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A comparison of white-collar career development in the UK, Germany and Japan:

An empirical analysis focusing on managerial positions at large companies

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1. Introduction - Awareness of the Issues

The aim of this paper is to analyze the survey data (hereinafter, the 2021 UK-Germany-Japan Survey) conducted by the author on white-collar workers in the UK, Germany, and Japan, and to clarify the similaritiies and differences in career development among the three countries.[1] What are the characteristics of the career development of Japanese white-collar workers? It can be said to be an attempt to analyze the characteristics of Japan through a comparison with the UK and Germany based on empirical data. As Sato (2011; 2014) pointed out, during this period, against the backdrop of globalization and the knowledge economy, new career theories have emerged, represented by the protean career theory (Hall 1976; 1996), which is symbolized by the idea that "traditional careers are dead," and the boundaryless career theory (Arthur and Rousseau 1996; Sullivan 1999, etc.).

However, some believe that the traditional career of working for a specific organization for a long time and being promoted to a managerial position through repeated transfers and promotions still has a strong vitality (MacDonald, Brown and Bradley 2005; Baruch 2006; Hamori and Kararika 2009; Vinkenburg and Weber 2012, etc.). For example, Dries and Peperman (2008) derived from interview surveys that "high-potential careers" are those who have little tendency to move to other companies, and rather want to be promoted within a specific organization.

In addition, in Japan, the characteristics of the Japanese employment system have been characterized as a membership-type system, and discussions have begun to be seen in comparison with the Western job-type system (Hamaguchi 2013). International comparative research on management positions has also been conducted with the possibility of transferring job-type employment to Japan in mind (Kume and Nakamura 2020). Although the membership-type and job-type are concepts that are based on the employment system, they are also related to the mechanism

of career formation. In other words, in the membership-type, which does not limit job duties, a career that is fixed at a specific company based on new graduate recruitment, transfers and promotions, and in the job-type, which limits job duties, a career that is based on recruitment on an ongoing basis and job-specific careers can be envisioned.

Which of the traditional career theory and the new career theory, and the membership-type and job-type that have emerged while intersecting with them, better grasps the reality of Europe, the United States and Japan?Further progress in future research on this point is expected.

What should not be overlooked here is that although there is certainly a certain amount of empirical data on the actual career development of white-collar workers working for Western and Japanese companies, it is not necessarily sufficient.

For example, Sato (2019) conducted a web survey (2018 UK survey) targeting white-collar workers in the UK using a previous international comparison survey framework. However, the data for Japan is limited to comparison with past survey results. There is a study by Evans et al. (2002) that clarified the careers of white-collar workers in three countries, the UK, Germany, and Japan, but this also mainly presented a theoretical model, and the verification by empirical data supporting it cannot be said to be sufficient. Empirical analyses have been attempted by Storey et al. (1997), Stewart et al. (1997), Koike and Inoki (2002), and Dovoine and Ravasi (2013). Storey et al. (1997) looked at the UK and Germany, Stewart et al. (1994) looked at the UK and Germany, Koike and Inoki (2002) looked at the US, Germany, and Japan, and Dovoine and Ravasi (2013) looked at France, Germany, the UK, and Switzerland. The classic work Dore (1973/1993) looked at the UK and Japan, but did not examine white-collar career development itself. In other words, it is fair to say that there is almost no empirical international comparative research on white-collar careers, particularly of managerial positions in the UK, Germany, and Japan. This paper aims to fill that gap as much as possible.

This paper is structured as follows. Section 2 provides a survey of international comparative research on white-collar career development. Section 3 summarizes the issues to be considered in this paper and presents several hypotheses derived from previous research. Sections 4 to 6 analyze data from the 2021 UK, German and Japanese surveys. Section 4 attempts to compare the three countries in terms of job change experiences, the relationship between work and education and training, and vocational qualifications, while section 5 compares and analyzes the vertical and horizontal aspects of intra-organizational careers. Section 6 verifies the models of Evans et al. (2002) and Dovoine and Ravasi (2013), and section 7 compares the three countries based on factor analysis of career views. Section 8 considers desirable career paths, and section 9 provides an overall summary.

2. Survey of international comparative studies on white-collar career development

As mentioned above, international comparative studies on white-collar career development are not necessarily sufficient. Table 1 summarizes the objects and time periods of each study, as well as the main

Table 1. List of international comparative studies on white-collar career development

Authors and Publications	Survey objects and period	Main fact findings	Comment
Storey et.al. (1997)	Interviews and questionnaire surveys of eight large Japanese and British companies (two Japanese and British manufacturers, two banks, two large retailers, and two information service companies; a total of eight companies, 107 Japanese and 239 British people)	The differences between the UK and Japan in personnel management systems and in-house career plans and development mechanisms were clarified. Management development in the UK varies greatly between companies, whereas in Japan it varies little. The "success" of Japanese companies is not due to managers being highly motivated and satisfied with their work, but rather due to the integration of various employment-related systems. The UK approach is "sink or swim," and careers are "possessions" that individuals must find either internally or externally.	In Japanese companies, career management and management development are "embedded" in the company's career management (i.e., "company-led"). In the UK, although the company monitors performance, it is basically individual-led.
Koike, Inoki, and Sato, H. (2002).	Interviews and questionnaire surveys of managers (human resources, accounting, and sales department heads and section managers) from large companies in Japan, the United States, and Germany (1,567 people in Japan, 752 people in the United States, and 674 people in Germany)	Analyzing the vertical (promotion selection period) and horizontal (transfer range) of careers within an organization. In Japan, promotion periods are slower and the range of work experience is wider than in the United States and Germany. The implication is that the ability to respond to change and uncertainty is more efficient when the range of experience is wider.	It is said that having a "wide" range of work experience is effective in dealing with uncertainty, but no indicators for measuring this are specified. In addition, the model assumes that vertical and horizontal careers within an organization correspond to uncertainty. Differences between countries are merely a matter of the superiority or inferiority of the ability to deal with uncertainty, and do not explain the differences in systems and practices between countries.
Stewart他 (1994)	Interview survey of managers in the UK and Germany (10 managers from each of the technical, sales, and administrative/financial departments of a brewing company, insurance company, and construction company; a total of 30 people from each country)	In both Germany and the UK, qualifications are a driving force for careers within an organization, but in Germany, they make a difference in career velocity. In particular, a university degree can affect the speed of promotion. In the UK, this effect is weaker, and there are cases where non-university graduates are promoted faster than university graduates. However, there are also industries and companies in the UK where official qualifications are important. The UK cannot be said to have a higher job change rate than Germany, but there are more position changes.	There are many people with long tenure in both the UK and Germany. There are also many transfers in the UK (possible because jobs are not linked to qualifications). In Germany, people move less frequently. In the UK, people broaden their experience by moving, but in Germany, there is a tendency to emphasize expertise over experience (p. 62). In Germany, the concept of "management" is not clear, and there are few MBAs.
Davoine and Ravasi(2013)	Survey of global corporate leaders and top executives in France, Germany, the UK and Switzerland (272 people from 32 French companies, 177 people from 29 German companies, 266 people from 30 UK companies, 201 people from 20 Swiss companies)	Japan uses an elite cohort approach (a group of people who graduated from a certain university at the same time). Potential is identified through an elite pool or cohort recruitment. Long-term careers. Job rotation. Thorough training and evaluation. Egalitarianism. Potential is developed through transfers between departments and comparisons with peers. Germany uses a functional approach. Potential is identified through apprenticeships and trial recruitment. Elite recruitment with emphasis on doctoral degrees. Potential is developed through a functional (mountain climbing) career based on specialized knowledge. The UK uses managed development. Potential is identified without managing functions and there is little elite recruitment. Decentralized recruitment. Trial period of 5-7 years. Potential is developed through careful monitoring of high performance and training by staff.	The characteristics of the career paths of senior management in each country are described. Japan has a "classified university graduate cohort" approach, Germany has a vocational approach, and the UK has a "managed development" approach. Germany's apprenticeship system and emphasis on specialized knowledge are rooted in the dual system (VET) (i.e. the style of career management is complementary to VET).

Source: Author

findings, for Storey et al. (1997), Japan Institute for Labor Policy and Training (1997), Koike and Inoki (2002), Stewart et al. (1994), and Davoine and Ravasi (2013), which are references for this paper.

2.1 Storey et al. (1997)

Storey et al. (1997) is introduced in Sato (2017), so we will summarize the findings as necessary for the context of this paper.

First, looking at the educational level of managers and the age at which they first took up a full-time job, the proportion of university graduates was the highest in all Japanese and British companies, except for British banks. In addition, when comparing Japan and the UK, Japan has a higher proportion of university graduates and higher educational levels. Next, looking at the age at first job, in the UK, there are many managers who took their first job at age 18 or younger, but none at Japanese companies. Second, comparing the job-changing experience and length of service of managers between Japan and the UK, there are more managers who have changed jobs in the UK and their length of service is shorter.

However, there are also many managers in the UK who have only changed jobs, meaning they have no experience of changing jobs, with 88% of managers in banks, 76% in communications, and 58% in engineering, accounting for the majority.

Third, looking at the age at which managers first took up a managerial position, the UK is younger than Japan. In the UK, there are many managers under 26 years old, but in Japan there are none, and the majority are over 30 years old.

Fourthly, looking at the structure of manager career plans and management development (manager training programs), as we have already seen, many managers in the UK have changed jobs, but on the other hand, transfers between functions within the

company are rare (on the other hand, there are cases where there are many, so it should be noted that there are differences between companies). There are cases where the transfer procedure is an open recruitment method. What is important about MD's efforts is that in Japan, job rotation, transfers between departments, slow promotions, etc. are systematically implemented on the premise of long-term employment, and there is generally little difference between companies. In contrast, in the UK, there is a large difference between companies that are working on management development and those that are not. Examples of management development efforts include a company (BT) that matches upper management positions with internal human resources, and a company (Tesco) that makes department heads responsible for training their subordinates.

Fifth, the "success" of Japanese companies is not due to managers being highly motivated and satisfied with their work, but rather to the fact that their employment systems are integrated. The British approach is "sink or swim," with careers being something that individuals should discover inside or outside the organization (an individual's "property") (Storey et al.: pp. 228-229).

Sixth, management development in Japanese companies is "embedded" in corporate career management and is "company-led rotation." There are also examples in the UK of attempts to raise the employee base and management development in which the performance of managers above a certain level is individually monitored, but there are differences in the institutionalization efforts that are the premise of career management, with the rule being individual-led internal recruitment rather than company-led rotation.

2.2 UK survey by Japan Institute for Labor Policy and Training (1997)

Japan Institute for Labor Policy and Training (1997) conducted a comparative study of Japan and the UK using large companies as examples. The results of the study on the career development of mainly university graduates and white-collar workers revealed the following.

First, when the survey was conducted on whether or not employees had ever changed jobs, there were more employees in the UK who had. According to the case study, in the case of the accounting department of an established large manufacturer, all seven employees in the Japanese accounting department had never changed jobs, while all eight employees in the UK accounting department had changed jobs.

Second, looking at the breadth of careers, that is, the range of horizontal movement, both in Japan and the UK are mostly confined to one job function, but in Japan it is slightly wider.

Third, looking at the timing of vertical movement, that is, the first selection period is later in Japan. Looking at the marketing department of a supermarket as an example, in the UK, the first selection period occurs 2-3 years after joining the company, and the actual selection period occurs 8-9 years after joining the company, that is, the plateau period when more than half of employees do not get promoted any further. In contrast, in Japan, both selection periods are much later than in the UK.

Fourth, in Japan, there are more people with ground work experience in factories, branches,

sales offices, etc. Fifth, looking at the intake point into the internal labour market, Japan, of course, hires new university graduates. Established large companies in the UK combine new school leaver and mid-career recruitment, but rapidly growing companies only hire mid-career employees and screen relying on occupational qualifications for selection.

2.3 Comparative survey of Japan, the US and Germany by Koike and Inoki (2002) and characteristics of Germany

The analysis of the questionnaire survey by Koike and Inoki (2002) was conducted as part of the research project of the Japan Institute for Labor Policy and Training (2-2), and Sato Hiroki (2002:249-267) summarized the results of the questionnaire version of the Japan Institute for Labor Policy and Training (1998) for the three countries of Japan, the US and Germany. The subjects of the survey were managers of large companies in Japan, the US and Germany (human resources, accounting and sales departments: 1,567 in Japan, 752 in the US and 674 in Germany). There is a case study from the UK, but it was not included in the questionnaire survey. Looking at the horizontal (range of transfers) and vertical (promotion selection period) of intra-organizational careers, Japan has the widest range, the US has the narrowest, and Germany is somewhere in between. As for the promotion selection period, Japan is the latest and the US is the earliest. Germany is somewhere in between.

Secondly, a case study of Germany suggests that career paths in Germany are narrower than in Japan (Inoki 2002: 244-245). Furthermore, a study using data from this project to compare sales career paths in Japan, the United States and Germany also concluded that the range of career paths in Germany is narrower (Honda 2001: 21-23).

Thirdly, based on the questionnaire surveys and case studies, it can be inferred that a wider range of experience is more effective in adapting to change and uncertainty (Koike and Inoki 2002: 40-53).

2.4 Comparison of the UK and Germany by Stewart et al. (1994)

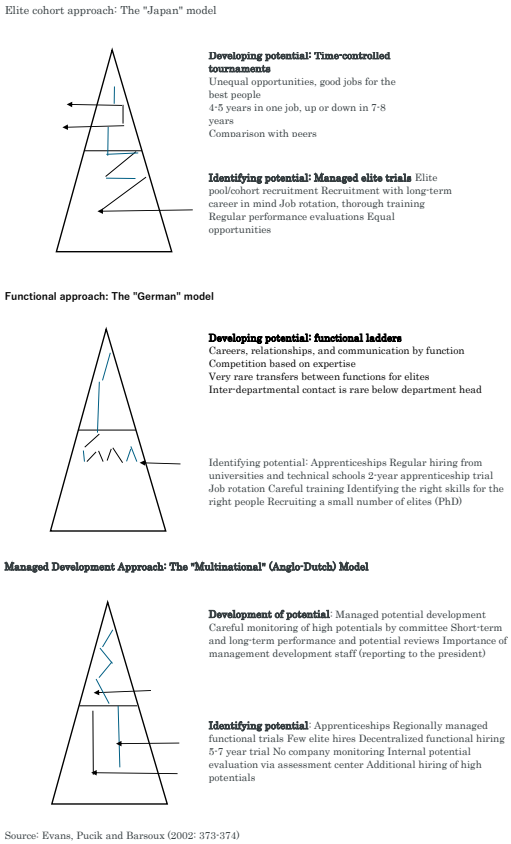
A valuable international comparative study of management positions is the UK-Germany comparison by Stewart et al. (1997). The subjects of the study were interviews with managers from the UK and Germany (10 managers from the technical, sales, and administrative/financial departments of a brewing company, insurance company, and construction company; a total of 30 from each country). The findings can be summarized as follows

First, while qualifications are a driving force for careers within an organization in both Germany and the UK, they promote career velocity more in Germany. In particular, a university degree affects promotion speed (consistent with Evans et al.'s point that there are many doctorates in management). In the UK, the effect of educational background is weak, and there are cases where non-university graduates are promoted faster than university graduates. However, there are industries and companies in the UK where public qualifications are important (Stewart et al. 1994: 54-55). Although the turnover rate in the UK is not higher than in Germany, the results show that people change positions more frequently (two-thirds of middle

managers in Germany have been in their current position for more than five years, compared to one-sixth in the UK) (Stewart et al. 1994: 60-61).

Secondly, what is useful for this paper is the horizontal career, that is, the range of transfers. According to this, there are many people who have been employed for a long time in both the UK and Germany, but in the UK there are more transfers (possible because jobs are not linked to qualifications), while in Germany there is less movement. In the UK, people move to a new position to broaden their experience, while in Germany there is a strong tendency to emphasize expertise over experience (Stewart et al.: 62). This is said to be influenced by the historical circumstances of Germany, where there was a weak tradition of studying "management, the act of managing something," compared to the deepening of academic expertise, and therefore there were few business school students with MBA courses (Stewart et al. 1994: 163-164).

Figure1 Three models for identifying and developing leadership



Source: Evans, Pucik and Barsoux (2002: 373-374)

2.5 International comparison by Evans et al. (2002) and Davoine and Ravasi (2013)

Evans et al. (2002) and Davoine and Ravasi (2013) attempted an international comparison of the careers of executive candidates and presented several models of leadership development. Davoine and Ravasi (2013) conducted a questionnaire survey of leaders and top management of global companies in France, Germany, the UK, and Switzerland (272 people from 32 French companies, 177 people from 29 German companies, 266 people from 30 UK companies, and 201 people from 20 Swiss companies) and modeled the results. Figure 1 illustrates Japan, Germany, and the UK by Evans et al. (2002: 372-376).

First, the characteristics of each country are modeled as follows. Japan is an elite cohort approach (a group of graduates from a brand-name university at the same time). Potential is identified through elite pool or cohort recruitment. Job rotation for long-term careers. Thorough training and evaluation. Strong egalitarian norms. Potential development is based on transfers between departments and comparisons with peer groups. Germany has a functional approach. Potential is assessed through apprenticeships and trial hiring. Elite hiring is often done with emphasis on doctoral degrees. Potential development is based on professional (climbing) careers based on

specialized knowledge. The UK has managed development. When assessing potential, there is little management of job functions and few elite hires. Recruitment is decentralized and a trial period of 5-7 years is set for hiring. Potential development is done by carefully monitoring high performers and developing them together with staff. This is the core of the Evans model.

Secondly, what is useful in light of the interest of this chapter is the description of the characteristics of the careers of upper management by country. According to this, Japan has a "class group of brand-name university graduates" approach, Germany has a functional approach, and the UK has a "managed development" approach. It is important to note that Germany's emphasis on apprenticeship and specialist knowledge has its roots in the German vocational education and training system, and modelling the UK as a "managed development" approach is consistent with Storey et al.'s (1997) management development work.

3. Points to consider and possible hypotheses

3.1 Points to consider

Based on the survey of previous studies in 2, the points to consider in this paper are as follows.

First, when elucidating the career development of white-collar workers, particularly those in managerial positions, it is important to clarify intra-organizational careers. Among these, Koike and Inoki (2002) provide a useful perspective. In particular, this study, which attempted an international comparison based on the vertical (timing of promotion) and horizontal (range of transfers) axes of intra-organizational careers and found Japan's characteristics in the system of "slow promotion" and "wide" transfers, is useful in light of the interests of this paper. This point is touched upon in Sato (2019), so we will not go into detail here. However, this study is not without issues. It is true that inferences are made about the relationship between the breadth of careers and uncertainty response. The substance of white-collar skills is divided into A routine and B non-routine, and B is further divided into skills that can be learned from Haba's wide field experience (BS) and comprehensive judgment abilities learned based on expertise (BG). Based on this, they infer that the strength of BG's skills is the "ability to respond accurately and quickly to fundamental changes," and that the development of this ability is efficient when one masters several "related (adjacent) fields" (Koike and Inoki 2002: 47-52). However, there has been no actual verification as to whether those who have worked in such "related fields" have acquired the "ability to respond to change" (such as by preparing some kind of measure for the ability to respond to change and analyzing the relationship with career breadth). In the days when Japanese companies performed well and were internationally competitive, perhaps it was assumed without verification that "Japanese companies perform well. If you look at the career breadth of their managers, it is broad. Therefore, if the career breadth of managers is broad, their performance (ability to judge change) is also good." However, today, when the decline in the international competitiveness of Japanese companies is pointed out, this assumption is by no means self-evident. Also, if

there are differences in career breadth depending on the country, and if the career breadth of other countries is narrower than that of Japan, then the ability of managers in other countries to respond to uncertainty will be inferior, and the background factors behind the narrower career breadth than in Japan will also become an issue to consider.

Secondly, in relation to the analysis of career breadth, the breadth of transfers and transfer procedures are important. In order to widen the breadth of transfers in intra-organizational career development, it is a prerequisite that the main body of career management is in a position to manage the careers of each individual. In that sense, this is related to the issue of whether white-collar career development should be a company-led job rotation system or an individual-led open recruitment system. According to Storey et al. (1997: 92), career management and management development in Japanese companies are "embedded" in the company's career management (in that sense, the company owns the individual's career). This suggests that the career development of Japanese white-collar workers is company-led. On the other hand, in the UK, there are few transfers that go beyond the scope of a job function, and it has been pointed out that this is difficult once a certain level is reached (Storey et al. 1997: 75-76). In some cases, open recruitment is used below a certain level, but succession plans are in place for those above a certain level (Storey et al. 1997: 60). Overall, although there are a number of cases of individual-led projects using open recruitment methods, the evidence is insufficient and these points will need to be examined.

Thirdly, in terms of understanding the characteristics of career development in the UK, Germany and Japan, which is the focus of this paper, the international comparison by Evans et al. (1989) and Davoine and Ravasi (2013) based on Evans et al. (1989) is useful. According to this comparison, Japan has a "college of branded university graduates" approach, Germany has a vocational approach, and the UK has a "managed development" approach. Of these, the German vocational approach has a tendency to emphasize apprenticeship and specialized knowledge, and it is important to note that this is rooted in the dual system (German vocational education and training system in which classroom learning is done at school and practical training is done at the workplace). In fact, it has been pointed out that the career scope of German managers is narrower than that of Japanese managers (Honda 2001: 21-23; Koike and Inoki 2002: 244-245). This also suggests that the management development system for managers may be influenced not only by the relationship with the vocational education and training system located outside the company, but also by the relationship with the vocational education and training system located outside the company. This point is consistent with Stewart et al. (1997), who revealed the differences between the UK and Germany: in the UK, transfers broaden the scope of experience, while in Germany, there is a strong tendency to emphasize specialization over experience. Based on these findings, it is necessary to examine the characteristics of white-collar career formation in the three countries, including their relationship with education and training systems.

The fourth point is the compatibility of the new career theory with reality. As mentioned

at the beginning, the new career theory has been developed in a way that criticizes the limitations of traditional careers that aim for promotion within a specific organization. However, to what extent can we actually see reality that is compatible with the new career theory? It is also often thought that Japan's membership-based career is closer to traditional careers (in the sense that it has an orientation toward promotion within a specific organization), while Europe and the United States are different because of their job-based careers, but there has been insufficient verification of the validity of this theory with empirical data. For example, it is necessary to consider to what extent the career views of white-collar workers in the UK, Germany and Japan correspond to the new career views assumed by protean career and boundaryless career theories - including whether Japanese white-collar workers, whose careers are closer to traditional careers, can be said to have weaker career autonomy as assumed by new career theories.

4. Analysis of the 2021 UK-Germany-Japan Survey Data (1) - Sample Composition, Job Change Experience, and Relationship between Work and Education and Training

4.1 Sample Composition of the 2021 UK-Germany-Japan

Comparative Survey In sections 4 to 6, we analyze the data from the 2021 UK-Germany-Japan Survey conducted by the author. We would like to clarify the actual situation of career development (mainly within organizations) and employment attitudes of white-collar employees (including large corporate managers) in the UK, Germany, and Japan, and consider the characteristics of the three countries. When sampling, we ensured that each country had approximately the same proportion of people in their 20s to late 60s, and approximately the same proportion of gender, so as to avoid bias in age and gender. In addition, we tried to include as many managers, including section managers, department managers, and executives, and workplaces with an employee size of 1,000 or more as possible.

Table2 2021 UK-German-Japan Survey Sample Composition(%)

	UK	Germany	Japan
sample total	732	725	792
sex(male)	51.1	49.8	50.6
average age	late 40s	late 40s	late 40s
section manager	19	21.2	49.2
division manager	24.9	12.8	27.7
executive	7.8	5.9	16.3
number of employees of company 1000人or more	52.5	38.5	68.2
manager of large company	25.8	14.8	65.9

The resulting breakdown of the valid sample attributes by country is as follows (Table 2).

However, as shown in Table 2, the distribution differs by country, so in the analysis, we separately tabulate each question for each country's total and large corporate managers. Here, large company managers refer to section managers, department heads, and executives whose workplaces have more than 1,000 employees, and account for 25.8% of the British sample (732 people), 14.8% of the German sample (725 people), and 65.9% of the Japanese sample (792 people). In addition, the questionnaire design was based on Koike and Inoki (2002) and Sato (2018), which referenced it, so a comparative study is possible. However, since there are differences in the survey time

Table 3 Number of companies experienced

	UK(732)	large company manager	Geramny(725)	large company manager	Japan(792)	large company manager
1 company (current company only)	21.9	30.2	30.8	40.2	48.9	53.6
two campany	18.6	20.6	22.2	27.1	24.5	21.6
three company	17.8	20.1	20	18.7	15.5	14.6
four company	15.4	13.2	11.6	6.5	3.9	3.8
five company or more	26.4	15.9	15.3	7.5	7.2	6.3

Note: "Management positions at large companies" refers to section managers, department heads, and executives at companies with 1,000 or more employees.

and sample composition, they will not be included in the results of this analysis. Analysis and consideration will be attempted based on the results of the 2021 UK, German, and Japanese survey conducted at the same time using the same questionnaire. For a comparison with previous surveys, please refer to Sato (2018). Below, we will analyze the percentage of white-collar careers in the three countries who have changed jobs, the relationship between work and education and training, the horizontal (range of transfers) of intra-organizational careers, the vertical (time of promotion selection) of intra-organizational careers, and the career routes of executive candidates, and compare and consider the characteristics of each country.

4.2 Percentage of people who have changed jobs

The extent to which white-collar workers in each country have changed jobs provides useful information for understanding the actual state of white-collar career development in each country.

Table 3 shows the results of the 2021 UK-German-Japan survey. The UK has the highest number of job changes, followed by Germany, and Japan has the lowest number. Those who answered "one company" here mean that they joined the company immediately after graduating from school and have remained there to the present without changing jobs. The percentages are 21.9% for UK white-collar workers and 30.2% for large company managers, 0.8% for German white-collar workers and 40.2% for large company managers, 48.9% for Japanese white-collar workers and 53.6% for large company managers. From this, we can see that while more than half of Japanese white-collar workers are internally promoted to management positions after joining the company as new graduates, in the UK, this group is just over 20% (even 30% of large company managers), and in Germany, it is only 30% (even 40% of large company managers). This result can be said to be consistent with the possible hypothesis.

4.3 Relationship between work and education and training

Table4 shows the results regarding the relationship between work and education and training.

First, what do white-collar workers and large company managers in the UK, Germany, and Japan think has been useful in carrying out their current jobs? The top half of Table 4 shows the results. The following can be noted. Both Japanese white-collar workers and large company managers scored low on all of the following items (i.e., few people thought it was useful in their current jobs): "Off-JT provided by the company," "Content of education at the highest level of education," "Experience in a specific job within a specific occupation," "Experience in various jobs within that occupation," "Experience in other occupations within that occupation," and "Instruction and advice from superiors at work" (i.e., few people thought it was useful in their current jobs). Of these, the UK had high scores on all items

Table4 Survey results regarding the relationship between work and education

		UK(732)	large company manager	Geramny (725)	large company manager	Japan (792)	large company manager
Useful things in my current job1)	Content of the highest level of education	1.1	1.34	1.1	1.36	1.01	1.01
	Off-the-job training provided by the company	1.02	1.17	1.08	1.22	1.03	1.03
	Self-study or self-funded education and training	1.21	1.33	1.05	1.25	0.95	1.06
	Experience in various jobs within the relevant occupation	1.51	1.53	1.36	1.39	1.22	1.25
	Specific work experience within the relevant occupation	1.51	1.62	1.32	1.3	1.13	1.13
	Experience in other occupations within the relevant occupation	1.28	1.26	1.19	1.21	1.07	1.09
	Guidance and advice from superiors at work	1.26	1.38	1.23	1.21	1.12	1.11
Use of learned knowledge2)	Flequency of use the knowledge and skills acquired during school?	55.2	74.6	58.3	72.9	48.1	46.3
Priorities for Recruitment3)	How important was it from the employer's perspective when recruiting: Faculty, department, or course type	54.7	69.3	58.3	79.5	48.1	56.5
	How important was it to the employer at the time of hiring: the prestige or reputation of the university or school	49.6	58.7	53.6	68.2	55.2	49.1
perceptions of occupation and workplace 4)	My current job is related to the education and training I received in my final year of education.	41.6	57.1	49.1	45.8	30.8	31.8
	In your country, obtaining a public professional qualification helps you advance your career.	48.4	48.4	61.6	52.3	36.2	36.2
	At your workplace, having a public professional qualification makes a difference in promotion.	38.1	52.4	45.5	45.7	23.5	25.1
	At your workplace, promotions depend on your highest level of education.	39.9	55	44.3	47.7	24.6	28.3

Note 1): Formula for calculating the index = (number of people who said "very useful" x 2 + number of people who said "somewhat useful" x 1 - "not useful at all" x 0) ÷ (number of people who said "total" - number of people who said "did not experience")

except for "Off-JT provided by the company" (same score as Germany), and Germany was between the UK and Japan.

Second, looking at the frequency of use of knowledge acquired at school, that is, how much they use the knowledge and skills they acquired while at school, Germany had the highest percentage of people who said they "use it frequently," followed by the UK and the lowest in Japan. The UK had the highest percentage of people who said they "use it frequently" among large company managers.

Thirdly, when asked what was important when being hired by their current employer, the percentage of both white-collar workers and managers of large corporations who answered that "type of faculty, department, or course" and "reputation of university or school" were "important" was highest in Germany, followed by the UK, and lowest in Japan. Fourthly, regarding their perceptions of their occupations and employers, the percentage of those who answered "yes" to each of the following statements was highest among white-collar workers in Germany, followed by the UK, and lowest in Japan: "your current job is related to the education and training you received in your final educational background," "in your workplace, obtaining a public professional qualification is useful for career advancement," "in your workplace, obtaining a public professional qualification makes a difference in whether you will be promoted," and "in your workplace, obtaining a public professional qualification makes a difference in whether you will be promoted," was highest among white-collar workers in Germany, followed by the UK, and lowest in Japan. Furthermore, the percentage of managers of large corporations in the UK who answered "yes" to each of the following statements was highest among white-collar workers in Germany, followed by the UK, and lowest in Japan. From the above, we can see that the perception that work experience within a company was useful is strongest in the UK, while the perception that obtaining professional qualifications makes a difference to career advancement and promotion is

highest in Germany, while Japanese white-collar workers and managers of large companies have the lowest perception of both.

5. Intra-organizational careers of white-collar workers and large-company managers

In the following, 5-1 will analyze the horizontal aspects of intra-organizational careers, that is, the scope of work experience, and in 5-2, the vertical aspects of intra-organizational careers, that is, the presence or absence of a fast track (a system for selecting executive candidates early) and the timing of promotion selection.

5.1 Horizontal intra-organizational careers - the scope and specialization of work experience (proportion of years of service in the longest-experienced occupation)

There were two questions about the horizontal aspects of intra-organizational careers. One was to grasp the scope of work experience in terms of the pattern of practical experience, and consisted of "I have always done one job/task in one department" (abbreviated as "always experienced one job in one department"), "I have worked in one department, but have experienced a wide range of jobs/tasks within that department" (abbreviated as "wide in one department"), "I have worked in several departments, but have experienced jobs/tasks that are closely related to my work" (abbreviated as "experienced related jobs in multiple departments"), and "I have worked in several departments and experienced a variety of jobs/tasks" (abbreviated as "experienced a variety of jobs in multiple departments"). The latter group is seen as having a wider range of transfer experience (Table 5). The other group is seen as having the longest years of functional experience as a percentage of years of service, and this percentage is divided into four categories: "25% or less," "26-50%," "51-75%," and "76% or more." The latter group is seen as having a narrower range of transfer

Table 5 The pattern of work experience (percentage)

		The pattern that most closely matches your work experience at your current workplace			
		one job or one task in one function	wide range of work and job experiences within one function	closely related work and tasks in several function	wide range of work experience in several function
UK(732)		36.7	42.1	12.4	8.7
	large company manager	32.8	45.5	13,2	8.5
Germany(725)		25.1	39.8	16.1	18.9
	large company manager	26.2	39.3	19.6	15
Japan(792)		26.1	35.4	22.1	16.4
	large company manager	23	34.3	26.2	16.5

Table 6 Proportion of years of experience with the longest function in terms of years of service (percentage)

		function in terms of years of service			
		25%以下	26～50%	51～75%	76%以上
UK(553)		4.9	11.7	16.3	67.6
	large company manager	4.8	13.9	12.8	68.4
Germany(359)		3.3	9.1	9.8	77.8
	large company manager	3.8	6.6	5.7	84
Japan(442)		6.7	13.9	18	61.4
	large company manager	6.6	14	17.2	62.2

experience (Table 6).

First, looking at the patterns of work experience for white-collar workers and large corporate managers in the UK, Germany and Japan, the most common pattern in each country was "broad in one department," with 42.1% of UK white-collar workers and 45.5% of large corporate managers. The figures were 39.8% for German white-collar workers and 39.3% for large corporate managers, and 35.4% for Japanese white-collar workers and 34.3% for large corporate managers. However, a closer look reveals differences among the three countries, with the proportion of those who said "narrow in one department" being the highest for UK white-collar workers and large corporate managers, followed by Germany and lowest in Japan. Conversely, the combined figures for "I have worked in several departments, but have experienced closely related tasks and duties" (hereinafter abbreviated to "I have experienced related tasks in multiple departments") and "I have worked in several departments and have experienced a variety of tasks and duties" (hereinafter abbreviated to "I have experienced a variety of tasks in multiple departments") were highest in Japan at 38.5% for white-collar workers and 42.7% for managers at large corporations, followed by Germany at 35.0% and managers at large corporations at 34.6%, and lowest in the UK at 21.1% for white-collar workers and 21.7% for managers at large corporations. From the above, it can be said that the range of transfers viewed in terms of patterns of work experience is narrowest in the UK, followed by Germany and widest in Japan.

Secondly, looking at the three countries, focusing on the ratio of the longest years of

Reference Table Proportion of years of experience with the longest function in terms of years of service (percentage)

	25%以下	26～50%	51～75%	76%以上
Japan	3	27.4	30.4	39.2
USA	1	14.7	18.7	65.6
Germany	3.6	13	25.4	57.9

Source: Koike and Inoki (2002)

experience in a specific occupation to the years of service, many people have "76% or more," which indicates a narrow range of work experience, but the highest percentage is 77.8% for white-collar workers in Germany and 84% for large company managers, followed by 67.6% for white-collar workers in the UK and 68.4% for large company managers, and the lowest in Japan at 61.4% and 62.2% for large company managers. On the other hand, the combined percentage of "25% or less" and "26-50%," which are considered to have a low level of experience in a specific occupation, in other words a wide range of work experience, is the highest at 20.6% for both white-collar workers and large company managers in Japan, followed by 16.6% for white-collar workers in the UK and 18.7% for large company managers, and the lowest at 12.4% for white-collar workers in Germany and 10.4% for large company managers in Germany. In other words, the range of work experience measured by this indicator is the widest in Japan, followed by the UK and the narrowest in Germany. As such, it is known that where each country ranks in terms of the range of work experience measured by these two indicators, Japan has the widest in both questions, while the UK and Germany vary depending on the question, with the UK having the narrowest pattern of practical

experience and Germany having the narrowest in terms of the ratio of years of functional experience to years of service.

Incidentally, Koike and Inoki (2002: 259) state the following about the longest years of functional experience as a percentage of years of service (Reference table).

Looking at this, the proportion of people with 76% or more in Japan was low at 39.0%, which was a low level of specialization, but in the 2021 UK-German-Japan survey, this figure had increased significantly to 61.4% (62.2% of managers in large companies), which is noteworthy as it is the same proportion as in the United States in Koike and Inoki (2002) (i.e., the range of experience has narrowed).

5.2 Vertical careers within an organization: presence or absence of a fast track, promotion selection period

The vertical careers within an organization will be analyzed from the presence or absence of a fast track and the promotion selection period. (1) Presence or absence of a fast track Table 7 looks at the presence or absence of a fast track. In the questions, a fast track was defined as "a career route for selecting future executive candidates (head office general manager positions and above) at an early stage after joining the company," and respondents were asked to choose whether or not it existed from "present at the time of joining the company," "present some time after joining the company," "not present," or "unknown." According to the survey, the percentage of white-collar workers who answered "present at the time of joining the company" was 18.6% (38.1% in large company management positions) in the UK, 15.6% (33.6% in large company management positions) in Germany,

Table7 Career path to select future executive candidates (general manager or above) (percentage)

		Do you think your company has a career path to select future executive candidates (general manager or above) early on after joining the company?				Total
		from the time joinee	some time after joining	not exist	not clear	
UK(732)		18.6	23.2	41.9	16.3	100
	large company manager	38.1	30.7	23.8	7.4	100
Germany(725)		15.6	47.6	23.7	13.1	100
	large company manager	33.6	48.6	14	3.7	100
Japan(792)		20.5	37.5	22.3	19.7	100
	large company manager	19.5	42.3	20.7	17.4	100

and 20.5% (19.5% in large company management positions) in Japan. Looking at the white-collar total, Japan has the highest percentage of people who answered "yes," but looking at the responses of managers at large companies, the highest is the UK at 38.1%, followed by Germany at 33.6%, with Japan having the lowest at 19.5%. One thing to note about the white-collar total is that, as shown in Table 2, the UK and Germany respondents work for more companies with fewer than 1,000 employees than Japan. It is thought that this is the reason why the percentages differ between the white-collar total and managers at large companies in the UK and Germany. For this reason, we believe that we should place emphasis here on the results of the responses of managers at large companies.

Looking at the results for managerial positions at large companies, the most common answer was "sometime after joining the company" in Germany at 48.6%, followed by Japan at 42.3%, with the UK having the lowest answer at 30.7%. "No" was the answer given by 23.7% in the UK, 20.7% in Japan and 14% in Germany. "Don't know" was the most common

Table 8 Promotion Selection timing (year)

		After how many years of employment do differences in promotions occur among same cohort	After how many years of employment do employees of same cohort have no chance of being promoted
UK(732)		4.05(7.89)	5.97(9.80)
	large company manager	4.11(4.63)	5.52(6.50)
Germany(725)		4.05(7.66)	6.03(9.46)
	large company manager	4.92(6.22)	5.99(7.72)
Japan(792)		5.47(4.93)	13.02(10.34)
	large company manager	6.29(5.14)	15.64(10.82)

answer in Japan at 17.4%, followed by the UK at 7.4% and the lowest in Germany at 3.7%. Incidentally, according to Koike and Inoki (2002: 264), the percentage of people who said that a fast track was "available from the time they joined the company" was 10.1% in the US, 9.9% in Germany and 3.4% in Japan, meaning that the number is increasing in both Germany and Japan.

(2) Promotion Selection Timing

Next is the promotion selection timing. The questions about promotion selection timing were, "After how many years of employment do differences in promotions between employees of the same senior level appear" (hereafter abbreviated as "the time when the first difference appears") and "After how many years of employment do employees of the same senior level no longer have any prospect of promotion" (hereafter abbreviated as "the time when the career plateau appears").

Table 9 shows the results. For "the time when the first difference appears," it was 4.05 years for British white-collar workers (4.11 years for large company managers), 4.05 years for German white-collar workers (4.92 years for large company managers), and 5.47 years for Japanese white-collar workers (6.29 years for large company managers). Additionally, the "time to emerge of a career plateau" was 5.97 years for British white-collar workers (5.52 years for managers at large corporations), 6.03 years for German white-collar workers (5.99 years for managers at large corporations), and 13.02 years for Japanese white-collar workers (15.64 years for managers at large corporations). From the above, Germany is slightly slower than the UK and Germany in terms of "the time when the first difference appears" and "the time to emerge of a career plateau." It can be said that Japan is "especially later than the UK and Germany in terms of the time to emerge of a career plateau."

5.3 Patterns of work experience and performance as ability to adapt to change

When analyzing the relationship between patterns of work experience and individual performance, the question is how to measure individual performance. In this paper, we decided to independently develop a nine-item scale (seven-point scale) that documents "ability to adapt appropriately to change" (Inoki 2002: 47-49) while using a scale for measuring innovative work performance (Janssen=Van Yperen 2004:376). Since it is difficult to grasp the "ability to adapt to change" itself, we asked about the "frequency of work performed in the organization or department." For example, if you frequently perform work that "puts into action decisions that affect the department or organization," you are considered to have the "ability to adapt to change."

Table 9 shows the results of an analysis of individual performance by patterns of work experience as the breadth of work experience. When looking at the work patterns by country and by work pattern, the shaded areas indicate the highest average values. In the UK, "having

Table 9 Ability to adapt to change according to work experience pattern

		Generate new ideas for improvement	Support decisions that affect the department or organizations	Find new methodsbtechniquebequipment available for work	Get approval for decisions that affect the department or organization	Implement decisions that affect your department or organization	Create unique solutions to problems	Systematizing innovative ideas	Get key organizational members excited about innovative ideas	Exercise thoroughness in applying decisions that affect the department or organization
one job or one task in one function	UK (269)	4.353	4.587	4.409	4.257	4.026	4.896	4.275	4.379	4.335
	Germany (182)	4.253	4.264	4.088	4.231	4.269	4.214	4.148	3.940	4.143
	Japan (207)	4.145	4.068	4.024	4.077	4.087	4.232	3.971	4.029	3.971
wide range of work and job experiences within one function	UK (308)	4.481	4.666	4.601	4.461	4.399	4.945	4.487	4.591	4.571
	Germany (289)	4.571	4.633	4.422	4.453	4.671	4.606	4.536	4.391*	4.547
	Japan (280)	4.364	4.293	4.257	4.346	4.311	4.307	4.214	4.161	4.125
closely related work and tasks in several function	UK (91)	4.451	4.648	4.418	4.407	4.363	4.835	4.352	4.429	4.527
	Germany (117)	4.256	4.479	4.274	4.154	4.342	4.453	4.214	4.128	4.265
	Japan (175)	4.869	4.978	4.672	4.657	4.964	4.956	4.701	4.314	4.606
wide range of work experience in several function	UK (64)	4.625	4.813	4.688	4.484	4.672	5.438	4.359	4.484	4.516
	Germany (137)	4.868**	4.978***	4.671**	4.657	4.963*	4.956***	4.700*	4.314	4.605*
	Japan (130)	4.353	4.346	4.238	4.362	4.346	4.446	4.146	4.138	4.162

Note 1: Average score of frequency of each task performed in the company or department on a 7-point scale [1: Never, 4: Undecided, 7: Always]. *p<.05 **p<.01 ***p<.001

Note 2: The markers indicate the row with the highest average value for each country [i.e., which work experience pattern has the highest frequency of each]. * indicates the significance of the difference from the lowest average value as a result of analysis of variance. *p<.05 p<.01 p<.001

Table 10 Performance by work experience pattern (analysis of variance)

	UK			Germany			Japan		
	Count	Mean	Significance of mean difference	Count	Mean	Significance of mean difference	Count	Mean	Significance of mean difference
one job or one task in one function	269	4.391		182.000	4.172	***	207.000	4.067	
wide range of work and job experiences within one function	308	4.578		289.000	4.537		280.000	4.264	
closely related work and tasks in several function	91	4.492		117.000	4.285	*	175.000	4.370	
wide range of work experience in several function	64	4.675		137.000	4.746		130.000	4.282	
	α =.944 mean=4.507			α =.952 mean=4.444			α =.973 mean=4.239		

Note: Factor analysis of the performance questions yielded one factor. The significance of the mean difference indicates the difference from the cell with the highest mean value. *p<.05 **p<.01 ***p<.001

experience in a variety of work roles in multiple departments" was the highest in seven out of nine items, and in Germany, "having experience in related work roles in multiple departments" was the highest in eight out of nine items. In Japan, "having experience in related work roles in multiple departments" was the highest in all nine items (the results of the analysis of variance in Germany were also significant). The higher the average value in each item, the more "able to adapt to change" it is considered to be, so it is possible to consider that those with a broader pattern of work experience are more "able to adapt to change" than those with a narrower pattern. In order to examine whether there are statistically significant differences between the nine items as a whole and the work practice patterns, the nine items were subjected to factor analysis and the factor means were examined using one-way analysis of variance, with the results shown in Table 10. According to Table 10, the mean value of those who had "experienced a variety of tasks in multiple departments" was significantly different from the mean value of other work practice patterns (for example, "experienced one task in one department") only in Germany, and there was no significant difference between the UK and Japan.

6. Identifying and developing leadership — verifying the Evans model

In 6, we verify the Evans model for identifying and developing leadership. The Evans model is a model for identifying and developing leadership talent, as shown in Figure 1. Identifying leaders here means identifying and finding talent with high potential. Developing leaders means developing talent with high potential. In Figure 1, the UK is classified as a managed development model. In identifying potential, the job function is not managed and there is little elite recruitment. Decentralized recruitment is carried out, with a trial period of 5-7 years. In developing potential, high performance is carefully monitored and developed by staff. Germany is a functional approach. In identifying potential, it is characterized by apprenticeship and trial recruitment, and elite recruitment with emphasis on doctoral degrees. In developing potential, it is a functional (mountain climbing) career that emphasizes specialized knowledge base. Japan is an elite cohort (group of

Table 11 Comparison of leadership identification and development in three countries

		Frequency	Mean	Standard deviation	significance
conducting apprenticeship and apprenticeship trials.	UK	732	3.133	1.5115	
	Germany	**725**	**2.623**	**1.3817**	**
	Japan	792	2.556	1.1331	**
	Total	2249	2.765	1.3695	
regularly hiring new graduates from universities.	UK	732	3.228	1.2796	
	Germany	**725**	**2.858**	**1.2983**	**
	Japan	792	3.155	1.2829	
	Total	2249	3.083	1.2959	
Build your career by job function (for example, if you are in the sales department, build your career in the sales department)	UK	732	3.286	1.2061	
	Germany	**725**	**2.957**	**1.2087**	**
	Japan	792	3.077	1.1053	*
	Total	2249	3.106	1.1795	
Competition is based on expertise and skills	UK	732	3.469	1.0961	
	Germany	**725**	**3.153**	**1.1211**	**
	Japan	792	3.003	1.0427	**
	Total	2249	3.203	1.1027	
We do not recruit elites to serve as executive candidates.	UK	**732**	**3.352**	**1.2093**	
	Germany	725	3.257	1.2283	
	Japan	792	3.119	1.1570	**
	Total	2249	3.239	1.2008	
Hiring is left to the functional department rather than the HR department	UK	**732**	**2.911**	**1.2506**	
	Germany	725	3.156	1.1784	**
	Japan	792	2.827	1.1217	**
	Total	2249	2.960	1.1908	
monitoring the performance of high potential employees.	UK	**732**	**3.318**	**1.1236**	
	Germany	725	3.116	1.1052	**
	Japan	792	2.952	1.0644	**
	Total	2249	3.124	1.1069	
Performance review is underway	UK	**732**	**3.918**	**1.1478**	
	Germany	725	3.353	1.2754	**
	Japan	792	3.006	1.0988	**
	Total	2249	3.415	1.2327	
Recruiting new graduates at the same time	UK	732	2.717	1.3348	**
	Germany	725	2.812	1.1673	**
	Japan	**792**	**3.069**	**1.2241**	
	Total	2249	2.872	1.2522	
Job rotation based on long-term careers	UK	732	2.783	1.2135	
	Germany	725	2.717	1.2003	*
	Japan	**792**	**2.922**	**1.0989**	
	Total	2249	2.811	1.1727	
There are transfers between multiple functions, such as from sales to human resources.	UK	732	2.885	1.2545	
	Germany	725	2.767	1.2358	**
	Japan	**792**	**2.980**	**1.1409**	
	Total	2249	2.880	1.2121	
Performance comparison among the same cohort	UK	732	3.026	1.1885	
	Germany	725	2.754483	1.1660	**
	Japan	**792**	**2.755**	**1.0490**	**
	Total	2249	2.843	1.1404	

Note 1: The numbers are the average scores on a 5-point scale: "1 Not at all true," "2 Not really true," "3 Can't say either way," "4 Somewhat true," and "5 Completely true."

Note 2: * indicates the significance of the difference from the country with the highest average (yellow). *p<.05 **p<.01 ***p<.001

graduates from a brand-name university) approach. To assess potential, cohorts are recruited from an elite pool and job rotation is carried out with the expectation of a long-term career. Detailed training is provided and evaluations are also conducted, but the approach is strongly egalitarian. Furthermore, potential development is based on the idea of transfer between departments and comparison of performance evaluations within the cohort. Twelve questions were set with a model characterizing the UK, Germany, and Japan in mind. The top four were thought to correspond to German characteristics, the next four to British characteristics, and the final four to Japanese characteristics. Table 12 shows the average values of the answers given by white-collar workers in the UK, Germany, and Japan to the questions set in this way (on a five-point scale from "1 completely different" to "5 completely true"). The in the right column of Table 11 indicates the significance probability of the difference from the highest average value obtained from the analysis of variance.

7. Career views of white-collar workers in the UK, Germany and Japan

7.1 Comparison of career views by factor analysis

New career theories such as protean careers and boundaryless careers assume a corresponding way of looking at and thinking about careers, that is, a certain career view. Attempts have been made to scale this career view. In Japan, following the scaling attempts of Briscoe, Hall and DeMuth (2006), attempts have been made to analyze the current state

of career autonomy in Japan (Takeishi and Hayashi 2013; Takeishi, Umezaki and Hayashi 2014, etc.[2]). The scales used in this paper are 9 of the 14 scales in total, including 8 self-direction scales and 6 value priority scales for the "protean career," with reference to Takeishi, Umezaki and Hayashi (2014: 92). In addition, 9 of the 13 scales in total, including 8 "boundaryless thinking scales" and 5 "preference for mobility scales," for boundaryless careers, were used. White-collar workers in the three countries were asked to answer a total of 18 items using a 5-point scale (1 for "not at all true" and 5 for "completely true"). Table 12 shows the results of an attempted factor analysis.

Factor analysis of the career view scale for white-collar workers in the UK, Germany, and Japan yielded the following results.

Exploratory factor analysis was conducted using SPSS on 18 questions regarding career views. Factor analysis was conducted using the principal factor method with varimax rotation, and based on the changes in the eigenvalues of the initial factor analysis and interpretability, it was determined that a three-factor structure was appropriate for the UK and Japan, and a four-factor structure was appropriate for Germany. The cumulative contribution rates were 63.47% for the UK, 65.45% for Germany, and 67.86% for Japan. The final factor pattern after varimax rotation is shown in Table 12.

The first factor for the UK and Japan was named "Protean" as it consisted of nine items relating to "whether or not you decide your own career" (reliability coefficient α for the UK = .879, mean 3.427; reliability coefficient α for Japan = .910, mean 3.052).

The second factor was named "boundary-

Table 12 Comparison of career views (factor analysis)

	factor (UK)			factor (Germany)				factor (Japan)		
	1	2	3	1	2	3	4	1	2	3
Looking back, when my company asked me to do something I didn't like, I basically followed my own values.	.471	.182	.230	.255	.195	.162	.464	.561	.255	.194
What matters most is your own career success, not what other people think.	.490	.151	.155	.253	.192	.259	.535	.701	.230	.171
Even if the company asks me to do something that goes against my values, I will follow my conscience.	.597	.252	.132	.296	.217	.201	.490	.619	.361	.238
Carve out a career by prioritizing your own priorities, even if it goes against the company or organization's wishes	.584	.135	.097	-.014	.040	.138	.536	.646	.148	.186
What's important is the career you think is right, not the company.	.619	.136	.088	.113	.112	.248	.580	.642	.201	.125
What matters most is your own career success, not what other people think.	.691	.317	.136	.220	.190	.562	.302	.563	.422	.261
The most important thing for me is to choose my own career.	.722	.322	.149	.194	.147	.774	.278	.670	.377	.195
Ultimately, your career advancement depends on you.	.731	.318	.148	.283	.186	.648	.337	.744	.363	.139
I've always been in control of my career.	.607	.243	.266	.250	.226	.657	.284	.638	.233	.163
I want the prospect of continuing to work at one employer	.299	.236	.707	.230	.687	.224	.133	.189	.167	.752
If there is such a thing as an ideal career, it is to continue working at one company.	.149	.151	.829	.201	.695	.244	.110	.202	.115	.754
If my current company guarantees me lifetime employment, I will never move to another company.	.098	.078	.772	.169	.749	.058	.144	.140	.105	.803
I think it's better to be part of a familiar company than to look for another job.	.217	.056	.685	.165	.685	.107	.184	.257	.177	.720
It's fun to work on projects with people from various organizations both inside and outside the company.	.309	.751	.141	.667	.253	.159	.168	.342	.756	.187
Working with people outside of my company is exciting	.304	.796	.069	.771	.135	.120	.171	.299	.782	.108
I enjoy work that requires me to communicate and coordinate with other departments, not just my own.	.242	.794	.195	.735	.280	.210	.166	.264	.788	.179
It's fun to interact with people from various companies.	.271	.818	.133	.792	.135	.208	.083	.316	.788	.167
I get excited when I am faced with a new experience or a situation that I have never experienced before.	.316	.710	.124	.729	.186	.228	.158	.369	.778	.131
Protean	α =.879	Mean3.427	1~5	Boundaryless thinking	α =.899	Mean3.423	1~5	Protean	α =.910	Mean3.052
Preference for mobility (reversed)	α =.862	Mean2.648	1~5	Preference for mobility (reversed)	α =.862	Mean2.632	1~5	Preference for mobility (reversed)	α =.874	Mean3.048
Boundaryless thinking	α =.921	Mean3.500	1~5	Value priority	α =.863	Mean3.391	1~5	Boundaryless thinking	α =.932	Mean3.182
				Self direction	α =.741	Mean3.230	1~5			1~5

Table 13 Basic statistics and correlation coefficients for each country's scale regarding career outlook

		N	Mean	Standard variation	①	②	③	④
the UK	①Protean	732	3.43	0.802	――			
	② Boundalryless thinking	732	3.5	0.931	.600***	――		
	③Preferance for moving firm	732	2.65	0.992	―.437***	―.347***	――	
					①	②	③	④
Germany	①Boundalryless thinking	725	3.42	0.93	――			
	②Preferance for moving firm	725	2.63	0.939	―.475***	――		
	③Value priority	725	3.39	0.902	.533***	―.463***	――	
	④Self direction	725	3.23	0.903	.470 ***	―.424 ***	.582***	――
					①	②	③	
Japan	①Protean	792	3.05	0.781	――			
	② Boundalryless thinking	792	3.18	0.927	.678***	――		
	③Preferance for moving firm	792	3.05	0.957	―.474***	―.383***	――	

less thinking" because it consisted of five items related to "whether or not one enjoys work that requires interaction with a variety of people both inside and outside the company" (reliability coefficient α in the UK = .862, mean 3.500; reliability coefficient α in Japan = .932, mean 3.182).

The third factor was named "mobility preference" by reversing the values because it of four items related to "whether or not one would continue to work for a particular organization for a long time" (reliability coefficient α in the UK = .862, mean 2.648; reliability coefficient α in Japan = .874, mean 3.048) .

The first factor in Germany was named boundary-less thinking (reliability coefficient α = .899, mean 3.423), and the second factor was named mobility preference (reversed) (reliability coefficient α = .862, mean 2.632). The third factor was named Self-Oriented (reliability coefficient α = 863. Mean value 3.391), and the fourth factor was named Value Priority (reliability coefficient α = .741. Mean value 3.230) .

When looking at the mean values of each factor, it can be said that a characteristic of Japanese white-collar workers' career outlook is that the mean values for Protean and boundaryless thinking are low, and that there is a high preference for mobility（Table13）.

7.2 Relationship between career outlook and performance: Cluster analysis

The characteristics of each cluster are as follows.

In the UK, the "first cluster (medium protean, medium boundaryless thinking, medium mobility preference)" with the average values of the three scales being in the middle range was 66.9%. The "second cluster (high protean, high boundaryless thinking, high mobility preference)" with high scores on all three scales accounted for 10.4%, while the "third cluster (low protean, low boundaryless thinking, high mobility preference)" with low scores on both protean and boundaryless and high mobility preference only accounted for 22.7%.

In Germany, 22.9% of respondents were in the "first cluster (medium boundaryless thinking, medium mobility preference, low self-orientation, low value preference)" with medium scores on boundaryless thinking and mobility preference and low on self-orientation and value preference, and 23.9% were in the "second cluster (medium boundaryless thinking, medium mobility preference, high self-orientation, high value preference)" with medium scores on boundaryless thinking and mobility preference and high on self-orientation and value preference. Furthermore, 37.4% of respondents were in the "third cluster (high boundaryless thinking, low mobility preference, high self-orientation, high value preference)" where boundaryless thinking, self-orientation and value preference were high, but mobility preference was low.

In Japan, 26.2% of respondents were in the "first cluster (high protean, high boundaryless

Table14 Comparison of career perspective factor scores by cluster in the UK, Germany and Japan

		Protean	Boundary less thinking	Preferanc e for moving to other firm		
UK	Cluster 1 (medium protean; medium boundary-less thinking; low mobility preference) n=490	3.6558	3.7751	2.1332		
	Cluster 2 (high protean; high boundaryless thinking; high mobility preference) n=76	3.9108	4.3105	3.9079		
	Third cluster (low protean; low boundaryless thinking; high mobility preference) n=166	2.5281	2.3169	3.5904		
		Boundary less thinking	Preferanc e for moving to other firm	Self direction	Value priority	
Germany	Cluster 1 (midium boundary-less thinking; midium mobility preference; low self-direction; low value priority) n=166	3.1687	2.7515	2.7696	2.8630	
	Cluster 2 (midium boundary-less thinking; midium mobility preference; high self-direction; high value priority) n=173	3.3896	2.9017	4.0795	3.6098	
	Cluster 3 (high boundary-less thinking; low mobility preference; high self-direction; high value priority) n=271	4.1011	1.8312	3.8164	3.6144	
	Cluster 4 (Low boundary-less thinking; High mobility preference; Low self-direction; Low value priority) n=115	2.2435	3.9391	2.2500	2.2848	
		Protean	Boundary less thinking	Preferanc e for moving to other firm		
Japan	Cluster 1 (high protean; high boundaryless thinking; low mobility preference) n=262	3.7150	4.0954	2.6622		
	Cluster 2 (low protean; low boundaryless thinking; high mobility preference) n=530	2.7237	2.7306	3.2387		

thinking, low mobility preference)" where protean and boundaryless were high, but mobility preference was low, while 66.9% were in the "second cluster (low protean, low boundaryless thinking, high mobility preference)" where protean and boundaryless were low, and mobility preference was high.

It should be noted that the proportion of the first cluster, where protean and boundaryless thinking, which indicate career autonomy, are high, and where there is a strong desire to stay at the current workplace, is just over a quarter of the total.

Table 15 Comparison of performance by cluster in the UK, Germany and Japan

		Generate new ideas for improvement	Support decisions that affect the department or organizatio n	Find new methods& techniques &equipment available for work	Get approval for decisions that affect the departme nt or organizati on	Impleme nt decisions that affect your departme nt or organizat ion	Create unique solutions to problems	Systemat izing innovativ e ideas	Get key organizat ional members excited about innovativ e ideas	Exercise thorough ness in applying decisions that affect the departme nt or organizat ion	Probabili ty of significan ce of difference in means of performa nce factors	Cluster total average values for performa nce factors (numbers in parenthe ses are for managers at large companie s)
UK	Cluster 1 (medium protean; medium boundary-less thinking; low mobility preference) n=490	4.751	4.945	4.784	4.627	4.537	5.210	4.676	4.764	4.788	4.79	
	Cluster 2 (high protean; high boundaryless thinking; high mobility preference) n=76	4.711	4.829	4.684	4.526	4.250	5.092	4.355	4.816	4.776	4.727	4.51 (4.85
	Third cluster (low protean; low boundaryless thinking; high mobility preference) n=166	3.410	3.687	3.645	3.590	3.542	3.916	3.518	3.416	3.410	3.570***	
Germany	Cluster 1 (midium boundary-less thinking; midium mobility preference; low self-direction; low value priority) n=166	4.108	4.187	3.946	4.012	4.187	4.114	4.000	3.795	3.946	4.033***	
	Cluster 2 (midium boundary-less thinking; midium mobility preference; high self-direction; high value priority) n=173	4.566	4.815	4.370	4.324	4.572	4.705	4.480	4.023	4.387	4.449***	4.44 (4.55
	Cluster 3 (high boundary-less thinking; low mobility preference; high self-direction; high value priority) n=271	5.162	5.240	4.996	5.015	5.240	5.103	5.052	4.923	5.111	5.094	
	Cluster 4 (Low boundary-less thinking; High mobility preference; Low self-direction; Low value priority) n=115	3.383	3.548	3.452	3.548	3.557	3.635	3.435	3.478	3.409	3.501***	
Japan	Cluster 1 (high protean; high boundaryless thinking; low mobility preference) n=262	5.676	5.580	5.412	5.489	5.464	5.569	5.137	5.187	5.187	5.401	
	Cluster 2 (low protean; low boundaryless thinking; high mobility preference) n=530	3.677	3.651	3.632	3.713	3.709	3.742	3.630	3.619	3.585	3.662***	4.20 (4.44

Note: The significance of the mean value of the performance factors is the significance of the difference from the maximum mean value. *** p<.0001

Table 15 shows the results of an analysis of the average performance by cluster for the three countries. Since only one factor was obtained as a result of the factor analysis of performance, the right side of the table shows the average value and the significance probability of the difference from the maximum average value obtained by the analysis of variance. The following can be noted from Table 15. First, in the UK, only the average values of the second cluster are high for "creating original solutions to problems" and "motivating key organizational members to become enthusiastic about innovative ideas," but the average values of all other items are highest in the first cluster and lowest in the third cluster. Second, in Germany, the average values of all items are highest in the third cluster and lowest in the fourth cluster. Third, in Japan, the average values of all items are highest in the first cluster and lowest in the second cluster. From the above, it can be said that the average performance values of the

Table 16 Desirable career path

		A course in which you work for one company for a long time and gradually move into managerial roles	A course in which you gain experience in several companies and gradually move into managerial roles	A course to work for one company for a long time and become an expert in a certain field	A course to gain experience in several companies and become an expert in a certain field	A course where you work first as an employee and then later as an independent worker	A course to work independently from the beginning	Neither	I don't know	Total
UK(732)		24.5%	27.9%	18.0%	15.7%	3.4%	1.2%	4.8%	4.5%	100.0%
	large company manager	29.6%	38.6%	9.5%	13.8%	1.6%	1.1%	4.2%	1.6%	100.0%
Germany(725)		26.5%	19.2%	29.9%	13.9%	2.9%	1.1%	2.5%	4.0%	100.0%
	large company manager	22.4%	33.6%	20.6%	12.1%	1.9%	1.9%	.9%	6.5%	100.0%
Japan(792)		28.9%	24.4%	13.8%	11.9%	3.8%	1.3%	9.7%	6.3%	100.0%
	large company manager	31.2%	25.7%	13.6%	12.1%	2.7%	1.0%	8.0%	5.7%	100.0%

clusters where self-direction and value-first (i.e., Protean) are high in Germany, and Protean and boundaryless thinking are high in Japan, and where mobility preference is low are high in Japan.

On the other hand, it can be said that the performance of the clusters where the Protean scale and boundaryless thinking are low and mobility preference is high is low in Germany, Japan, and the UK. If we consider Protean and boundaryless thinking as indicators of autonomous career consciousness, then we can say that clusters with high (low) autonomous career consciousness have high (low) performance. It is important to note that this was observed not only in Japan, but also in Germany and the UK.

8. Desirable career paths

What do white-collar workers in each country consider to be desirable career paths? Table 16 shows the results.

In the UK, white-collar workers and managers of large corporations most often take a course of "working at several companies and gradually moving into managerial work," while in Germany, white-collar workers most often take a course of "working at one company for a long time and becoming an expert in a certain job," while managers of large corporations most often take a course of "working at several companies and gradually moving into managerial work." And in Japan, white-collar workers and managers of large corporations most often take a course of "working at one company for a long time and gradually moving into managerial work." The differences between these three countries are not clear-cut, but we can point to some gradual characteristics: on the one hand, the UK, which prefers working at several companies before becoming a manager (career advancement at multiple companies), on the other hand, the UK, which prefers becoming a manager at one company (promotion to managerial position at a specific company), and in between, Germany, which prefers becoming an expert in a specific occupation at one company (expert in a specific occupation).

9. Conclusion

I will summarize the results of the analysis so far, based on the possible hypotheses presented in 3.2, and what has been verified and what has not been verified.

First, many managers in the UK are mid-career recruits who have experience of changing jobs. In contrast, many managers in Japan are new graduates and are promoted internally. Germany may be somewhere in between. This hypothesis was verified.

Second, "The professional significance of education in terms of what you learned at school is useful for your current job (professional relevance) is strongest in Germany, followed by the UK, and weaker in Japan." Regarding this hypothesis, the

percentage of people who said that "the content of their highest level of education" is useful in their current job was lowest in Japan, and highest in Germany. The "frequency with which they use what they learned at school in their current job" was also high. In that sense, the results were generally verified.

Third, "The extent to which obtaining public professional qualifications is useful for career advancement and promotion is high in Germany and the UK, but low in Japan." This hypothesis was verified. The perception that "obtaining public professional qualifications is useful for career advancement and promotion" was strongest in Germany, followed by the UK, and weakest in Japan.

Fourth, "In terms of horizontal careers within an organization, that is, the range of work experience, managers in Germany and the UK are more likely to specialize in a particular job function, while in Japan the range of careers is probably broader. Furthermore, compared to the UK, Germany may have a higher degree of job function specialization." This hypothesis was verified in the sense that the UK had a higher degree of specialization in terms of patterns of work experience than Japan, and Germany had a higher degree of specialization in terms of the proportion of the job function with the longest experience in terms of years of service than Japan.

Fifth, "In terms of vertical careers within an organization, or the timing of promotion selection, it is possible that in Germany and the UK, a route to become a candidate for management (fast track) is more likely to be adopted from the time of joining the company than in Japan. Also, the timing of promotion selection is probably earlier in the UK and Germany, and later in Japan." This hypothesis was verified based on the responses of managers at large companies, but was not verified in Japan for white-collar workers overall. Furthermore, the timing of promotion selection was earlier in the UK and later in Japan. Germany was also somewhere in between, so this finding was verified.

Sixth, "Regarding the relationship between the breadth of careers and the ability to adapt to change as an individual's performance, it is likely that those with a broad range of experience will be more involved in tasks involving making decisions and responding to change than those with a narrow range of career experiences." In the UK and Germany, those with a work experience pattern of "having experience in a variety of jobs in multiple departments" and in Japan those with "having experience in related jobs in multiple departments" were the most likely to be engaged in "tasks that affect the organization," but statistically significant results were only verified in Germany.

Seventh, "Regarding Evans et al.'s model for identifying and developing leadership, Japan would likely adopt the "classified university graduate cohort" approach, Germany the "functional approach," and the UK the "managed development" approach." Among the questions set based on this hypothesis, five showed significant differences in the analysis of variance: three characteristics of Japan, "New graduates are hired at the same time," "Job rotation is based on long-term careers," and "There are transfers between multiple functions, such as sales to human resources," and two characteristics of the UK, "The work of high-potential employees is monitored" and "Performance reviews are conducted." In that

sense, this hypothesis was verified for the UK and Japan, but not for Germany. Eighth, "The element of autonomous career consciousness emphasized in new career theories such as boundaryless career and protean career may be more prevalent in the UK and Germany than in Japan." As a result of factor analysis, three factors were extracted for Japan and the UK. Four factors were extracted for Germany. The average values for "protean" and "boundaryless thinking" were highest in the UK and lowest in Japan. In that sense, this hypothesis was verified. In addition, a cluster classification of career views based on the factors of the three countries was conducted, and it was found that there was a cluster with a high level of autonomous career consciousness in each country, and that this was related to performance.

It is also important to note that there is a correlation between levels of autonomous career consciousness and performance, and that this was observed in all three countries. Taking the above into consideration, the characteristics of the three countries in line with the main points of this paper (proportion of people with job change experience, relevance between work and education, scope of work experience), timing of promotion selection, and autonomous career consciousness as a career outlook) can be briefly summarised as follows (Table 17)

In the UK, the ratio of people with job change experience is high, the correlation between work and education is intermediate, the range of work experience (in terms of the ratio of the longest years of functional experience to years of service) is intermediate (or narrow in terms of the practical experience pattern), the timing of promotion selection is early, and the autonomous career consciousness is high. In Germany, the ratio of people with job change experience is intermediate, but the correlation between work and education is strong, the range of work experience (in terms of the ratio of the longest years of functional experience to years of service) is narrow (intermediate in the practical experience pattern), and the timing of promotion selection and autonomous career consciousness are intermediate between the UK and Japan.

In Japan, the ratio of people with job change experience is low, the correlation between work and education is weak, the range of work experience (in terms of both the ratio of the longest years of functional experience to years of service and the practical experience pattern) is wide (intermediate in the practical experience pattern), the timing of promotion selection is late, and the autonomous career consciousness is low. As mentioned at the beginning, the most basic interest of this paper

Table17 Charistaristics of white-collar worker's career formation in company in the UK, Germany and Japan(percentage)

	Ratio of people who have never changed jobs	Relationship between work and education[2]	Focus on new graduate recruitment [3]	Company-initiated placements and transfers[3]	Range of work experience (percentage of people with experience in multiple departments) [4]	Promotion selection period (career plateau emergence period) [5]	Autonomous career consciousness (mean value of Protean factor) [6]	Frequency of responding to changes[7]
UK	21.9 (30.2)	48.4 (48.4)	47.6 (55.7)	51.1 (56.3)	21.1 (21.7)	5.97 (5.52)	3.43 (3.44)	4.51 (4.85)
Germany	30.9 (40.2)	61.6 (52.3)	44.2 (56.9)	30.9 (50.4)	35.0 (34.6)	6.03 (5.99)	3.23 (3.16)	4.44 (4.55)
Japan	48.9 (53.6)	36.2 (36.2)	63.6 (71.3)	67.2 (72.6)	38.5 (42.7)	13.02 (15.64)	3.05 (3.10)	4.20 (4.44)

Note 1: The numbers in parentheses indicate large company managers (those at the section manager level or above at companies with 1,000 or more employees). The numbers in bold in parentheses indicate large companies (those with 1,000 or more employees).

Note 2: Percentage of people who answered "Completely true" or "Somewhat true" to the question, "In your country, obtaining public professional qualifications leads to career advancement"

Note 3: Percentage of respondents who answered "close" or "rather close"

Note 4: The total of those who answered "Experienced in several departments and experienced work closely related to their work" and "Experienced in several departments and experienced a variety of work" as work experience patterns

Note 5: Responses to the question, "After how many years of employment do employees of the same seniority have no chance of being promoted any further?" (unit: years)

Note 6: Of the factors obtained through factor analysis, the figures for the UK and Japan refer to the average value of the Protean factor, while the figure for Germany refers to the average value of the Self-Oriented factor.

Note 7: The average value of the factor analysis results (one factor was extracted) on the frequency of performing tasks that involve decisions that affect the department or organization (a seven-point scale with 1 "Never" to 4 "Can't say either way" to 7 "Always").

is in the characterization of the career development of Japanese white-collar workers. Based on the above summary, it is possible to characterize Japanese white-collar workers as having a weak connection between work and education, as developing long-term careers based on broad work experience and slow promotions at a particular company, and as having a low sense of autonomous career awareness.

In contrast, in the UK, white-collar workers have a high sense of autonomous career awareness and are promoted to managerial positions after gaining experience at multiple companies. Also, in Germany, it is possible to characterize white-collar workers as having a strong connection between work and education, as developing careers in line with specific occupations. This can be said to be broadly consistent with the desirable career paths envisioned by white-collar workers in the UK, Germany, and Japan.

Note

1 The survey data analyzed in this paper is a web questionnaire survey for the 2021 UK-Germany-Japan survey, and the selection of survey subjects, request for cooperation, and creation of raw data were entrusted to Cross Marketing Co., Ltd. (funded by the Grant-in-Aid for Scientific Research C Research Project "Comprehensive Study on Internal Labor Markets and Occupational Labor Markets" Project No. 21K01705, representative Sato Atsushi). The survey subjects were white-collar workers (executives, managers, professional and technical workers, clerical workers, and sales workers in the occupational classification) in the UK, Germany, and Japan, with a goal of more than 700 people per country (upper limit within the budget).

2 Takeishi, Umezaki, and Hayashi (2014: 92-93), who targeted employees of Company A in Japan, conducted factor analysis (maximum likelihood method, varimax rotation) on 14 items measuring protean careers and 13 items measuring boundaryless careers developed by Briscoe et al. (2006). As a result, two factors were extracted from the Protean career scale: eight items for "self-directed" and six items for "value-first," while two factors were extracted from the boundaryless career scale: eight items for "boundaryless thinking" and five items for "mobility preference." In this paper, the Protean in the UK and Japan as defined by Briscoe et al. (2006) was not divided into two categories, self-directed and value-first, so they were combined and referred to as "Protean." 3 The "desirable career course" in Table 14 was also analyzed by Sato (2019), but the original question was from the Japan Institute for Labour Policy and Training (2008).

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A comparison of white-collar career development in the UK, Germany and Japan: An empirical analysis focusing on managerial positions at large companies

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To clarify the commonalities and differences in career development among the three countries by analyzing the survey data (hereinafter abbreviated as 2021 English-German-Japanese survey) conducted by the author for white-collar workers in the United Kingdom, Germany and Japan. This is the aim of this article. As a result of data analysis, the following was clarified.

First, many managers in the UK have changed jobs after being hired mid-career. On the other hand, Japanese managers have a large proportion of new graduates hired and internally promoted. Germany is in the middle.

Second, Germany has the strongest vocational significance (professional relevance) of education in the sense that what it learns at school is useful for the current job, followed by the United Kingdom and the weakest in Japan.

Third, the degree to which the acquisition of public vocational qualifications is useful for career advancement and promotion is high in Germany and the United Kingdom, and low in Japan.

Fourth, horizontal career within the organization, that is, the range of work experience, managers in Germany and the United Kingdom are more likely to specialize in specific functions, but in Japan the range of careers is wide.

Fifth, the time for vertical or promotion selection of careers within the organization was early in the UK and late in Japan. Germany was in the middle.

Seventh, there is a possibility that the elements of autonomous career consciousness emphasized by new career theories such as boundaryless careers and protean careers are more common in the United Kingdom and Germany than in Japan. In addition, as a result of cluster classification of career views, it was found that there are clusters with high autonomous career awareness in each country, and that performance is related to them.

Based on the above, the characteristics of the three countries are based on the main points of this paper ,which wre ratio of people who have changed jobs, relationship between work and education, range of work experience), promotion selection time, and autonomous career awareness as a career

view. The following is a brief summary.

White-collar workers in Japan can be characterized by long-term career development based on a wide range of work experience and slow promotion at a specific company under a weak link between work and education, and low autonomous career awareness.

On the other hand, in the UK, white-collar workers with a high level of autonomous career awareness will be promoted to managerial positions while experiencing multiple companies. In addition, Germany could be characterized by forming a career tailored to a particular profession with a strong link between work and education.

And it can be said that this is almost consistent with the desirable career course drawn by the white-collar workers of Britain, Germany and Japan.