came into effect and heightened interest in women's advancement in the workplace.⁸ Furthermore, the women recognized in the "Survey on Working Life" as the middle-aged and older group are women in the Equal Employment Opportunity Law-generation who have developed their occupational careers along with the development of women's labor policy in the postwar period, which is appropriate for examining the question of this study.

2. Variables and analytical strategy

As a specific indicator for capturing the motivation to engage in autonomous skill development, this study focuses on the implementation of self-development. Self-development mentioned here means "work-related education and training conducted by individuals on their own initiatives, not by instructions from the company or workplace."⁹ Although it is not clear whether the individual's occupational skills have really improved, it is at

least a sufficient indicator of the level of motivation of workers themselves to develop their occupational skills autonomously. The self-development variables are adopted as shown in Table 1 according to the items implemented. Each variable is a dummy variable that takes 1 if one or more of the relevant self-development items are implemented.

The career variable capturing women's experience of career interruptions, which is designed based on Takeishi (2001), takes three values: "regular workers continuing their first job" who entered regular employment as their first job and continue the job at present; "regular workers having changed jobs" who have changed jobs and are currently working as regular workers; and "currently non-regular workers" who are currently working as non-regular workers (regardless of whether or not they have changed jobs). Here, "career interruption" refers to the interruption of a "long-term career in the same organization," which is assumed under typical Japanese employment practices, and is captured depending on whether or not the individual has changed jobs in their career.¹⁰ In the context of the current women's labor policy, "regular workers continuing their first job" are expected to be the most active as core human resources in companies, while "regular workers having changed jobs" are regarded as receiving relatively low expectations for playing an active role. It can be assumed that "currently non-regular workers" also generally receive low expectations for women's advancement in the workplace, regardless of career continuity. In addition to the career variable, attention is paid to differences by marital status. Previous studies on the third stage of women's life cycle have focused on the loss of the social role of child-rearing as one of the factors contributing to the high level of motivation to engage in learning activities and work among middle-aged and older women. Although this explanation itself is only one interpretation, this study also analyzes differences by marital status in order to understand the heterogeneity of the experience of career interruptions.

First, age and marital dummies and a career variable are used to ascertain descriptively whether the implementation rate of self-development is higher in the middle and older age among women who have experienced career interruptions. In this analysis, comparisons are made not only within women, but also between men and women. If an association is observed in that the motivation to engage in self-development in the young and prime-age is higher than that in the middle and older age among men, this makes the high level of motivation to engage in self-development in the middle age and older age among women more distinctive. In the descriptive analysis, the results for all types of self-development is reviewed and then the type of self-development reflected in these results is identified. As it is found that the results for all types of self-development reflect the results for the "interaction type" of self-development in particular, a focus is placed on this type of self-development in the multivariate analysis that follows.

Next, with the analysis subject being limited to women and the outcome being limited to an "interaction type" of self-development, multivariate analysis is conducted to confirm whether similar results are obtained when the basic covariates and the fluidity and job category variables are controlled. It is possible that the motivation to engage in autonomous skill development, such as self-development, is also related to the "fluid career" orientation. For example, the motivation to successfully change jobs and the increased intention to leave a job due to some dissatisfaction with the current job may often be directed toward acquiring new skills that are required in career transitions. In addition, previous studies have pointed out that women's job categories are related to post-industrialization, which became prominent from around the 1970s (Osawa 1993; Tsutsui 2015). Although fields that have developed as a result of post-industrialization are mainly related to care work, such as the medical, health care and welfare industry, and in some respects, post-industrialization has resulted in an expansion of occupational segregation by gender, the entry of women into these industries and occupations has encouraged more women to become specialized in particular jobs (Mandel and Semyonov 2006). This female-specific job specialization may also be related to the implementation of self-development by women whose career has been interrupted.

Table 1. Definitions of self-development variables

Variables	Items
Educational institution type	Attending courses at universities and graduate schools; attending courses at specialized training colleges and miscellaneous schools; and attending courses at national and prefectural vocational training institutions.
Interaction type	Attending workshops, study meetings, seminars, etc.; participating in study meetings with colleagues at work; and participating in study meetings with people outside the company.
Self-study type	Taking correspondence courses; self-directed study.
All types	Any of the above items.

Source: Prepared by the author.

Table 2. Definitions of fluidity variables and job category variables

	Variables	Description
Fluidity	Intention to continue working for current job	To what extent the workers would like to continue working for their current job until retirement (or as long as possible). Categories are: "Want to continue working;" "Don't want to continue working;" and "Don't know."
	Job change preparation dummy	Whether the workers currently engage in job-hunting or job-search activities (including preparing to start their own business), such as having a job interview or gathering information on job openings or jobs.
	Job change orientation dummy	In comparison between the two types of career view, A: "work for one company for a long time and receive better treatment at that company," and B: "repeatedly change jobs in search for better working conditions," whether the workers respond that their career view is closer to B.
	Job satisfaction dummy	Whether the workers are satisfied with their current job.
	Unemployment anxiety dummy	Whether the workers are worried about losing their job within the next 12 months.
Job category	Job type	Categories are: managerial; professional/technical; clerical; sales (retail salesperson); sales (sales representative); services; and manual workers (such as security; manufacturing process, construction and mining, transport and machine operation, carrying, cleaning, packaging, and related workers).
	Industry	Categories are: manufacturing; construction; information and communications; transport and postal services; wholesale and retail trade; finance and insurance; real estate and goods rental and leasing; professional and technical services; accommodations, eating and drinking services; services, N.E.C.; education, learning support; medical, health care and welfare; and government.

Source: Prepared by the author.

In the multivariate analysis, basic covariates are first controlled by narrowing the analysis subject to women, and then a logit model is estimated, with the "interaction type" of self-development dummy adopted as the outcome, and the age, age squared term, and married dummies and their interaction terms adopted as independent variables. From this model, the marginal effect of age (effect of aging) for each married dummy and the predictive

values for each married dummy and age are calculated.¹¹ Using this model as a baseline, analysis is conducted using the same procedure by adding the fluidity and job category variables¹² shown in Table 2 in turn, to compare the results. Finally, Model 4, in which all control variables are input, is analyzed, while taking into account the interaction of age, age squared term, and married dummies with the career variable, to confirm the implementation rate of the “interaction type” of self-development in the middle and older age among women with interrupted careers. Other than the fluidity and job category variables, the covariates used are education, length of service, company size, annual income,¹³ and working hours. The descriptive statistics values of the variables used in the multivariate analysis are presented in Appendix Table.

The sample used in the descriptive analysis is workers aged 25 to 64 ($N = 3,557$, about 52% is women), and the sample used in the multivariate analysis is limited to women ($N = 1,857$). Cases with missing variables used are excluded from the analysis.

IV. Results

1. Descriptive analysis

Table 3 shows the implementation rate of each type of self-development, by gender, marital status, and age. Here, age is divided into two age groups, with the 45–64 age group being considered the middle and older age group. In the case of men, the implementation rate of self-development in the young and prime-age is high for “all types” of self-development, regardless of marital status. In the case of women, on the other hand, different patterns are observed depending on the type of self-development and the combination of marital status and age. In the case of married women, the “interaction type” was about 5 percentage points higher among those aged 45–64 than among those aged 25–44, while the “self-study type” was about 4 percentage points lower. For married women, it is important to analyze self-development by type, since this difference offsets the age difference in the implementation rate of “all types” of self-development. As for unmarried women, the implementation rate of “all types” of self-development is higher in young and prime-age, as is the case of men. Although the implementation rate tends to be higher in young and prime-age for “all types” of self-development, the implementation rate of the “interaction type” of self-development is higher in middle and older age among married women.

The results for the “interaction type” of self-development among married women are consistent with the findings of the previous studies on the third stage of women’s life cycle discussed in Section II, but does this trend apply generally to married middle-aged and older women or does it vary by career type? Figure 1 shows the implementation rate of each type of self-development by gender, marital status, age, and career.

First, let us look at the results for A: “All types.” In all categories except for married women, the implementation rate declines in the middle and older age. However, among married women, the implementation rate is higher in the middle and older age for all career types. The proportion of married women who engage in some form of self-development in their middle and older age is higher than in their young and prime-age, by about 10 percentage points among “regular workers having changed jobs,” about 4 percentage points among “regular workers continuing their first job,” and about 3 percentage points among “currently non-regular workers.”

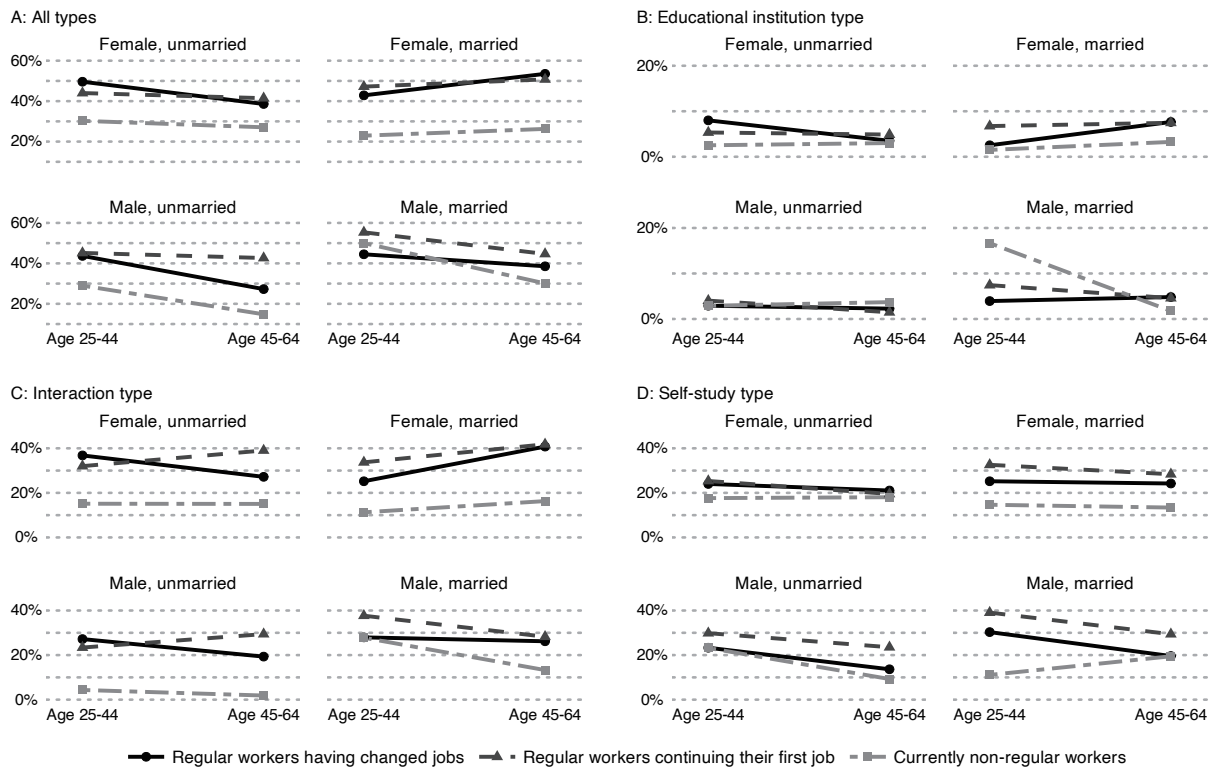
The results for the C: “Interaction type” of self-development most clearly reflect this trend. Among married women, the implementation rate of this type of self-development tends to increase in the middle and older age for all career types. The difference in the implementation rate of the “interaction type” of self-development between the middle and older age and the young and prime-age among married women is about 16 percentage points for “regular workers having changed jobs,” about 8 percentage points for “regular workers continuing their first job,” and about 5 percentage points for “currently non-regular workers.” The implementation rate in the middle and older age group is also 6 to 7 percentage points higher for “regular workers continuing their first

Table 3. Implementation rate of self-development by gender, age, and marital status

(Unit: %)

Category			N	All types	Educational institution type	Interaction type	Self-study type
Male	Married	Age 25–44	487	49.5	6.0	32.2	33.5
		Age 45–64	707	39.5	4.2	24.9	23.2
	Unmarried	Age 25–44	296	40.9	3.4	20.3	26.0
		Age 45–64	210	29.0	2.4	18.1	15.7
Female	Married	Age 25–44	474	32.5	2.7	19.0	20.7
		Age 45–64	776	33.9	4.5	23.5	16.9
	Unmarried	Age 25–44	319	41.1	5.3	27.6	21.9
		Age 45–64	288	33.7	3.5	23.3	19.4

Source: Prepared by the author based on JILPT “Survey on Working Life.”



Source: Prepared by the author based on JILPT “Survey on Working Life.”

Figure 1. Implementation rate of self-development by gender, marital status, age, and career type

job” among both unmarried men and women. For the other categories, there is no tendency for the implementation rate to increase in the middle and older age.

For all career types, the implementation rate of the B: “Educational institution type” of self-development tends to be several percentage points higher among married women in their middle and older age. It should be noted, however, that the overall level of the implementation rate of the “educational institution type” of self-

development is low, and the magnitude of the difference between the two age groups is relatively small. There is no tendency for the implementation rate to increase in the middle and older age among unmarried women and among men.

As for the D: “Self-study type” of self-development, the implementation rate in the middle and older age is high at about 19% for “currently non-regular workers” among married men,¹⁴ whereas there is no tendency in other categories for the implementation rate to increase in the middle and older age.

The above descriptive analysis indicates that the finding of previous studies on the third stage of women’s life cycle that “women are more motivated to engage in learning and work in the post-parenting and middle and older age periods” is particularly true for the “interaction type” of self-development among married women. Furthermore, although this tendency is true for all career types, that finding supports the hypothesis of this study as well, because the degree of increase in the implementation rate is relatively large among “regular workers having changed jobs” in particular. Next, let us focus on women’s “interaction type” of self-development to see whether this association is still observed after controlling several covariates and fluidity and job category variables.

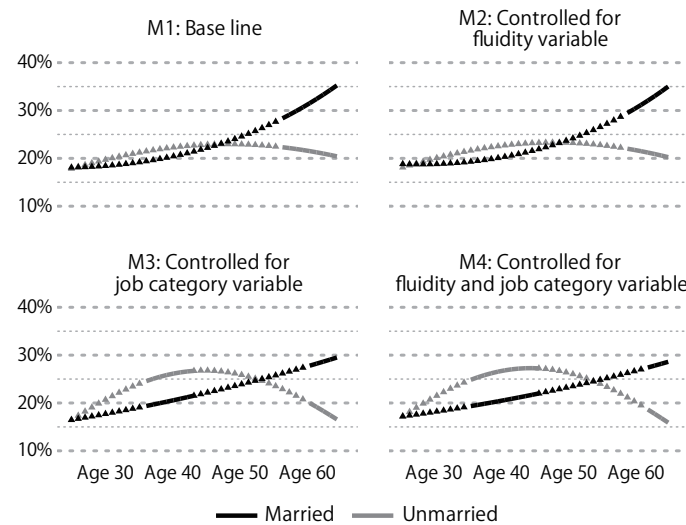
2. Multivariate analysis

Figure 2 and Table 4 present the results of the multivariate analyses. Figure 2 shows the predictive values estimated from four logit models, limiting the sample to women and using the “interaction type” self-development dummy (hereafter simply referred to as “self-development”) as the outcome. All these models focus on the age, age squared term, and married dummies and their respective interaction terms, so the estimation results for the other variables are omitted. The first model controls only education, length of service, company size, annual income, and working hours as basic covariates (M1). The next model (M2) controls the fluidity variable (see Table 2) in addition to M1, the third model (M3) controls the job category variable (see Table 2) in addition to M1, and the last model (M4) controls the fluidity and job category variables in addition to M1. Table 4 shows the marginal effects of age (effect of aging) estimated from these models. The solid line in Figure 2 indicates that the difference between the predictive values for each marital status at the relevant age is statistically significant at the 5% level.¹⁵

The baseline model (M1) in Figure 2 shows that the implementation rate of self-development among married women tends to increase with age. However, there is little difference between the married and unmarried groups until around age 50, after which the difference widens but does not reach a statistically significant level until age 57 or later. Table 4 shows that the effect of aging among married women is also statistically significant, with the implementation rate increasing by about 0.5 percentage points per year of aging. This trend does not change at all when the fluidity variable is controlled in M2, indicating that the effect of aging among married women is not due to the “fluid career” orientation, such as dissatisfaction with the current job and a desire to change jobs.

There is a slight change in the shape of the effect of aging when the job category variable is controlled in M3. The implementation rate of self-development is slightly higher around age 40 among unmarried women, while it is slightly lower around age 60 among married women. As a result, the implementation rate among unmarried women is statistically significantly higher around the age of 40. Despite this change in the shape of the effect of aging, the effect of ageing on married women in M3 itself is statistically significantly positive (Table 4). Similar results are obtained for M4, in which both the fluidity and job category variables are controlled. The higher implementation rate among married women in their middle and older age is still observed after controlling the basic covariates as well as the fluidity and job category variables.

Finally, whether the higher implementation rate of self-development among married women in their middle and older age varies by career type is analyzed. Specifically, using the covariates and control variables of M4 used in Figure 2 and Table 4, the predictive values (Figure 3) and marginal effects (Table 5) are examined with



Source: Prepared by the author based on JILPT “Survey on Working Life.”

Note: Only among female workers aged 25–64. The outcome is “interaction type” of self-development. Solid lines indicate that the difference in predictive values by marital status at the relevant age is statistically significant at the 5% level. In all these models, covariates (education, length of service, company size, annual income, and working hours) are controlled.

Figure 2. Predictive values for implementation rate of self-development by age and marital status (only among female workers)

Table 4. Marginal effect of age by marital status

Model	Marital status	Marginal effect of age	Standard error	Significance level
M1: Base line	Unmarried	0.00068	0.00145	***
	Married	0.00454	0.00135	
M2: Controlled for fluidity variable, unmarried	Unmarried	0.00053	0.00150	**
	Married	0.00429	0.00138	
M3: Controlled for job category variable, unmarried	Unmarried	-0.00033	0.00133	**
	Married	0.00341	0.00119	
M4: Controlled for fluidity and job category variables, unmarried	Unmarried	-0.00080	0.00137	*
	Married	0.00298	0.00121	

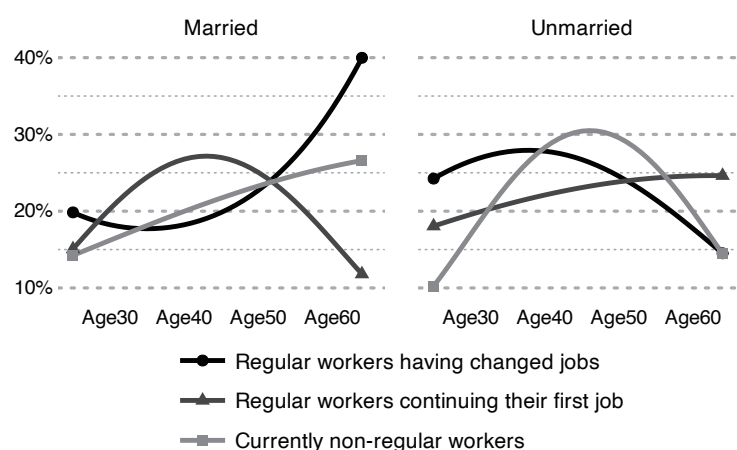
*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Source: Prepared by the author based on JILPT “Survey on Working Life.”

Note: Only among female workers aged 25–64. The outcome is “interaction type” of self-development. In all these models, covariates (education, length of service, company size, annual income, and working hours) are controlled.

regard to the age, age squared term, and married dummies, career variable, and their interaction terms. Note that in Figure 3, the differences in predictive values by career type were not statistically significant at most ages, so they are uniformly shown as solid lines.¹⁶

Figure 3 shows that the effect of aging is most pronounced among married “regular workers having changed jobs.” The implementation rate of self-development among married “regular workers having changed jobs” decreases gradually from their 20s to 40s, but increases thereafter, with a particularly large increase after the age of 50. In contrast, the implementation rate among “regular workers continuing their first job” increases from



Source: Prepared by the author based on JILPT “Survey on Working Life.”

Note: Only among female workers aged 25–64. The outcome is “interaction type” of self-development. In this model, covariables and fluidity, and job category variables are controlled.

Figure 3. Predictive values for implementation rate of self-development by age, marital status and career type (only among females workers)

Table 5. Marginal effect of age by marital status and career type

Marital status	Career type	Marginal effect of age	Standard error	Significance level	N (%)
Unmarried	Regular workers continuing their first job	0.00163	0.00395		116 (6.2)
	Regular workers having changed jobs	-0.00291	0.00212		239 (12.9)
	Currently non-regular workers	0.00046	0.00192		252 (13.6)
Married	Regular workers continuing their first job	-0.00146	0.00273		156 (8.4)
	Regular workers having changed jobs	0.00555	0.00259	*	276 (14.9)
	Currently non-regular workers	0.00316	0.00156	*	818 (44.0)

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Source: Prepared by the author based on JILPT “Survey on Working Life.”

Note: Only among female workers aged 25–64. The outcome is “interaction type” of self-development. In this model, covariates and fluidity, and job category variables are controlled. N (%) indicates the number of cases in each category and their distribution in the analyzed sample (female workers) for reference.

their 20s to 40s, but declines monotonically from their 40s onward. Meanwhile, the implementation rate monotonically increases with age among “currently non-regular workers.” Table 5 shows the marginal effect of age on each career type, which is statistically significantly positive for “regular workers having changed jobs” and “currently non-regular workers.”

Looking at the results for unmarried women, the shape of the effect of aging for “regular workers having changed jobs” and “currently non-regular workers” is an inverted U-shaped curve (Figure 3), and the marginal effect of age is not statistically significantly positive, indicating no tendency for the implementation rate of self-development to increase during the middle and older age. Although there appears to be a positive effect of aging for unmarried “regular workers continuing their first job,” its magnitude is relatively small and not statistically significant (Table 5).

These results indicate that the implementation rate of self-development among middle-aged and older women

varies depending on marital status and career type. In the same category of currently regular workers, the implementation rate increases among “regular workers continuing their first job” before their 40s. In contrast, the implementation rate increases in the middle and older age among married women who are “regular workers having changed jobs,” that is, those who have experienced some form of career interruptions (job change) by leaving their first job; and are currently working as regular workers. The implementation rate among these women increases sharply, especially from their late 40s onward. As can be seen from the number, N, in each category shown in Table 5 as a reference, the majority of married women do not actually have a career as “regular workers having changed jobs,” but many of them are in the “currently non-regular workers” group. However, the implementation rate of self-development among “currently non-regular workers” tends to increase gradually with age. The “currently non-regular workers” group includes those who have been continuously employed as non-regular workers, but there are also many cases in which they have left regular employment and then re-entered the workforce as non-regular workers. “Regular workers having changed jobs” and “currently non-regular workers” have in common that they are out of the conventional scenario of women’s advancement in the workplace, and it is suggestive that the implementation rate of self-development tends to increase in middle and older age for both of these groups.

V. Discussion

1. Major findings and consideration

The findings of this study can be summarized as follows. First, the implementation rate of the “interaction type” of self-development is higher in the middle and older age than in the young and prime-age among married women (Table 1), and this is not due to career fluidity or job specialization (Figure 2, Table 4). Second, this tendency is observed among middle-aged and older married women who have changed jobs and are currently working as regular workers or who are currently working as non-regular workers, and it is particularly pronounced in the former group (Figure 1, Figure 3, Table 5). These findings support the hypothesis of this study that “middle-aged and older female workers who have experienced career interruptions are more likely to engage in self-development than female workers in their young and prime-age.”

Although previous studies on the third stage of women’s life cycle showed the finding that “women are more motivated to engage in learning and work in the post-parenting and middle and older age periods,” the analysis in this study shows that heterogeneity according to marital status and career type was observed for the increase in women’s motivation to engage in autonomous skill development in the middle and older age. The motivation to engage in autonomous skill development increases with age among married women who are “regular workers having changed jobs” and those who are “currently non-regular workers.” Indeed, since these two groups have deviated from the normative career model of “long-term service in the same organization,” it may be difficult to expect them to be promoted in their middle and older age as a consequence of their career in the same company, which is the conventional scenario for women’s advancement in the workplace. However, women in these groups become more motivated for autonomous skill development in their middle and older age, and based on this, a different scenario for women’s advancement in the workplace can be considered.

While previous studies on the third stage of women’s lifestyle have attributed this trend to the fact that “women in middle and older age experience the loss of their previously core social role of caregiving” (Amano 1979; Ochiai 2019), the results of this study can be interpreted as otherwise than the experience of loss of social roles. For example, if a mechanism is assumed in which the motivation to engage in autonomous skill development increases in the early stage of career formation, it is easy to understand the heterogeneity by career type described above. In the case of “regular workers having changed jobs” and “currently non-regular workers,” as it is typical for them to prioritize the caregiving role in their young and prime-age when they experience career interruptions

due to marriage, childbirth, and childcare, most of them can form their career in full swing in the post-parenting and middle and older age periods. In other words, while the duration of the overall career is shorter for women whose career has been interrupted, they may be more motivated to engage in autonomous skill development in their middle and older age because they enter the initial stage of career formation during this age period. Conversely, women who continue their career are assumed to be highly motivated to engage in autonomous skill development in their young and prime-age, which is the initial stage of their careers. This is consistent with the finding of this study that in the case of married women who are “regular workers continuing their first job,” the implementation rate of self-development is the highest before their 40s.

Of course, both of the above mechanisms are only based on interpretations. In this study, it was not possible to directly analyze the experience of career interruptions due to life events because of the limitation of data, i.e., not all career information was available. In the first place, not all career interruptions women experience are caused by life events. For example, it has been pointed out that among highly educated women, the reasons for leaving their first job are not only family factors such as marriage and childbirth, but also work-related factors, such as loss of career in the company or dissatisfaction with the job content and reward (Ouchi 2007; Osawa and Nho 2015). A future study is needed to examine the mechanism by which the phenomenon of “middle-aged and older female workers who have experienced career interruptions are more likely to engage in self-development than female workers in their young and prime-age,” which was shown in this study. Despite these limitations, this study is significant in that it presents a new path toward the advancement in the workplace of women whose career has been interrupted.

2. Policy implications

As discussed in Section II, today in the area of skill development of employees, emphasis is being placed on workers’ autonomous skill development. The MHLW’s “Guidelines to Promote Learning and Recurrent Education in the Workplace” state that in autonomous skill development, it is important for workers to actively engage in acquiring new abilities and skills through reskilling and recurrent education, and for companies to provide continuous support for this.¹⁷ According to the findings of this study, the most active in autonomous skill development are married middle-aged and older women who have experienced career interruptions. The importance of autonomous skill development has begun to be recognized in companies in relation to innovation creation, and as a specific form of implementation, “cross-boundary learning,” which means “individuals engage in learning and reflecting on content related to their own work and duties while going in and out of the boundary of the organization to which they belong,” is attracting attention (Nakahara 2012: 186). Specifically, “cross-boundary learning” includes voluntary study meetings held outside of the organization and self-development conducted outside of the company while interacting with various people, but it also includes occupational skill development outside of the “situation to which one conforms,” such as a department within a company or one’s usual work (Ishiyama 2018). According to the findings of this study, middle-aged and older women who have experienced career interruptions are more active in autonomous skill development, especially when it is conducted through personal involvement with others (“interaction type”). Therefore, in both the context of women’s advancement in the workplace and the context of skill development of employees, it is important for companies to create an environment in which autonomous skill development can take place through personal involvement with others, such as cross-boundary learning.

In recent years, attention has also been focused on how companies utilize human resources in the field of innovation, such as the launch of new businesses and services and the development of products and goods. While it is said that in such innovation, it is important for companies to carry out autonomous skill development, such as the above-mentioned cross-boundary learning (Iriyama 2019), the latest study points out that it is not mid-career hires but internally trained personnel who are handpicked for such core projects (JILPT 2022b). One of

the main reasons is that the existing evaluation axes in the external labor market are based on job type, and the potential of human resources is not fully evaluated. Therefore, in order to promote advancement in the workplace of female workers whose career has been interrupted, it is important to develop a mechanism to evaluate their potential, including their motivation to engage in skill development, in the external labor market.

Furthermore, it is important to increase the number of “regular workers having changed jobs” among those who have a life course of “being re-employed after career interruptions.” The implementation rate of self-development through “interaction type” significantly increases in the middle and older age among women who are “regular workers having changed jobs,” but not many women follow such career pattern in reality. The typical life course of “being re-employed after career interruptions” is still the career pattern for “currently non-regular workers,” and this career pattern has also deviated from the conventional scenario of women’s advancement in the workplace. Of course, the above-mentioned argument is applicable to “currently non-regular workers” because the implementation rate of self-development through “interaction type” significantly increases in their middle and older age. Women with such career pattern are expected to be more active in autonomous skill development if they are employed as regular workers.

This study shows that it is effective to focus on career formation through workers’ autonomous occupational skill development as one of the scenarios for the advancement in the workplace of women whose career has been interrupted. Autonomous occupational skill development of workers has already been discussed in the area of skill development of employees, and several measures have been implemented.¹⁸ Although these measures are aimed at all workers, in the context of women’s labor policy, it is important, especially in terms of positive action, to actively implement these measures for women with interrupted careers, who have tended to be regarded as receiving low expectations of playing an active role as core human resources in the company.

Finally, I will discuss the impact of the policy implications of this study in light of future social changes in Japanese society. Although this study focuses on women with interrupted careers who have deviated from the conventional scenario of women’s advancement in the workplace, it is assumed that the number of such women will decrease not only due to the impact of future women’s labor policies but also due to social changes, such as the declining birthrate and the tendency to never marry or marry late. Optimistically, if women are less likely to experience career interruptions due to life events as a result of the tendency to never marry or marry late, more women will follow the normative career model of “long-term service in the same company,” in which case the conventional scenario of women’s advancement in the workplace will become more effective. However, as mentioned as a limitation of this study, women experience career interruptions for various reasons, and interruptions may occur for reasons other than life events. Regardless of the reason, if women experience career interruptions, they will still deviate from the conventional scenario of women’s advancement in the workplace. Therefore, it is necessary to have an alternative plan in case they fail to follow the scenario of career internalization for any reason. By focusing on the increase in the motivation to engage in autonomous occupational skill development among women whose career has been interrupted, as indicated in this study, a new horizon for women’s advancement in the workplace will be opened.

This paper is a translation of the author’s paper “*Shūgyō chūdan josei no josei katsuyaku e no michisuji: Chūkōnenki no josei no jiritsuteki shutaitekina nōryoku kaihatsu iyoku ni chūmoku shite* [Advancing women with interrupted careers: Focusing on women’s motivation for autonomous skill development during middle age and older]” submitted to and published in the *Japanese Journal of Labour Studies* (Vol.65, No.760, November 2023) with some additions and amendments in line with the gist of *Japan Labor Issues*.

Notes

1. A recent study has shown that the trade-off between childbearing and career has been eliminated in younger cohorts (born in the 1970s and later) (Moriizumi and Nakamura 2021).
2. “Advancement through career internalization” mentioned here means that female workers are treated in the same way as male workers at all stages of employment management, continue to work in a way in which they can balance work and family even when facing life

- events such as marriage, childbirth, and childcare, form stable careers within the company, and as a result play an active role as core human resources (e.g., in managerial positions) within the company.
3. Note that in this study, “long-term service in the same organization” is regarded as a “normative career model” not in the sense that it is considered desirable according to general moral standards, but in the sense that a career based on “long-term service in the same organization” is considered desirable in typical Japanese employment practices.
 4. Labor economists traditionally consider career interruption (job loss) to function as a signal of low productivity in the career-change market (Gibbons and Katz 1991).
 5. This is the result of an analysis using the “lifeline method” in which the survey respondents were asked to look back on their work life and subjectively evaluate the ups and downs in their career by drawing a line on a survey sheet with age on the horizontal axis and plus-minus scale on the vertical axis (Shimomura 2013).
 6. Council for Designing the 100-Year Life Society. 2018. Basic Design for the Human Resources Development Revolution. <https://www.kantei.go.jp/jp/content/000023186.pdf>, accessed on August 18, 2023.
 7. MHLW. 2022. Guidelines to Promote Learning and Recurrent Education in the Workplace. <https://www.mhlw.go.jp/content/11801000/000957888.pdf>, accessed on August 16, 2023.
 8. Other large-scale social surveys include the SSM Survey (National Survey of Social Stratification and Social Mobility) and JGSS (Japanese General Social Surveys). However, the most recent SSM Survey was conducted in 2015. The JGSS is somewhat smaller than the “Survey of Working Life,” with a sample size of 4,000, although the most recent survey was conducted in 2018.
 9. Specifically, in response to the question (Q7-2) “In the past year, have you done any of the following as work-related self-development (voluntary education and training not directed by the company or workplace)?,” the respondents were asked to choose all items that apply.
 10. Specifically, respondents were considered to have changed jobs if they answered “yes” to the question (Q3-31) “Have you ever worked for another company before starting work at your current company?”
 11. The model is estimated using the logit command of Stata. The average marginal effect calculated by the margins command is used to confirm the effect of aging. The predictive values are calculated for each marital status per year in the age range of 25 to 64 years using the margins command. See Long and Freese (2014) for details on this analytical procedure.
 12. “Agriculture, forestry, and fishery workers” among job categories, and “Agriculture, forestry, and fisheries,” “Mining and quarrying of stone and gravel,” and “Electricity, gas, heat supply, and water supply” among industry categories are excluded from the analysis due to their extremely small sample size.
 13. For annual income, the top and bottom 2% of the distribution are coded.
 14. It is interesting to note that the implementation rate of the “self-study type” of self-development increases in the middle and older age for “currently non-regular workers” among unmarried men, who are often regarded as deviating from the typical career course as in the case of women whose career has been interrupted. However, the motivation to engage in occupational skill development among men is described to the minimum extent because it is not the subject of this study. I would like to examine this trend in future study.
 15. Predictive values are calculated for each age and marital status using the margins command of Stata, and the difference between the predictive values for married and unmarried in each age group is tested using the user-created command, the mlincom (in the spost13 package). For details, see Long and Freese (2014).
 16. Using the same procedure as in the preceding note, the significance of the difference between “regular workers continuing their first job” and “currently non-regular workers” is tested, with “regular workers having changed jobs” serving as the benchmark. The only combination that was significant at the 5% level was the difference between “regular workers having changed jobs” and “regular workers continuing their first job” at ages 62–64. This may be due to the large number of interaction terms in this model and the large standard errors of the estimated coefficients. Therefore, if a larger data set is used, the difference in predictive values would also be statistically significant.
 17. See *supra* note 7.
 18. For example, the MHLW has established the Education and Training Benefit System to pay for workers’ autonomous occupational skill development, and the “Career Formation and Relearning Support Center” where workers can receive support from career consultants and other specialists.

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Appendix Table. Descriptive statistics values

Variables	N	mean	sd	min	max
Interaction type of self-development	1857	0.2299	0.4209	0	1
Age (centered at the age of 45)	1857	0.8745	10.3175	-20	19
Married dummy	1857	0.6731	0.4692	0	1
Career type					
Regular workers continuing their first job	272	0.1465			
Regular workers having changed jobs	515	0.2773			
Currently non-regular workers	1070	0.5762			
Education					
Graduate from senior high school or lower education	716	0.3856			
Graduate from professional training college, junior college, or college of technology (KOSEN)	746	0.4017			
Graduate from university or higher education	395	0.2127			
Company size					
Less than 30 employees	472	0.2542			
30–99 employees	334	0.1799			
100–299 employees	286	0.1540			
300–999 employees	281	0.1513			
1,000 employees or more; government offices and public enterprises	484	0.2606			
Length of service (centered at five years)	1857	3.8681	8.8367	-5	37
Annual income	1857	244.2999	186.0202	70	1100

Appendix Table. Descriptive statistics values (continued)

Variables	N	mean	sd	min	max
Working hours					
Less than 35 hours	708	0.3813			
35–45 hours	706	0.3802			
45–55 hours	335	0.1804			
55 hours or more	108	0.0582			
Intention to continue working for current job					
Want to continue working	920	0.4954			
Don't want to continue working	376	0.2025			
Don't know	561	0.3021			
Job change orientation dummy	1857	0.2041	0.4031	0	1
Job change preparation dummy	1857	0.1309	0.3373	0	1
Job satisfaction dummy	1857	0.6780	0.4674	0	1
Unemployment anxiety dummy	1857	0.1691	0.3749	0	1
Job type					
Clerical	576	0.3102			
Managerial	24	0.0129			
Professional/technical	401	0.2159			
Sales (sales representative)	43	0.0232			
Sales (retail salesperson)	194	0.1045			
Services	349	0.1879			
Manual workers	270	0.1454			
Industry					
Manufacturing	255	0.1373			
Construction	38	0.0205			
Information and communications	28	0.0151			
Transport and postal services	46	0.0248			
Wholesale and retail trade	313	0.1686			
Finance and insurance	98	0.0528			
Real estate and goods rental and leasing	21	0.0113			
Professional and technical services	48	0.0258			
Accommodations, eating and drinking services	135	0.0727			
Services, N.E.C.	121	0.0652			
Education, learning support	152	0.0819			
Medical, health care and welfare	528	0.2843			
Government	74	0.0398			

Source: Prepared by the author based on JILPT “Survey on Working Life.”

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