

*Repatriates' Knowledge Transferring Behavior in Multinational Companies:
A Comparison with Non-Repatriates, Focusing on Career Value, Career
Development, Communication with Overseas Affiliates, Creative Workplace,
Creative Work Behavior and Creative Outcomes¹*

Atsuko Yoshimura

INTRODUCTION

The knowledge repatriates acquire during their international assignments is a valuable resource for multinational companies (MNCs) (Oddou, Osland & Blakeney, 2009). Drawing on Berthoin-Antal's (2000) study, considered the first scholarly work on repatriates' knowledge-transferring behavior, Burmeister, Deller, Osland, Szukdlarek, Oddou & Blakeney (2015) highlighted that about half of the works are qualitative, among which there are few comparative studies between repatriates and non-repatriates (Yoshimura, 2020; 2021).

Knowledge transferring process research focuses on the relationship between knowledge transfer and knowledge recipients (Szulanski, 1996). The repatriates' knowledge-transferring process model suggests that recipients play an important role in repatriate knowledge transfer (RKT) (Burmeister, Deller, Osland, Szukdlarek, Oddou & Blakeney., 2015).

A comparative study between repatriates and non-repatriates may reveal new insights into RKT research, because they could be recognized as knowledge disseminators and receivers, both of whom are indispensable in knowledge-transferring behavior.

Repatriates' knowledge-transfer behavior in their home workplaces seems to have become more important after the COVID-19 pandemic. This could be because existing repatriates have a higher scarcity value than before the pandemic (Yoshimura, 2020; 2021).

¹ The author gratefully acknowledges the Japan Society for the Promotion of Science for providing grant-in-aid for scientific research.

This study is the third in a series on repatriates and non-repatriates employed at MNCs' head offices in the home country and knowledge-transferring behavior related to variables for research and development (R&D) workers. The first study examined differences between repatriates and non-repatriates in terms of demographics, types of knowledge transfer behavior, and knowledge exchange networks. The second research dealt with the differences between repatriates and non-repatriates in terms of motivation, job characteristics, and perceived human resource management practices.

This study focuses on career values, career development, communication with overseas affiliates, creative workplaces, creative jobs, and creative outcomes of R&D workers.

This study attempts to examine the differences between repatriates and their non-repatriates colleagues, at MNCs' head offices in the home country on related variables of knowledge transfer behavior.

First, R&D repatriates' career-, communication-, and creativity-related variables have not been sufficiently researched. If this study can identify these variables, it would advance our understanding of RKT behavior. Second, RKT studies comparing knowledge-sharing behaviors of repatriates and their non-repatriates colleagues at MNCs' head offices remain limited. Such a comparative study contributes to our understanding of whether there are differences in knowledge transfer behaviors between repatriates and non-repatriates (Yoshimura, 2020; 2021). These results may then advance our understanding of the knowledge transfer behavior of R&D repatriates in the workplace.

Repatriates' career value

A career can be recognized as a sequence of work experiences over time (Arthur & Rousseau, 1996, p.3).

Career success can be described as the accomplishment of desirable work-related outcomes at any point during a person's work experience (Arthur, Khapova, & Wilderom, 2005, p. 179). Even within their companies, repatriates may accept overseas assignments, implying that repatriates prefer careers across boundaries or take the risk of changing their work environment, compared to non-repatriates.

A boundaryless career can be viewed as "independence from, rather than dependence on, traditional organizational career arrangements" (Arthur & Rousseau,

1996, p.6.). Boundaryless careers are the opposite of “organizational careers” (Arthur & Rousseau, 1996, p.5). Thus, repatriates may prefer boundaryless careers more than non-repatriates. Accordingly, this study proposes Hypothesis H1-1.

H1-1. Repatriates prefer to move up their career more strongly through a change in company or internal transfer than do non-repatriates.

More precisely, the author examines:

H1-1-1. Repatriates want to improve their abilities and skills through a change in company or internal transfers more strongly than non-repatriates.

H1-1-2. Repatriates search for opportunities outside their company when they recognize there is no possibility of enhancing their skills and abilities in their current company.

H1-1-3. Repatriates want to work abroad more strongly than non-repatriates.

Repatriates are workers who decided to travel abroad. Thus, they may tend to self-decide and develop their careers. Repatriates acquire skills and abilities during overseas experiences (Berthoin-Antal, 2000). Indeed, even before going abroad, repatriates may have greater confidence in their communication and R&D skills. Thus, repatriates may prefer boundaryless careers more than non-repatriates. Thus, this study proposes Hypothesis 1-2.

H1-2: Repatriates are more confident about their career-related abilities than non-repatriates.

More precisely, the author examines:

H1-2-1: Repatriates trust their judgment when deciding on their careers more strongly than non-repatriates.

H1-2-2: Repatriates believe it is easy to find new jobs because of their abilities and extensive experience.

A protean career refers to a career style distinguished by frequent changes and autonomy. It is driven by the needs of the individual rather than of the organization (Hall, 2001).

Repatriates may have a stronger desire to pursue protean careers than non-repatriates, considering the former are more self-determining in developing their careers than non-repatriates. This study proposes Hypothesis 1-3.

H1-3: Repatriates are more eager to seek protean careers or acquire new career-related abilities than non-repatriates.

More precisely, the author examines:

H1-3-1: Repatriates are willing to acquire the skills demanded in the labor market, even if they are outside their specialty.

Repatriates' career development

Repatriates may be eager to learn and develop their R&D and management abilities. Accordingly, this study proposes Hypothesis 2.

H2: Repatriates learn and develop their work-related abilities and knowledge more actively than do non-repatriates.

More precisely, the author posits the following four hypotheses:

H2-1: Repatriates enhance their knowledge of R&D more actively than do non-repatriates through Off-JT.

H2-2: Repatriates improve their knowledge and management skills more actively than non-repatriates do through Off-JT.

H2-3: Repatriates enhance their knowledge of R&D more actively than do non-repatriates through Off-JT.

H2-4: Repatriates improve their knowledge and management skills more actively than non-repatriates during their free time.

Communication with overseas subsidiaries/affiliates

Research shows that repatriates want to be assigned jobs in which their overseas experience can be useful at the home workplace (Black, Gregersen, Menderhall & Stroh, 1999; Berthoin-Antal, 2000). Yoshimura (2020) found that repatriates had a larger social network size with overseas workers than non-repatriates. Thus, the author proposes Hypothesis 3:

H3: Repatriates working in workplaces that require more communication with overseas workers than non-repatriates are assigned jobs with more communication with overseas workers than non-repatriate jobs.

More precisely, the author examines the following four hypotheses:

H3-1: Repatriates and/or their colleagues in the workplace conduct more R&D activities that require cooperation with overseas subsidiaries/affiliates than non-repatriates.

H3-2: Workplaces with repatriates communicate with R&D personnel working in overseas subsidiary/affiliates more closely than non-repatriates.

H3-3: More R&D personnel are dispatched from overseas subsidiary/affiliates for training in repatriated workplaces.

H3-4: At the place where repatriates work, they share global R&D strategies and policies with overseas subsidiaries/affiliates.

Creative workplace

The relationship between knowledge and creativity has been theorized in recent decades (Weisberg, 1999). Knowledge-sharing research identifies a creativity-enhancing job design as a positive antecedent of knowledge-sharing behavior among R&D workers (Yoshimura & Tanaka, 2022).

Accordingly, the author proposes Hypothesis 4:

H4: Repatriates' workplaces encourage workers' creativity more strongly than non-repatriates' workplaces.

More precisely, the author examines the following four hypotheses:

H4-1: Repatriates perceive that their workplaces encourage workers' creativity more strongly than non-repatriates.

H4-2: A climate in which failure is not allowed exists less in repatriates' workplaces than in non-repatriates' workplaces.

H4-3: R&D resources are provided more sufficiently at repatriates' workplaces than at non-repatriates' workplaces.

H4-4: Repatriates are encouraged to communicate with employees in other workplaces more than non-repatriates.

Creative R&D behavior

Knowledge creation can be defined as producing new combinations of knowledge that did not exist before (Nahapiet & Goshal, 1998). R&D activities can be recognized as "sequences of knowledge creation" (Murakami, 2019, p.9); that is, R&D workers work for knowledge creation (Yoshimura & Tanaka, 2022).

Knowledge creation has three phases: recognition and acquisition of knowledge, transformation of knowledge in an individual/organizational context, and new linkages of acquired or transformed knowledge (Hosso, Becker-Ritterspach & Saka-Helhout, 2012).

Knowledge-sharing behaviors may be recognized as the first phase of knowledge

creation, followed by creative R&D outcomes (Yoshimura & Tanaka, 2022). Repatriates execute knowledge-sharing behaviors more frequently and have a larger knowledge exchange network than non-repatriates (Yoshimura, 2020). Thus, the author proposes Hypothesis 5:

H5: Repatriates behave more creatively than non-repatriates.

More precisely, the author examines four hypotheses:

H5-1: Repatriates come up with creative ideas more frequently than non-repatriates.

H5-2: Repatriates embody new ideas to realize them more frequently than non-repatriates.

H5-3: Repatriates come up with new solutions to problems more frequently than non-repatriates.

H5-4: Repatriates devise new ways of achieving their goals more frequently than non-repatriates.

Creative R&D outcomes as knowledge creation

The paper also proposes Hypothesis 6:

H6: Repatriates produce more creative R&D outcomes than non-repatriates.

More precisely, the author examines the following five hypotheses:

H6-1: Repatriates release more new products (including new models) than non-repatriates.

H6-2: Repatriates produce more patent applications than non-repatriates.

H6-3: Repatriates produce more patentable inventions than do non-repatriates; however, they do not apply for patents themselves.

H6-4: Repatriates write more academic papers than do non-repatriates.

H6-5: Repatriates write more academic papers in English than do non-repatriates.

METHODS

Procedure

This study analyzed data that were part of a larger dataset collated in 2015. The research team contacted several R&D companies, of which ten agreed to participate in the research project. A total of 751 participants completed the online or paper-based questionnaire, with a response rate of 44.1%. Seven MNCs with overseas R&D units, departments, and headquarters in Japan were selected. A total of 643 participants were selected, and the available data percentage was 42.2%. Data from 632 participants who

completed the main measures as required were analyzed.

Japan was selected for this study due to its long history of expatriation. To address concerns about the possible misuse of data, online and paper questionnaire instructions stated that the data would be treated as confidential and accessed only by members of the research team (Yoshimura, 2020; 2021).

Participants

A total of 632 R&D employees of MNCs met the knowledge criteria required for this study. Based on the accepted definition of repatriates—staff who had been dispatched overseas at least once—105 employees (16.6% of the 632 R&D workers)—were identified as repatriates for this research. The remaining 527 were considered non-repatriates who worked in R&D.

Yoshimura (2020,2021) developed a t-test on the demographics of repatriates and non-repatriates, which was similar to that used in this study. On average, the repatriates were 42.42 years old and had worked at their present company for 16.49 years; female participants accounted for only 1.9% of the total. In contrast, the non-repatriates were 39.1 years old on average and had worked at the company for 13.5 years; female participants accounted for 17.1% of the total.

In terms of responsibilities, 54.3% of the repatriates were in charge of research and 61.9% were in charge of development. Among the non-repatriates, 62.6% oversaw research and 59.8% oversaw development² or design. The participants worked in the following industries: manufacturing of transportation equipment (repatriates: 31.4%; non-repatriates: 7.8%), pharmaceuticals (repatriates: 29.5%; non-repatriates: 40.2 %), and manufacturing of electrical machinery, information, and communication electronics equipment (repatriates: 39.1%; non-repatriates: 52.0%) Yoshimura, 2020; 2021).

Measurement

Career value

To measure the career values of R&D workers, participants were asked what they thought about different career values, such as boundaryless and protean careers. The

² Multiple choices can be made on the scope of participants' current work. Therefore, the total of these percentages could exceed 100.

research group asked participants to rate CR1—CR6 on a scale ranging from 1 (disagree) to 5 (agree) (Table 1).

Career development

R&D workers were asked how many hours they spent last year in Off-JT or self-development to enhance their knowledge of R&D or improve their knowledge and skills in management and marketing. They were asked to choose from the following responses: 1 (0 h), 2 (less than 10 h), 3 (10 to less than 20 h), 4 (20 to less than 50 h), and 5 (50 h or more). The definitions are as follows: Off-JT refers to education and training conducted away from workers' ordinary work during working hours. Self-development refers to activities conducted to improve workers' abilities in their current jobs during their free time (Table 2).

Communication with overseas subsidiaries/affiliates

To measure the extent of communication with overseas subsidiaries/affiliates, participants were first asked whether they and/or other members of their workplace conducted R&D activities that required cooperation with an overseas subsidiary/affiliate. The ratios of responses to the instructions were calculated in repatriates (N=105) and non-repatriates (N=527) (Table 3-1).

Second, they were asked to what extent their workplaces apply to items COM1—COM3: communicating with R&D personnel overseas, dispatching R&D personnel from overseas for training, and sharing R&D strategies overseas. They could choose a response ranging from one from 1 (does not apply) to 5 (applies) (Table 3-2).

Creative workplace

The author asked participants how they felt about their workplace on four items: CWP1—CWP4: encouraging workers' creativity, climate where failure is not allowed, being provided with sufficient resources for R&D, and being encouraged to communicate with employees at other workplaces. They were also asked to rate these by choosing a response ranging from 1 (does not apply) to five (applies) (Table 4).

Creative work behavior of R&D workers

To measure the creative work behavior of R&D workers, participants were asked to

evaluate their behavior using four items, CWB1—CWB4: coming up with new ideas, embodying new ideas to realize them, coming up with new solutions, and proposing new ways to achieve their goals. They were also asked to rate these options by choosing a response ranging from 1 (does not apply) to five (applies) (Table 5).

Creative R&D outcomes.

The research group prepared five R&D achievements CRO1—CRO5: new products, patent applications, patentable inventions for which patents were not actually applied, and academic papers to measure creative outcomes of R&D workers. The participants were asked to specify the number of achievements in the last two fiscal years (Table 6).

Analysis

This study compared repatriates with non-repatriates based on career values, career development, communication with overseas affiliates, creative workplaces, creative R&D behaviors, and creative R&D outcomes using a t-test.

RESULTS

The first set of hypotheses examined career value, which refers to the recognition of workers' careers or their ability to work. Table 1 summarizes the results of H1-1: preference of transferring; H1-2: self-determination regarding career and confident about their abilities; and H1-3: acquiring new skills for marketability.

The results of CRV1 and CRV6 indicate that repatriates have a stronger preference for being transferred and going abroad, supporting H1-1-1 and H1-1-3. The results for CRV4 suggest that repatriates do not have a significantly stronger preference of searching for opportunities outside the company; therefore, H1-1-2 is not supported. H1-1 is, therefore, partially supported.

The results for CRV2 and CRV3 indicate that repatriates are not significantly more confident in their career-related abilities than non-repatriates. Consequently, H1-2-1 and H1-2-2 are not supported. Subsequently, H1-2 is not supported.

The results of CRV5 show that repatriates are not more willing to acquire the skills demanded in the labor market, even if they are outside their specialty than non-repatriates. Thus, H1-3-1, and consequently H1-3, is not supported.

Table 1. Career value

Career value	R(mean)	NR(mean)	t-value
CRV1. I want to improve my abilities and skills through a chance of company or internal transfer.	3.73	3.25	4.143***
CRV2. I respect my judgment when deciding my career rather than others' opinion and influence.	4.04	3.89	1.501
CRV3. I think it is easy to find a new job because of my abilities and extensive experience.	3.18	3.06	1.094
CRV4. I will search for an opportunity outside of the company when I recognize that there is no possibility of enhancing my skills and abilities with the present company.	3.42	3.26	1.354
CRV5. I am willing to acquire the skills demanded in the labor market even if they are outside of my specialty.	3.70	3.67	0.216
CRV6. I would like to work abroad if possible.	4.13	3.41	6.195***

R=Repatriates, NR=Non-repatriates, multiple answers

*** $p < .001$

The second set of hypotheses deals with R&D workers' Off-JT and self-development, which refers to how they improve their knowledge of R&D and the management of their careers. Table 2 summarizes the results of H2-1: enhancing knowledge of R&D by Off-JT; H2-2: enhancing knowledge of R&D during free time; H2-3: improving knowledge of management by Off-JT; and H2-4: improving knowledge of management during free time.

The results of three of the four items (SD2, SD3, and SD4) support H2-2, H2-3, and H2-4, indicating that repatriates learn R&D knowledge through self-development and improve management skills by Off-JT/self-development. Therefore, H2 is partially supported.

Table 2. R&D Workers' Off-JT and self-development

	R (mean)	NR (mean)	t-value
ROS1 Enhancing your knowledge of R&D and technological information by Off-JT.	2.60	2.43	1.213
ROS2 Enhancing your knowledge of R&D and technological information by self-development.	3.17	2.88	1.845 ⁺
ROS3. Improving your knowledge and skills in management and marketing by Off-JT.	2.27	1.95	2.401*
ROS4. Improving your knowledge and skills in management and marketing by self-development.	2.75	2.37	2.535*

R=Repatriates, NR=Non-repatriates, multiple answers, N101-104, 521-525

⁺p<.10, *p<.05

The third set of hypotheses considers overseas communication in repatriate workplaces. Table 3-1 describes the percentage of R&D workers who work in divisions with overseas subsidiaries/affiliates, indicating that a larger percentage of repatriates work in overseas workplaces than non-repatriates; thus H3-1 is supported.

Table 3-1 Working at division with overseas subsidiaries/affiliates

Working at division with overseas subsidiaries/affiliates	R (%)	NR (%)
Ratio of response to the instruction: If you and/or other members of your workplace conduct R&D activities that require cooperation with an overseas subsidiary/affiliate, please answer.	78.095	65.085

Tables 3-2 presents the results of hypotheses 3-2–3-4, indicating that repatriates communicate more closely with R&D personnel working in overseas subsidiaries/affiliates (H3-2); that R&D personnel are dispatched from overseas subsidiaries/affiliates for training more frequently at repatriates' workplaces than at non-repatriates' workplaces (H3-3); and repatriates share global R&D strategies and policies with overseas subsidiaries/affiliates more frequently than non-repatriates (H3-4).

It was found that repatriates work in places that require more communication with workers overseas than non-repatriates, thereby supporting H3.

Table 3-2. Communication with overseas subsidiaries/affiliates

	R (mean)	NR (mean)	t-value
CO1 We closely communicate with R&D personnel working in overseas subsidiary/affiliate.	4.01	3.56	3.401**
CO2 R&D personnel are dispatched from overseas subsidiary/affiliate for training.	3.17	2.67	2.755**
CO3. We share global R&D strategies and policies with overseas subsidiary/affiliate.	3.91	3.60	2.381*

R=Repatriates, NR=Non-repatriates, multiple answers, N81-82, NR342-343

*p<.05, **p<.01

The fourth set of hypotheses considers repatriates' perceptions of creative workplace climates. H4-1 predicts that repatriates' perceptions of workplace climate are more creative than non-repatriates' perceptions. Table 4 shows the results for H4-1, which indicates that repatriates' workplaces are more creative (CWP1). H4-2 predicts that repatriates' perceptions of workplace climate are more generous about trial and error than those of non-repatriates. However, the results for CWP2 show that repatriates perceive their workplace climate as one that does not allow failure more strongly than non-repatriates. Thus, H4-2 is not supported. Table 4 also shows the results of H4-3, which indicates that repatriate workplaces provide sufficient R&D resources, and H4-4, which predicts that repatriate workplaces are more encouraging to communicate with employees at other workplaces (CWP3; CWP4). However, these results show that repatriates perceive almost the same level of R&D resources and encourage communication with other workplace employees; thus both H4-3 and H4-4 are not supported. Table 4 shows that only H4-1 is supported, whereas H4-2, H4-3, and H4-4 are not supported. Therefore, H4 is only partially supported.

Table 4. Creative workplace

Creative workplace	R(mean)	NR(mean)	t-value
CWP1. My workplace strongly encourages workers' creativity.	3.35	3.16	1.665 ⁺
CWP2. There is a climate where failing is not allowed.	3.16	2.80	2.994**
CWP3. Sufficient resources for R&D (e.g., funds, time) are provided.	2.70	2.67	0.201
CWP4. We are encouraged to communicate with employees at other workplaces.	3.69	3.68	0.076

R=Repatriates, NR= Non-repatriates

⁺p<.10, **p<.01

The fifth set of hypotheses examines the creative behavior of R&D workers. Table 5 presents the results of hypotheses 5-1 to 5-4, indicating that repatriates embody new ideas to realize them more frequently than do non-repatriates (H5-2), and they propose new ways of achieving their goals (H5-4). Thus, the hypothesis is partially supported. Table 5 also presents the results for H5-1 and H5-3, indicating that repatriates come up with new ideas (H5-1) and new solutions (H5-3) at almost the same frequency as non-repatriates. Therefore, these hypotheses are not supported.

Table 5. Creative work behavior of R&D workers

⁺p<.10, *p<.05

Creative work behavior of R&D workers	R(mean)	NR(mean)	t-value
CWB1. I often come up with creative ideas.	3.29	3.23	0.498
CWB2. I often embody new ideas to realize them.	3.61	3.41	2.018*
CWB3. I often come up with new solutions to problems.	3.61	3.64	0.358
CWB4. I often propose new ways to achieve our goals.	3.60	3.44	1.797 ⁺

These the sixth set of hypotheses examine the creative R&D outcomes. Table 6 presents the results for hypotheses 6-1 to 6-4, indicating that repatriates produce more new products than do non-repatriates. Thus, H6-1 is supported. Table 6 also presents the results of H6-2, indicating that repatriates neither apply for more patents nor have more patentable inventions, compared to non-repatriates (H6-2). Therefore, these hypotheses are not supported.

Table 6. Creative R&D outcomes

Table 6. Creative R&D outcomes	R(mean)	NR(mean)	t-value
CRO1. The number of releases of new products (including new models).	1.39	0.54	3.847***
CRO2. The number of patent applications.	3.87	2.63	0.894
CRO3. The number of inventions that can be patented, but patents were not actually applied for.	0.82	0.71	0.439
CRO4. The number of academic papers.	1.49	0.97	1.249

***p<.001

DISCUSSION

This study describes the antecedents, mediators, and outcomes of RKT behavior by comparing repatriates' perceptions with those of non-repatriates, following Yoshimura (2020, 2021). To describe the factors of RKT behavior, this study's hypotheses were based on career- and work-related creativity.

First, the author expected repatriates to have a stronger preference to move across organizations (boundaryless career), change their job content according to market demand (protean career), and have more confidence in their career-related abilities. However, the results supported only one of the three hypotheses on repatriates' career value organizations. The repatriates do have a stronger preference to move organizations, internally or externally, and to go to overseas subsidiaries/affiliates.

Second, this study investigated repatriates' career development activities during both working and free hours. The results supported three of the four hypotheses, showing that repatriates acquire more knowledge of R&D during free time and obtain more knowledge of management/marketing during both on and off time. Marketability is a specific feature of a boundaryless career (Arthur & Rousseau, 1996). The results showed that both repatriates and non-repatriates are eager to acquire the skills demanded in the labor market, even if they are outside their specialty.

Third, this study expected repatriates to be assigned jobs that allow them to cooperate and communicate with overseas subsidiaries/affiliates more frequently than non-repatriates. The results supported all four hypotheses, showing that repatriates work in relatively more international circumstances than do non-repatriates.

Fourth, this study investigated repatriates' perceptions of creativity in the workplace. The results supported only one of the four hypotheses, showing that repatriates perceive

their workplace as more creative than do non-repatriates. Repatriates also perceive their workplace climate as being stricter about failures than non-repatriates.

Fifth, this study expected repatriates to behave more creatively than non-repatriates. The results supported two of the four hypotheses: embodying new ideas to realize them, and proposing new ways to achieve their goals. This indicates that repatriates are eager to come up with something new and work more creatively.

Sixth, this study expected repatriates to produce more creative R&D outcomes than non-repatriates. However, the results supported only one of the three hypotheses. Additionally, repatriates did not create more patents or academic papers than non-repatriates. This may imply that the repatriates in this study were more in charge of frontline development or management rather than the long-term development of basic research.

Implications

This comparative analysis identified some basic differences and similarities between R&D repatriates and non-repatriates based on career values, career development, communication with overseas affiliates, creative workplaces, creative work behavior, and creative outcomes.

Following Yoshimura (2020, 2021), this study provides a new perspective for understanding repatriates' knowledge-transfer behavior. The author believes that the results of this study shed new light on RKT behavior.

Findings

The findings revealed a few characteristics of R&D repatriates. First, repatriates want to improve their careers by transferring across organizations or internally, more strongly than non-repatriates. Additionally, repatriates enhance their abilities during on-time and/or Off-time more frequently than do non-repatriates. This may mean that repatriates are eager to enhance their abilities and have a higher tendency to quit their current company if they perceive that their abilities cannot be developed in the workplace. Specifically, repatriates did not have a statistically significant tendency to quit the company. This may reflect the relatively low turnover rate among employees in large-scale Japanese companies.

Second, repatriates are assigned to workplaces with more communication with

overseas subsidiaries/affiliates, where they apply their global skills to practical use. This may present the MNC's intention to promote repatriates' knowledge transfer behavior and realize their hopes of utilizing their overseas experience.

Third, repatriates perceive their workplace as more creative, but not generous about failure. However, these findings are inconsistent. Nevertheless, the author speculates that the industries of repatriates' companies would have affected the results. In this study, repatriates worked more in transportation (repatriates 31.4%; non-repatriates 7.8%), and less in electrical (repatriates 39.1%; non-repatriates 52.0%) and pharmacy (repatriates 29.5%; non-repatriates 40.2%) industries (Yoshimura, 2020). In the transportation industry, R&D workers may be required to achieve more concise creative outcomes, such as new production, without trial and error.

Fourth, repatriates embody ideas to produce new creations and propose new ways of achieving their goals more frequently than non-repatriates. This indicates that repatriates are assigned more creative jobs in the development division and/or are more confident about their creative abilities than non-repatriates.

Finally, this study found that repatriates produced more new products within the last two years than did non-repatriates. This result may be related to the fact that repatriates exchange their knowledge and information on science and technology for problem solving, business, and company products more frequently than non-repatriates.

Practical implications

The findings of the present study have several practical implications. First, MNCs should offer an appropriate work environment to retain repatriates. The results show that repatriates have a higher tendency to move across organizations, internally or externally. As Black et al. (1999) highlighted, when high-performing repatriates leave the company, MNCs may lose not only their human investment, but also the chance to achieve their global strategic goals. Black et al. (1999) also reported that repatriates worked independently of non-repatriates during expatriation.

MNCs should assign repatriates more challenging jobs with higher autonomy and responsibility and use overseas experience to enhance repatriates' organizational commitment and prevent turnover.

Second, MNCs should carefully evaluate repatriates' efforts to improve their work-related knowledge. This study found that repatriates develop their R&D and/or

management skills through Off-JT and/or self-development more intensively than non-repatriates. Skills and knowledge are the core competencies of a company. Defilippi and Arthur (1996) propose that cumulative career competencies are embodied in people's beliefs and identities (knowing why), skills and knowledge (knowing how), and networks of relationships and contracts (knowing whom).

Third, MNCs should offer repatriates creative work environments. This study found that repatriates behave creatively and produce more new products. They also perceived work climate as encouraging creativity, but as one that did not allow failure.

Firms can contribute to the structure and venue of knowledge creation (Bird, 1996, p.165). MNCs and managers may enhance repatriation creativity more effectively by creating a more creativity-oriented climate and allowing trial and error in workplaces.

Limitations and directions for future research

The t-test analysis based on raw data used in this study to explore the antecedents and consequences of RKT behavior is a limitation. For future research, a causal model of analysis should first be conducted to make the model for R&D repatriates the knowledge transferring model. Second, mediators between R&D and RKT behaviors and R&D performance, such as human resource management practices, should be included to enrich the content of the knowledge-transferring model and enable testing the same.

(Professor, Faculty of Business Administration, Seikei University)

REFERENCES

- Arthur, M. B. & Rousseau, D. M. (1996) *The Boundaryless Career. A New Employment Principle for a New Organizational Era*. New York, Oxford: Oxford University Press.
- Arthur, M. B, Khapova, S. N. & Wilderom, C. P. M., (2005) Career Success in a Boundaryless Career World. *Journal of Organizational Behavior*, 26, 177-202.
- Berthoin-Antal (2000). "Types of knowledge gained by expatriate managers", *Journal of General Management*. 26, 32-51.
- Bird, A. (1996) Careers as repositories of knowledge: Considerations for Boundaryless Careers. Chapter 9 Pp.150-168. Arthur, M. B. & Rousseau, D. M. (Eds.) *The Boundaryless Career. A New Employment Principle for a New Organizational Era*. Oxford University Press.
- Black, J., Gregersen, H. B., Mendenhall, M. E. & Stroh, L. (2001). *Globalizing people through*

- international assign.* [Kaigaihaken to global business]. (M. Shiraki, H. Nagai & T. Umezawa, Supervisor of Translation). Tokyo, Japan: Hakuto-Shobo. (Original work published 1999).
- Burmeister, A., Deller, J., Osland, J. S., Szkudlarek, B., Oddou, G. & Blakeney, R. (2015). The micro-processes during repatriate knowledge transfer: The repatriates' perspective, *Journal of Knowledge Management*, 19, 735-755.
- Defillippi, R. J. & Arthur, M.B. (1996) Boundaryless contexts and careers: A competency-based perspective. Chapter 7 Pp.116-131. Arthur, M. B. & Rousseau, D. M. (Eds.) *The Boundaryless Career. A New Employment Principle for a New Organizational Era*. Oxford University Press.
- Hall, D.T. (2001). *Careers in and out of organizations* (Foundations for Organizational Science). Thousand Oaks, London, New Delhi: Sage.
- Hosso, J. J., Becker-Ritterspach, F. & Saka-Helhout, A. (2012) Enriching absorptive capacity through social interaction. *British Journal of Management*, 23, 383-401.
- Murakami, Y. (2019) *Development and management of Human Resources for Global R&D*. Tokyo: Chuokeizai-sha, (in Japanese).
- Nahapiet, J. & Ghoshal, S. (1998) Social capital, intellectual capital and the organizational advantage. *Academy of Management Review*, 23, 242-266.
- Oddou, G., Osland, J. S. & Blakeney, R. N. (2009). Repatriates knowledge: variables influencing the transfer process. *Journal of International Business Studies*, 40, 181-199.
- Sternberg, R. J.(ed.) *Handbook of creativity*. Cambridge University Press.
- Szulanski, G. (2000). The process of knowledge transfer: A diachronic analysis of stickiness. *Organizational Behavior and Human Decision Processes*, 82(1), 9-27.
- Weisberg, R. W. (1999) Creativity and knowledge: a challenge to theories. Chapter 12 Pp.226-250. Sternberg, R. J.(ed.) *Handbook of creativity*. Cambridge University Press.
- Yoshimura, A. (2020). Repatriates knowledge transferring behavior in multi-national companies: a comparison based on demographics, type of knowledge, and the knowledge exchange network, *The Journal of Economics and Business Administration*, Seikei University, 51, 63-74.
- . (2021). Repatriates knowledge transferring behavior in multi-national companies: a comparison with non-repatriates, focusing on motivation, job characteristics and perceived human resource management, *The Journal of Economics and Business Administration*,

Seikei University, 52, 57-72.

Yoshimura, A. & Tanaka, S. H. (2022) The effects of human resource management practices and motivation on individual knowledge sharing behavior - an empirical study of R&D professionals in Japanese multinational enterprises. *The Journal of Economics and Business Administration*, Seikei University, 53, 75-94, (in japanese).