Understanding Psychological Processes of Applicants' Job Search

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Abstract

Purpose – The purpose of this paper is twofold. First, it empirically examines two theory-based models of applicants' job search developed from planned happenstance theory (PHT) and theory of planned behavior (TPB). Second, it tests the cross-cultural compatibility of these models in Japan and Korea.

Design/methodology/approach – The authors tested two theory-based job search models, PHT model and TPB model based on samples of college students from Japan (n = 175) and Korea (n = 172).

Findings – The results indicated that the TPB model was a significantly better fitting to the data than the PHT model. Moreover, a multi-group test of the TPB model demonstrated that the TPB model was invariant between the Japanese and the Korean samples.

Originality/value – Although there had been an important question among job search literatures regarding how important the planned behavior in the job search processes would be, the study gave an empirical support to the TPB job search model in contrast to the PHT model. Another contribution is that the study tested the Western-driven theories using Asian samples from Japan and Korea, constituting an important benchmark for further studies that attempt to test the generalizability of the TPB model, particularly in countries/areas that employ different employment systems.

1. Introduction

A considerable body of research shows that the more job search activities become an integral part of people's working lives, the more attention they pay to finding a job. This topic has been widely investigated by researchers and practitioners in the fields of career development and human resource management (Cote *et al.*, 2006; van Hooft *et al.*, 2004; Zikic and Saks, 2009). Job search activities have become an important aspect of people's working lives not only in Western but also Asian societies. Since both East and West have been affected by the 2008 global financial crisis, many organizations worldwide have accelerated their restructuring and downsizing activities, leading to changes in the nature of work (International Labor Organization, 2009). Furthermore, in many Asian countries, including Japan and Korea, employment practices have shifted sharply from the so-called lifetime employment model to short- or medium-term placements, which reduce personnel costs and encourage employees to develop more individualized and autonomous careers. Since the 1990s, millions of people in Japan and Korea have been looking for new jobs as a result of involuntary job loss, reentry to the workforce, or the desire to explore the new career opportunities brought about by emerging ventures (Japanese Institute for Labor Policy and Training, 2008; Korean Ministry of Labour, 2008). Accordingly, job-seeking activities have become a significant element of contemporary working life for the unemployed and employed alike.

A number of studies on job search behavior report on its antecedents and consequences, providing some evidence for the sequential processes that may ultimately lead to effective outcomes (e.g., Cote *et al*., 2006; Zikic and Saks, 2009). In particular, recent empirical research demonstrates that an individual's self-efficacy, in the specific context of job hunting, is one of the most significant determinants of success among various antecedents such as self-esteem, proactive personality, and conscientiousness (Zikic and Saks, 2009). Indeed, various formulations

of the self-efficacy concept, including generalized self-efficacy (Sherer *et al*., 1982), job-search self-efficacy (Caplan *et al*., 1989), and career decision making self-efficacy (Taylor and Betz, 1983) are related to job search behavior. Such behavior can itself be further categorized as preparatory (such as gathering information or developing social networks) and active (such as sending resumes to potential employers). Nevertheless, little is yet known about how these multiple concepts of self-efficacy interrelate to influence job search behaviors (Zikic and Saks, 2009).

Another important aspect largely overlooked in previous studies is the lack of empirical assessment of theory-driven models of job search in non-Western research contexts, especially in Asian nations such as like Japan and Korea. Most studies have been carried out in Western societies, with the topic rarely having been examined in Asia. For example, Kanfer and colleagues (2001) carried out a meta-analysis of job search studies based on 21,898 samples, all of which emanated from empirical work done in Western nations. In a similar vein, although van Hooft *et al*. (2004) investigated job search behavior by comparing ethnic minorities and majority groups in the Netherlands, the implications of their study are limited to a Western research context. In recent years, some studies have looked at job search in China (Song *et al*., 2006) and Taiwan (Lin, 2010), yet little is known about how well Western-derived theories and models of job search account for Asian applicants' behavior, especially from a cross-cultural comparative perspective.

To address these issues, the present study has two objectives. Firstly, we aim to identify the relationships between various concepts of self-efficacy as antecedents of job search behavior, and to confirm their influence on outcomes. From a theoretical perspective, we test two competing job search models based on, (1) Mitchell *et al*.'s (1999) planned happenstance theory (PHT: hereafter "PHT model") and (2) Ajzen's (1985) theory of planned behavior (TPB: hereafter

"TPB model"). In the PHT, Mitchell *et al.* (1999) regard unplanned events as inevitable and desirable. According to the PHT model, it does not necessarily mean that individuals' career planning leads to their specific intentions and behaviors in the job search process. The TPB model, on the other hand, segregates various concepts into the planning and behavioral phases, on the assumption that personal intentions, reasons, or plans are needed if individuals are to engage in looking for a job.

The second objective of this study is to test the cross-cultural compatibility of these job search models in Asia, using Japanese and Korean data. Specifically, we attempt to examine the invariance of both models between Japan and Korea. Empirical support for one or both model(s) between these nations would form a partial foundation for proposing their cross-national applicability.

We anticipate that our findings will help other researchers to assess which of these competing job search models offers a more suitable explanation for the processes carried out by applicants. Moreover, they will also provide partial, but important, evidence by which to assess the applicability and generalizability of Western-driven theories of job search to an Asian context, especially in Japan and Korea.

2. Theory and hypotheses

2.1 Multiple forms of self-efficacy as antecedents for job search

It is now widely recognized that the concept of self-efficacy takes various forms (Chen *et al.*, 2001). Bandura originally defined self-efficacy as "the beliefs in one's capabilities to organize and execute the course of action required producing given attainments" (1997, p. 3). His core concept has been widely applied to many areas of research, with a number of different ideas being generated through the addition of further situational and contextual meanings. A number of

researchers argue that there is a relationship between a general form of self-efficacy and a specific form found in the context of job search.

Self-efficacy can also be defined as one's judgment of "how well one can execute courses of action required to deal with prospective situations" (Bandura, 1982, p. 122). Based on this definition, most researchers consider self-efficacy to be a situational variable (Judge *et al*., 1998). Recently, however, others have distinguished the notion of generalized self-efficacy (GSE), defined as "individuals' perception of their ability to perform across a variety of situations" (Judge *et al*., 1998, p. 170), from the original concept (Chen *et al*., 2001; Tierney and Farmer, 2002). In particular, Chen and colleagues (2001) propose that "whereas self-efficacy is a relatively malleable, task-specific belief, GSE is a relatively stable, trait-like, generalized competence belief" (p. 376). In a similar vein, Saks and Ashforth (2000) point out that "GSE is expected to be a better predictor of performance in ambiguous and unfamiliar situations than task-specific self-efficacy which is a better predictor in less ambiguous and more familiar situations" (p. 45).

Since GSE is especially potent in new, ambiguous, and unfamiliar situations, it is potentially an important dispositional factor in predicting the job search process for undergraduate students with little or no experience of looking for work (Saks and Ashforth, 2000). Albion *et al*. (2005) test the relationship between GSE and effective job search behaviors (such as proactive coping) among unemployed Australians, and show that GSE is significantly related to proactive coping in the job search (r = .70, p < .01). However, there is little evidence that GSE is a strong predictor of job search behavior, even after other forms of self-efficacy (including JSSE) have been taken into account.

Job search self-efficacy (JSSE) refers to "an individual's confidence in his or her ability to successfully perform a variety of job search activities" (Wanberg *et al*., p. 899). The concept

was first introduced in Kanfer and Hulin's seminal work (1985), which applied Bandura's (1997) general concept to the context of job hunting. Additionally, it is now understood that the way in which a person views his or her own job search skills is influenced strongly by personal and environmental factors (van Ryn and Vinokur, 1992).

JSSE is different from GSE in terms of its changeable and learnable nature. GSE is more dispositional and fixed, whereas JSSE is more skills-based and can be developed through a person's acquisition of the skills needed to perform job search activities (Kanfer and Hulin, 1985). As such, GSE, as an aspect of overall self-esteem, can be regarded as an important foundation from which job seekers can go on to acquire sufficient JSSE to support their job search activities. The dispositional nature of GSE would therefore lead naturally to an increase in self-reported, perceptual competence in job search skills. Hence, we may assume that GSE will directly influence JSSE, which in turn will affect job search behavior.

2.2 Two job search models

PHT model. The essence of PHT (Mitchell *et al*., 1999) is that chance or unplanned events have a place in career planning and so it is not possible to infer that it has an explicitly sequential relationship with job search. This notion of PHT is partially reflected in Saks and Ashforth's (2002) study, which takes into account various concepts, including preparatory and active behaviors, intensity, and career planning as a unified and integral part of the job search process. Saks and Ashforth (2002) explore the relationships between an individual's job search, perceptions of fitness, and employment quality. They define job search as including three dimensions: job search behaviors, intensity, and career planning. Job search behaviors are "the specific activities through which effort and time are spent on job search" (Blau, 1993, p. 315). They can be further divided into two phases: preparatory, or "the effort one makes to gather job

search information" (Blau, 1993, p. 315), and active, or "one's commitment to his or her job search" (p. 316). For example, in the preparatory phase, individuals are expected to gather potential leads through various sources, such as relatives, newspapers, portal websites, and so on. In the active phase, however, they will take practical steps, such as sending out resumes and arranging interviews with prospective employers.

The second dimension, job search intensity, simply denotes "how hard individuals look for work" (Wanberg *et al*., 2005, p. 411). Previous studies of reemployment show that the more time and effort people invest in looking for a job, the more reemployment opportunities they will have (e.g., Koen *et al*., 2010; Wanberg *et al*., 2005).

Finally, career planning means "focusing on setting career goals" (London, 1983, p. 622). To be more specific, it involves realizing career objectives, exploring options, and formulating plans and strategies (de Vos *et al.*, 2009; Saks and Ashforth, 2002).

It should be noted that Saks and Ashforth's (2002) fourfold conceptualization is distinct from the one suggested by most prior studies (Blau, 1994), in that it includes career planning as an important component. They also propose that career planning during the pre-entry period increases an individual's perceptions of person-organization and job fit after entry.

Nevertheless, Saks and Ashforth (2002) assume no clear causal relationships between job search related activities, including the preparatory and active phases, and career planning. Their model, aligning as it does all four dimensions in a row, may indicate that career planning is neither an antecedent nor a consequence of the other components, especially preparatory and/or active job search behaviors. Hence, Saks and Ashforth's (2002) study conforms to the PHT by assuming that individuals' career planning and job search behaviors seem to occur simultaneously, or at least not in any clearly sequential order.

In summary, combining the PHT model, which is reflected in Saks and Ashforth's

(2002) conceptualization, with the anticipated causalities between GSE and JSSE, we predict that GSE will firstly have a positive effect on JSSE, which in turn will influence each dimension of job search (preparatory and active job search behaviors and career planning) simultaneously and positively. Thus, we can formally state the following:

Hypothesis 1A: JSSE mediates the relationship between GSE and career planning.

Hypothesis 1B: JSSE mediates the relationship between GSE and preparatory job search behavior.

Hypothesis 1C: JSSE mediates the relationship between GSE and active job search behavior.

TPB model. TPB (Ajzen, 1985) is an extension of the theory of reasoned action (TRA: Fishbein and Ajzen, 1975) to include the concept of perceived behavioral control. According to TRA, any behavior is determined by the intention to perform it. In other words, "the stronger a person's intention, the more the person is expected to try, and hence the greater the likelihood that the behavior will actually be performed" (Ajzen and Madden, 1986, p. 454).

 TPB, on the other hand, postulates that an individual's behavior is determined not solely by intention (or desire) but also by nonmotivational factors; that is, perceived behavioral control (Ajzen, 1985). The concept of perceived behavioral control refers to "the perceived ease or difficulty of performing the behavior and it is assumed to reflect past experience as well as anticipated impediments and obstacles" (Beck and Ajzen, 1991, p. 286). According to Ajzen (1991), people have behavioral intentions when they perceive that they have sufficient "availability of requisite opportunities and resources (i.e., perceived behavioral control, such as time, money, skills, cooperation of others)" (Ajzen, 1991, p. 182). In other words, people are strongly motivated to perform a specific behavior (that is, they have a high intention) when they

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perceive that they can control it and have the experience or skills required to perform it (Ajzen, 1991).

Importantly, Ajzen (1991) also highlights that the concept of perceived behavioral control is compatible with that of self-efficacy. As shown above, "self-efficacy beliefs can affect preparation for an activity and performance effort" (Bandura, 1982, p. 123). Thus, to the extent that individuals perceive themselves as having behavioral control (or some form of self-efficacy), they can set a plan for an action or goal, which in turn will affect whether or not they achieve it.

Some studies have investigated the psychological processes of job seeking by applying the TPB view, using unemployed and student samples (Song *et al*., 2006; van Hooft *et al*., 2005; Wanberg *et al*., 2005). These studies document the relationships between perceived behavioral control (self-efficacies) and job search behaviors. They suggest that perceived behavioral control should directly and positively affect job search intention, leading to an engagement with effective job search behaviors. Hence, from the TPB perspective, they suggest that job search intention, which serves as a proxy for career planning, will mediate the relationship between perceived behavioral control (self-efficacies) and job search behaviors.

Applying this line of reasoning here, individuals' self-efficacies, including GSE and JSSE, will influence individuals' career planning and, in turn, their preparatory and active job search behaviors. In other words, career planning plays a mediating role between self-efficacies and job search activities. Cote and colleagues (2006) demonstrate empirically that job search clarity (as part of career planning) has such a mediating effect for JSSE. As a result, they propose that career planning may link the various self-efficacies to job search, providing support for the notion that TPB encompasses perceived behavioral control.

Additionally, job search behaviors can be separated into the preparatory and active phases, following Blau's (1993, 1994) typology. That is to say, preparatory job search behaviors

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are expected to predict later, active behaviors. However, only a few studies distinguish between the two behavioral stages. To address this issue, we propose a model of job search that draws on TPB and includes the expected relationship between preparatory and active job search behaviors. Hence, we hypothesize the following:

Hypothesis 2A: JSSE mediates the relationship between GSE and career planning.

Hypothesis 2B: Career planning mediates the relationship between JSSE and preparatory job search behavior.

Hypothesis 2C: Preparatory job search behavior mediates the relationship between career planning and active job search behavior.

Figures 1 and 2 graphically present our hypothesized job search models based on the frameworks of PHT and TPB, respectively.

Insert Figures 1 and 2 about here

3. Method

3.1 Participants and procedures

The participants in this study were undergraduate students majoring in business administration in two large, urban, private universities in Japan and Korea. Due to the nature of job search and career-planning surveys, we eliminated first-year students from the sample. We also designed the sample to weight the different student-to-grade ratios in Japan and Korea so as to reflect differences in general job search and career management practices among students in each country.

Specifically, we increased the ratio of lower-year (that is, second- and third-year students) to higher-year (that is, fourth-years) students in the Japanese sample. Although there is

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within-country variation in students' attitudes and behaviors, the dominant culture is that Japanese students start looking for jobs earlier than their Korean counterparts. This is partly because most Japanese employers implement annualized recruitment practices where a large number of new graduates are employed immediately after graduation, at the beginning of April every year. To attract potential high performers, Japanese companies also (formally and informally) prerecruit some third-year undergraduates to ensure they will join them after graduation. These practices are supported by students who wish to find their lifetime employer while still in school. In contrast, Korean companies are not rigidly committed to either the annual recruitment of new graduates or the concept of lifetime employment. Indeed, while some Korean students receive job offers while still in school, others extend their job search after graduation. Thus, we set the ratio of the lower-year samples (second- and third- to fourth-year students) as 0.8 to 0.2 in the Japanese sample, whereas we sampled equal numbers across years in the Korean survey.

We distributed the questionnaires during classes, asking students to respond to all the items. We explained beforehand that their responses would not influence their course assessments. In total, we collected 175 responses from 182 (96.2%) participants in Japan, and 172 from 209 (82.2%) in Korea. The frequency distribution of second-, third-, and fourth-year students in our Japanese sample was 68 (38.9%), 80 (45.7%), and 27 (15.4%), while in the Korean data it was 68 (39.5%), 57 (33.1%), and 47 (27.3%). In terms of gender, 33.7% of Japanese and 37.8% of Korean respondents were female.

3.2 Measures

The questionnaires were administered in Japanese and Korean as appropriate. Because all the survey instruments used in the study were only available in English, we had firstly to translate

them. Following recommended methods (e.g., Schaffer and Riordan, 2003), the questionnaires were back-translated (Brislin, 1986) by a total of four individuals, two of whom were fluent in English and Japanese and two in English and Korean. Any differences between the original and back-translated versions were discussed by these translators until agreement was reached. Finally, two individuals who were bilingual in English and each of Japanese and Korean checked both the translated versions to ensure equivalence and clarity. The measurement items for all of the research variables are listed in Appendix A. All measures collected responses using a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree).

GSE was measured using Sherer and colleagues' (1982) widely-used GSE scale (e.g., Bosscher and Smit, 1998; Schwoerer *et al*., 2005). We used the 12-item version as suggested by McNatt and Judge (2004) who shortened the original 17-item measure by eliminating the items with the lowest factor loadings. This shorter version is more manageable for respondents. The 12-item GSE measure subsumes the 3 sub-dimensions of initiative (3 items), effort (5 items), and persistence (4 items) (see Appendix A). The overall alpha coefficient (.80) in this study was similar to the .84 obtained by McNatt and Judge (2004). In addition, the subscale coefficients for initiative (.71), effort (.61), and persistence (.64) were also comparable with the results obtained by Bosscher and Smit (1998) of .64, .63, and .64, respectively.

JSSE was assessed using a six-item measure developed by Vinokur, Price and Schul (1995) based on van Ryn and Vinokur's (1992) work for the Institute for Social Research. This scale has been commonly used in previous job search studies (e.g., Vuori and Vinokur, 2005; Wanberg, *et al*., 1999). The items focus on individuals' judgments of their competence at job seeking (see Appendix A). The reliability of the JSSE measure in this study (alpha coefficient of .91) was higher than that reported by Vuori and Vinokur (2005) (.81) and by Vinokur et al. (1995) (.87).

Career planning was measured using the 11-item career planning measure developed by Puah and Ananthram (2006). This scale has been used in recent studies of job search (such as Adekola, 2011), and incorporates Gould's (1979) widely-used six-item career planning measure (e.g., Ng *et al*., 2005; Zikic and Klehe, 2006). The extended scale adds five new items to Gould's measure to enable more detailed descriptions of an individual's career planning process to be captured, and is considered suitable for this research context (see Appendix A). The alpha coefficient reliability of the career planning measure used in this study (.92) was comparable with that of .94 reported by Adekola (2011) and .94 reported by Puah and Ananthram (2006).

Job search behaviors was assessed this using the 12-item measure developed by Blau (1994) and used widely in previous studies (e.g., van Hooft *et al*., 2004; van Hooft and Noordzij, 2009). Respondents are asked to indicate to what extent they have engaged in preparatory (such as talking with friends or relatives about possible job leads) and active (such as sending out resumes to potential employers) job search behaviors (see Appendix A). We deleted two items focusing on re-entry. The alpha coefficients for the preparatory and active subscales were .83 and .83, respectively. These values are slightly higher than those reported by the original author (Blau, 1994).

4. Results

4.1 Confirmatory factor analysis (CFA)

As this study aimed to test two job search models empirically, each of which involves interrelationships between GSE, JSSE, career planning, and job search behaviors, the construct validity of each dimension of these concepts needed firstly to be examined.

Firstly, we carried out a CFA on all 32 items including GSE, JSSE, career planning, and job search behaviors. Specifically, we tested the hypothesized eight-factor model (incorporating

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the initiative, effort, and persistence dimensions of GSE; JSSE; career planning; and preparatory and active job search behaviors) against an alternative single-factor model as well as a null model in which the 32 items were totally unrelated. The chi-square statistics for the eight-factor model (χ^2 = 849.36, df = 443) were significantly lower than for the single-factor model (χ^2 = 2092.18, df = 464) where all the measurement items were assumed to converge into a single factor. The various fit indices for this eight-factor model all achieved the general acceptance limit for a model fit (GFI = .91, CFI = .91, IFI = .90) and were better than those for the single-factor model (GFI = .64, CFI = .64, IFI = .61). These findings indicate that *a priori* the eight-factor model fit the data well. In addition, since the concepts of GSE and JSSE are deemed to be similar, and there could be a possibility that our respondents were unable to distinguish the two, we also tested the convergent and discriminant validity of the 18 items corresponding to GSE and JSSE. In particular, we tested the hypothesized four-factor model (including the initiative, effort, and persistence dimensions of GSE, and JSSE) against an alternative single-factor model as well as a null model. The chi-square statistics for the four-factor model (χ^2 = 235.80, df = 98) were significantly lower than for the single-factor model (χ^2=546.44, df=104). The various fit indices for this four-factor model all achieved the general acceptance limit for a model fit (GFI = .92, CFI = .92, IFI = .92) and were better than those for the one-factor model (GFI = .80, CFI = .75, IFI = .75). This indicates that our respondents were able to perceive the difference in meaning of the items describing the GSE and JSSE constructs. Considering the series of factor analyses as a whole, we may conclude that our respondents could distinguish the 8 underlying dimensions of all 39 items.

Another important issue relating to respondents' conceptual understanding of our measurement items is how similarly they were perceived by Japanese and Korean participants. Clarification of measurement equivalence between the two subsamples is particularly important

since we used translated versions of English-language questionnaires. To address this issue, we

conducted a multi-group CFA for the subscales of self-efficacies, career planning, and job search

behaviors across the two subsamples. The first step was to test an unconstrained model, where

only the number of factors was constrained to be equal between the groups. The second step was

to verify a constrained model where both the factor structure and the beta weights were

constrained to be equal across populations. If the difference in chi-square ($\Delta\chi^2$) between the two

models is insignificant, it is tenable to hypothesize an invariant pattern of factor loadings, which

serves as evidence for measurement equivalence (Byrne, 1998).

The results of our multi-group CFA give strong support for the invariance of all

measurements used in the study between Japanese and Korean respondents. As can be seen in

Table I, the increment in the chi-square values from the unconstrained (χ^2_{uncons}) to the constrained

(χ^2_{cons}) models for GSE ($\Delta\chi^2 = 13.97$, $\Delta df = 18$. n.s.), JSSE ($\Delta\chi^2 = 10.52$, $\Delta df = 6$. n.s.), career

planning ($\Delta\chi^2 = 16.49$, $\Delta df = 16$. n.s.), and job search behaviors ($\Delta\chi^2 = 8.8$, $\Delta df = 9$. n.s.) were

insignificant between subsamples. Further, various fit indices including GFI, IFI, and CFI

reached the conventional level of .90 for all factorial models. Therefore, it is reasonable to

propose that there were no significant differences in Japanese and Korean respondents'

conceptual understanding of the measures used in this study. The correlation coefficients of all

measures for the overall sample are shown in Table II and those for Japanese and Korean

subsamples in Table III.

Insert Tables I, II, III, and IV about here

4.2 Structural equation modelling (SEM) analysis

Test of the job search models based on the overall sample. In order to test our

hypothesized job search models, a structural equation modelling (SEM) analytical method with

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latent variables was applied. An SEM (or a latent factor model) approach allows us to estimate

both the structural model, as well as the measurement model, at once. It enables us to address the

measurement error problems and is therefore likely to generate more accurate statistical outputs

than the path analysis (or a single-indicator model) with manifest variables (e.g., Cole and

Preacher, 2014). Table IV shows the fit indices for the models tested using the whole sample.

Firstly, we tested PHT model (Model 1 in Table IV) as depicted in Figure 1. The results indicate

that this model seems to fit the data well since we obtained relatively high values for the various

fit indices (TLI, IFI, and CFI being .90, .91, and .91, respectively). However, it does not

outperform the TPB model (Model 3 in Table IV) based on these fit indices, as can be shown by

comparing their respective chi-square results. The chi-square increment from the TPB model (χ^2

= 506.75, df = 225) over PHT model (χ^2 = 577.20, df = 226) is statistically significant ($\Delta\chi^2$ =

70.45, Δdf = 1, p < .001), indicating that the TPB model fits the data better overall. Also, all the

fit indices for the TPB model (TLI = .92, CFI = .93, IFI = .93) are better than those for PHT

model. Therefore, the original TPB model (Figure 2) offers a better explanation for the data when

the whole sample is considered.

Based on these results, we adjusted the original PHT model based on the modification

indices. As shown in Figure 3, we added the assumption that career planning would be a mediator

between GSE and job search behaviors. In the original model, career planning is defined as part

of job search. In our revision, we treat it as an independent concept that can mediate the

relationship between GSE and both preparatory and active job search behaviors.

The result of a comparison between the original and revised models indicates that our

revision (Model 2 in Table IV) resulted in a small but significant increase in model fit compared

with the original (Model 1 in Table IV). Although no increments in TLI, IFI, CFI nor a

decrement in RMSEA were observed between the original and revised models, we found a

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significant reduction in chi-square values ($\Delta\chi^2 = 19.08$, $\Delta df = 3$, $p < .001$) as shown in Table IV. This indicated that the revised PHT model fits our sample better than the original. However, the chi-square value for the revised PHT model was still significantly higher than for the original TPB model as shown in Table IV ($\Delta\chi^2 = 51.37$, $\Delta df = 2$, $p < .001$), indicating that the latter is a more valid representative of our overall sample.

In addition, for the purpose of seeking the best-fit model of job search in Japan and Korea, we further revised the original TPB model to add a path leading from GSE to preparatory job search behavior. The revised TPB model is shown in Figure 4. The result of a comparison of the revised TPB model (Model 4 in Table IV) to the revised PHT model (Model 2 in Table IV) indicates the former displayed a significantly better fit (TLI = .92, CFI = .93, IFI = .93, RMSEA=.06 for the revised TPB model and TLI = .91, CFI = .92, IFI = .92, RMSEA=.07 for the revised TPB model). However, when the revised (Model 4) and original Model 3 TPB models are compared, all the fit values are the same (see Table IV). In addition, although the increments in chi-square value between the revised TPB and revised PHT models were statistically significant ($\Delta\chi^2 = 52.79$, $\Delta df = 1$, $p < .001$), those from the revised to the original TPB models were not ($\Delta\chi^2 = 1.42$, $\Delta df = 1$, n.s.). Therefore, the original TPB model shown in Figure 2 (Model 3 of Table IV) fits our data best out of the four theory-based job search models.

Finally, we examined the standardized path coefficients of the original TPB model. Most were statistically significant ($p < .001$) except for one path from career planning to preparatory job search behavior. Specifically, GSE was significantly and positively related to JSSE, which in turn related significantly and positively to career planning. Moreover, JSSE was significantly and positively related to preparatory job search behavior, leading to an increase in active job search. Again, the standardized path coefficient of the link from career planning to preparatory job search behavior was, though positive, not significant. This suggests that the relationship between career

planning and preparatory job search behavior differs between Japanese and Korean students.

Test of cross-cultural compatibility. Table V shows the results of a multi-group SEM analysis. This was conducted in order to test whether the four models were invariant between the Japanese and Korean subsamples. We first estimated PHT model, allowing the path coefficients to differ across groups (that is, the unconstrained model set out in Table V). Then we estimated the model again, restricting all parameters to be equal between two groups (the constrained model in Table V). As Table V shows, the increment in the chi-square values from the unconstrained (χ^2_{uncons}) to the constrained (χ^2_{cons}) model for all four models (Models 1 to 4) was statistically insignificant between the subsamples (Model 1: $\Delta\chi^2 = 6.16.$, $\Delta df = 8$, n.s; Model 2: $\Delta\chi^2 = 9.28.$, $\Delta df = 12$, n.s; Model 3: $\Delta\chi^2 = 12.61.$, $\Delta df = 10$, n.s; and Model 4: $\Delta\chi^2 = 17.79.$, $\Delta df = 12$, n.s). These results indicate that none of the four job search models tested in this study differed significantly between the Japanese and Korean data.

We then used the multi-group SEM results to check the standardized path coefficients of the original TPB model for each subsample. All the expected positive paths shown in Figure 2 were statistically significant ($p<.05$) in the constrained model (Model 2 in Table V) with the size of each path coefficient assumed to be equal between the Japanese and Korean subsamples. It should be noted that the relationship between career planning and preparatory job search behavior was statistically significant and positive when we estimated the model using a multi-group, simultaneous SEM analytic method. This indicates that when the nationality difference is controlled for, all path coefficients become significant, including the link between career planning and preparatory job search behavior which (as shown earlier) is insignificant when tested using the sample as a whole.

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Finally, in order to directly test whether or not the mediating effects in the PHT and TPB models are statistically significant, we estimated indirect effects from a bootstrapping approach recommended by MacKinnon (2008). Specifically, the index values of indirect effects, along with their corresponding 95% bias-corrected confidence interval bands, were computed based on the constrained models estimated in the multi-group SEM analyses. If the lower and upper limits of confidence intervals for the focal indirect effect do not include zero, "the analyst can claim that the indirect effect is not zero with ci% confidence" (Hayes, 2009, p. 412). As shown in Table VI, the results of a bootstrapping test for indirect effects (resample size: $N = 5,000$) show that all the hypothesized mediating effects in the PHT and TPB models are positive and the 95% biased-corrected confidence intervals for these effects do not include zero. These findings are consistent with Hypotheses 1A, 1B and 1C (relevant to the PHT model) as well as Hypotheses 2A, 2B, and 2C (relevant to the TPB model), suggesting that both job search models are likely. However, insofar as we considered the fit indices and compared their respective chi-square results for the models, we conclude that the multi-group "TPB model" with constraints is most tenable.

Insert Table VI about here

5. Discussion

The purpose of this study was to identify the pattern of relationships between multiple forms of self-efficacies, career planning, and job search behaviors based on an examination of theoretical models. We also attempted to test the cross-cultural compatibility of four theory-based job search models, including two extended versions which we derived, using Japanese and Korean student samples. The findings of the study are discussed and evaluated below.

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5.1 Relationships between GSE, JJSE, and job search

The results of our CFA provide strong support for the discriminant and convergent validity of the two closely-related measures capturing GSE and JSSE. These findings prove that the two types of self-efficacy, though similar, are independent and can be distinguished by respondents. However, a significant relationship was observed between GSE and JSSE based on an SEM analysis of the original TPB model. While this relationship has been considered on a theoretical level, the need for an empirical assessment has long been ignored by researchers (Chen *et al*., 2001).

Moreover, our study explored the sequential relations between these self-efficacies in order to predict career planning, which in turn affects job search behaviors, supporting assertions made in previous studies (Kanfer *et al*., 2001). Specifically, our findings affirm that GSE significantly influences job search behaviors only through JSSE [1]. Although prior job search studies highlight that self-efficacy is a significant antecedent of job search behaviors (e.g., Saks and Ashforth, 2000; Zikic and Saks, 2009), almost no research considers the relationship between GSE and JSSE in the model of job search process. In particular, what is lacking in prior research is the examination of a link between GSE and job search behaviors (Nicotra, 1998) despite the ample research evidence showing that the higher the level of an individual JSSE is, the greater the engagement of his/her job search behaviors is (e.g., Cote et al., 2006; Zikic and Saks, 2009). Although not directly analyzing in the job search setting, Lightsey Jr and colleagues (2006) point out that "GSE may predict general outcomes and behaviors in novel or ambiguous situations in which specific self-efficacy expectancies have not yet developed" (p. 73). This should imply that GSE has no direct influences over job seeking behaviors once their JSSE has been established. Our findings that JSSE fully mediates the relationship between GSE and job search behaviors seem to support the Lightsey Jr et al.'s (2006) assertion in the context of an individual's job search. Our study, therefore, contributes to this field by exploring empirically not only the

conceptual differences between GSE and JSSE, but also the role of sequential effects on the

enhancement of the career planning and job search behaviors of Japanese and Korean students.

5.2 The compatibility of the two job search models

The other goal of this paper was to assess the compatibility of two job search models, namely the

PHT (Mitchell *et al*., 1999) and the TPB (Ajzen, 1985). Our SEM analyses, using structural

equation modelling with latent variables, found that the TPB model fit the data much better than

either the original or revised PHT models. The best fit, for both the Japanese and Korean

subsamples, was the original TPB model. It therefore seems to be a useful framework to explain

the interrelationships between the multiple variables involved in job search for the Japanese and

Korean students participating in this study. The findings also support the TPB approach of

separating various job search concepts into planning and behavioral phases. Specifically, career

planning explains preparatory job search behavior, which can promote subsequent active job

search. The alternative model, PHT model, regards career planning as a sub-dimension of job

search, including both preparatory and active behaviors. Our findings support a sequence of

thoughts and actions within which attitude enhances intention, which then elicits behaviors and

then actions. Given the results reported here, such an interpretation of the TPB model can offer a

good explanation of university students' job search processes.

In addition, these findings provide basic support for the social-cognitive model of job

search (Zikic and Saks, 2009), in which self-regulation theory (Kanfer *et al*., 2001) and TPB (van

Hooft *et al*., 2004) are brought together to predict job search behaviors. They do this by

demonstrating the extent to which generalized and job search self-efficacies affect the overall

process whereby career planning enhances job search. Although Zikic and Saks' (2009) model

combines variables from both self-regulation theory and TPB, it makes no assumptions about the

interplays between the constructs pertaining to self-regulation and TPB. Thus, this study extends

Zikic and Saks's (2009) social-cognitive model of job search, by demonstrating the

interrelationship between multiple job search constructs drawn from both theories in the context

of Asian societies.

5.3 Cultural differences

Ajzen (1991) asserts that the relative importance of constructs within the TPB job search model

might be influenced by cultural factors such as an individual's demographic characteristics and

values. In the present study, we investigated whether cultural differences could account for

differences in the relative importance of elements of a job search model. The results of our

multi-group SEM analysis comparing Japan and Korea indicate that all the models tested,

including the TPB model, were invariant across both populations. This may suggest that national

differences, especially between two countries which are geographically and culturally similar, do

not necessarily matter in terms of the psychological processes required for students to implement

effective job search activities. In terms of the relevance of the Western job search literature, most

studies support the significance of TPB in explaining unemployed and/or students' job search

activities (e.g., Cote *et al*., 2006; van Hooft *et al*., 2004). That is, job seekers with high career

planning (job search clarity or intention) implement more preparatory behaviors, which in turn

lead to greater engagement in active job search.

It should be noted that our findings offer partial but important evidence to assess the

generalizability of the TPB model, especially in non-Western cultures. As discussed above, most

studies of job search have been carried out in Western societies, with little work being undertaken

in Asia (Song *et al*., 2006). As such, the applicability of these theories to other cultural contexts

has long been questioned (van Hooft *et al*., 2004). Our findings, with their support for the

applicability of TPB to job search activities among some Asian university students, are an important step forward in assessing the generalizability of this theoretical model.

6. Limitations and future research

This study has several limitations that must be addressed in future research. Firstly, all the data were collected using self-report measures, so there is a question of common method biases (Podsakoff *et al.*, 2003), or the possibility that concerns pertaining to item context and state will affect the relationships between variables measured at different points in time.

Secondly, our study relied on a cross-sectional survey design in which data on all variables were gathered at the same time. This means we cannot assess causality. Future studies should investigate both the PHT and TPB models using a longitudinal survey design to capture information on causal relationships. This may also help to alleviate the salience of common method biases (Podsakoff *et al.*, 2003).

Thirdly, we were unable to account for the relationship between job search and some of its potential effects. Specifically, it is likely that the number of interviews and job offers received might have influenced job seekers' career planning and search behaviors during the process. Furthermore, some recent studies have called for the inclusion of the consequences of job search activities as outcome variables (for example, the degree of organizational adaptation and socialization after entry). Again, the use of a time-series longitudinal survey involving the same respondents before and after organizational entry would address this and is strongly recommended.

In conclusion, the current study has extended our conceptual knowledge of job search based on an empirical examination of two theory-driven job search models in two Asian cultures. The results provide the possibility of generalizing a job search model based on TPB to Asian

countries including Japan and Korea. More empirical assessment of job search in and outside Western cultures is also encouraged.

Note

1. To ensure these sequential relationships among GSE, JSSE, and preparatory and active job search behaviors in the best fit, original TPB model, we tested several additional models, putting two direct paths onto the model; namely, (a) a path leading from GSE to preparatory job search behavior and (b) another path leading away from GSE to active job search behavior. The additional two models (adding the paths (a) and (b) separately to the original model) were then tested using an SEM analytic method; however, the model fit indexes for these models did not significantly improve that of the original TPB model ($\Delta\chi^2 = 3.70$, $\Delta df = 1$, n.s. for the model adding the path (a) and $\Delta\chi^2 = 0.11$, $\Delta df = 1$, n.s. for the model adding the path (b)). Furthermore, both paths (a) and (b) failed to reach the level of a statistical significant ($\beta = -.17$, n.s. and $\beta = .02$, n.s., respectively). These results suggest that JSSE fully mediates the link between GSE and each job search behavior.

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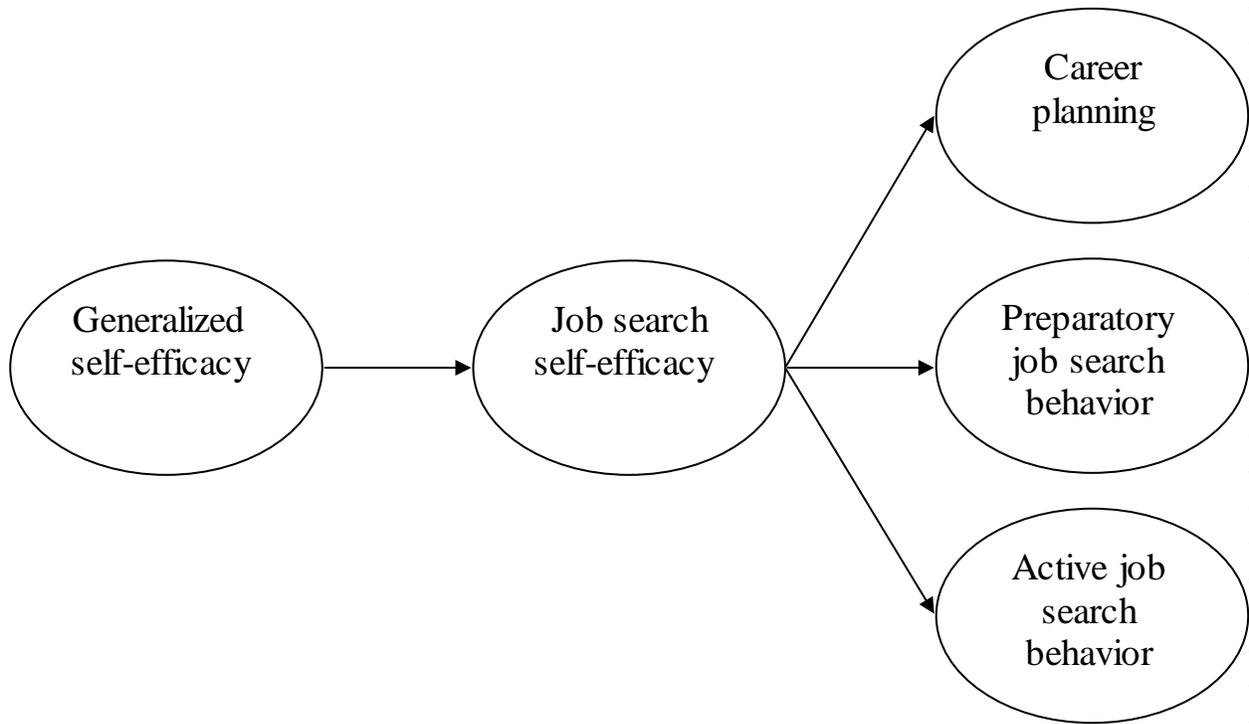
Figure 1. Job search model based on Mitchell et al.'s (1999) planned happenstance theory model
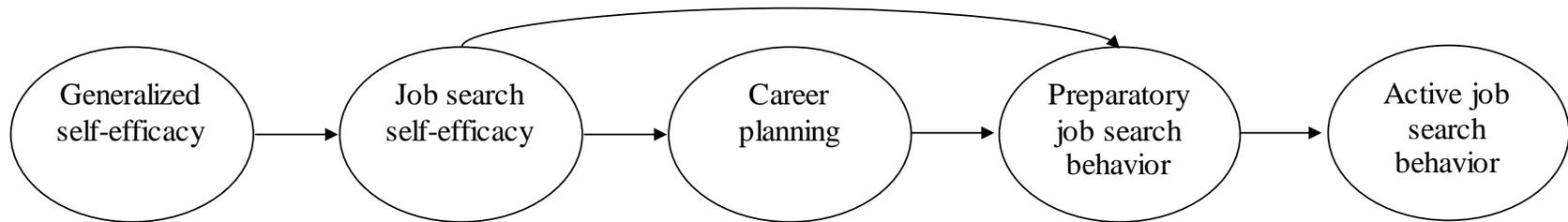
Figure 2. Job search model based on the Ajzen's (1985) theory of planned behavior

Table I. Multi-group confirmatory factor analysis tests of all the measures used in the study between Japanses and Korean respondents

Measures	Unconstrained model [a]						Constrained model [b]						$\Delta\chi^2_{(cons-uncons)}$ [c]	$\Delta df_{(cons-uncons)}$ [d]
	χ^2_{uncons}	df_{uncons}	GFI	IFI	CFI	RMSEA	χ^2_{cons}	df_{cons}	GFI	IFI	CFI	RMSEA		
Generalized self-efficacy	228.68	153.00	.95	.95	.95	.03	242.65	171.00	.95	.96	.95	.03	13.97	18.00
Job search self-efficacy	83.02	6.00	.94	.94	.94	.14	93.50	12.00	.94	.94	.94	.10	10.52	6.00
Career plannning	226.01	81.00	.93	.96	.96	.05	242.50	97.00	.93	.96	.96	.05	16.49	16.00
Job search behaviors	100.05	39.00	.96	.95	.95	.05	108.85	48.00	.96	.95	.95	.04	8.80	9.00

Notes. Sample size: N = 347. GFI = Goodness of fit Index; IFI = Incremental fit indext; CFI = Comparative fit index; RMESA = Root-mean-square error of approximation.

[a] Unconstrained model assumes only the number of factors is constrained to be equal between groups.

[b] Constrained model assumes both the factor structure and the beta weights are constrained to be equal across populations.

[c] $\Delta\chi^2_{(cons-uncons)}$ denotes an increment in chi-square values from the hypothesized constrained model to the hypothesized unconstrained model shown above.

[d] $\Delta df_{(cons-uncons)}$ denotes an increment in the degree of freedom (df) from the hypothesized constrained model to unconstrained model shown above.

Table II. Correlation matrix for all the variables used in the study for overall respondents

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Nationality	–										
2. Gender	-.04	–									
3. Age	-.51 ***	-.23 ***	–								
4. School year	-.07	.01	.60 ***	–							
5. Initiative	-.15 **	.11	.13 *	.10	–						
6. Effort	-.08	.06	.05	.11 *	.38 ***	–					
7. Persistence	-.34 **	-.06	.19 ***	-.04	.49 ***	.30 ***	–				
8. Job search self-efficacy	-.30 **	-.08	.27 ***	.12 *	.38 ***	.36 ***	.52 ***	–			
9. Career planning	-.20 **	-.06	.25 ***	.14 *	.38 ***	.35 ***	.45 ***	.58 ***	–		
10. Preparatory job serach behavior	-.06	.04	.21 ***	.25 ***	.13 *	.22 ***	.16 **	.38 ***	.32 ***	–	
11. Active job search behavior	-.14 **	.09	.33 ***	.41 ***	.17 **	.17 **	.15 **	.35 ***	.23 ***	.49 ***	–

Notes. Sample size: N = 347.

*p < .05, ** p < .01, ***p < .001.

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Table III. Correlation matrix for all the variables used in the study for the two groups of Japanes and Korean respondents

Variables	1	2	3	4	5	6	7	8	9	10
1 Gender	–	-.42 **	-.05	.09	.05	-.08	-.08	-.11	.07	.04
2 Age	-.42 ***	–	.70 **	.05	.01	.04	.15 *	.23 **	.23 **	.36 **
3 School Year	.07	.61 **	–	.07	.09	-.05	.15 *	.24 **	.28 **	.37 **
4 Initiative	.11	.10	.12	–	.58 **	.51 **	.37 **	.40 **	.03	.08
5 Effort	.05	.03	.08	.32 **	–	.50 **	.50 **	.47 **	.16 *	.04
6 Persistence	-.08	.01	-.12	.45 **	.31 **	–	.41 **	.41 **	.08	.05
7 Job search self-efficacy	-.12	.18 *	-.06	.34 **	.43 **	.51 **	–	.41 **	.37 **	.32 **
8 Career planning	-.03	.14	-.01	.33 **	.38 **	.43 **	.59 **	–	.34 **	.28 **
9 Preparatory job serach behavior	.02	.24 **	.24 **	.20 **	.28 **	.19 *	.39 **	.31 **	–	.53
10 Active job search behavior	.13	.27 **	.44 **	.22 **	.25 **	.15 *	.32 **	.15 *	.45 **	–

Notes. Coefficient of Japanese respondents (n = 175) are displyed in the lower part of this table, while those of Korean respondents (n = 172) are in the

upper part.

*p < .05, ** p < .01, ***p < .001

Table IV. Overall fit indexes for the job search models based on overall respondents

Job search models	χ^2	df	TLI	IFI	CFI	RMSEA
Model 1						
PHT model	577.20	226	.90	.91	.91	.07
Model 2						
Revised PHT model	558.12	223	.90	.91	.91	.07
Model 3						
TPB model	506.75	225	.92	.93	.93	.06
Model 4						
Revised TPB model	505.33	224	.92	.93	.93	.06

Notes. Sample size: N = 347. TLI = Tucker-Lewis index; IFI = Incremental fit indext; CFI = Comparative

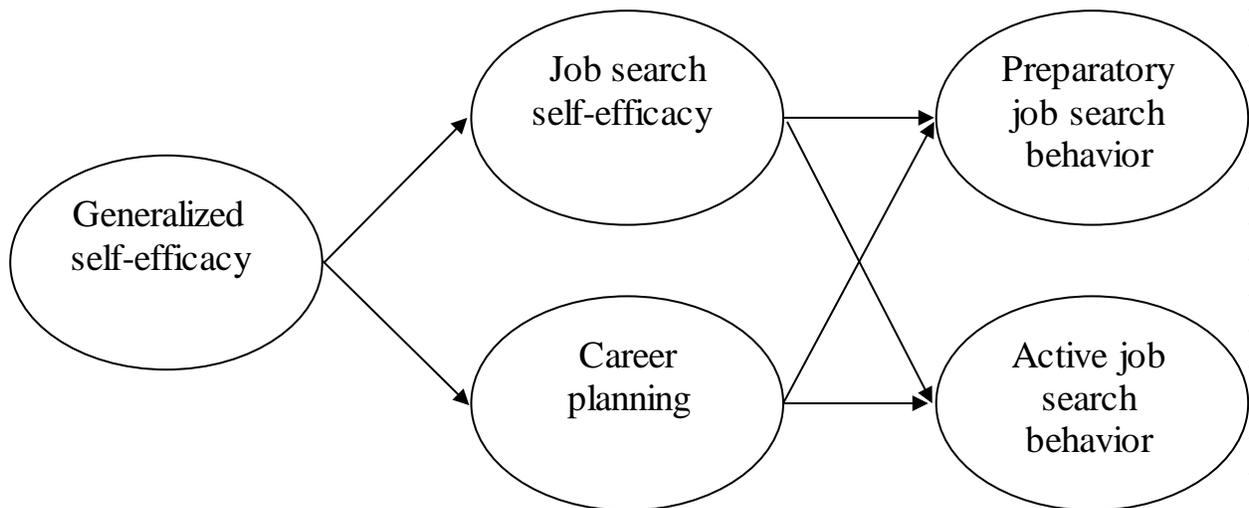fit index; RMESA = Root-mean-square error of approximation.

Figure 3. Revised job search model based on Mitchell et al.'s (1999) planned happenstance theory
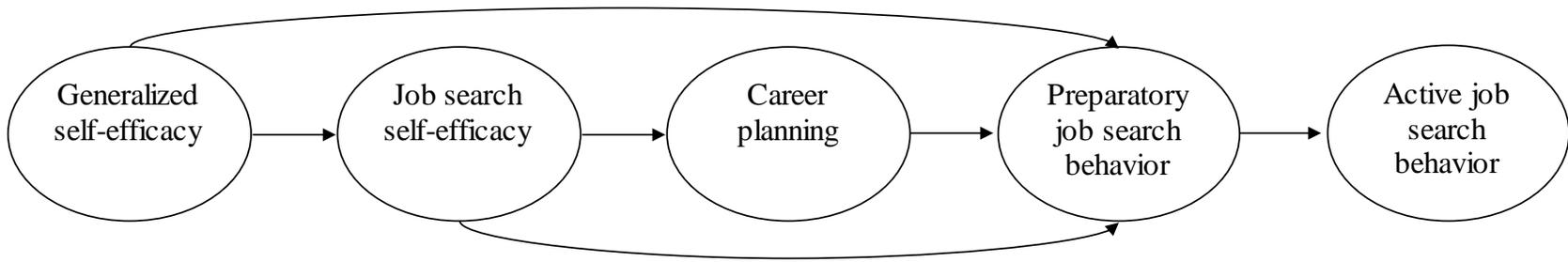
model

Figure 4. Revised job search model based on the Ajzen's (1985) theory of planned behavior

Table V. Results of the multi-group model invariance tests for the various job search models between Japanese and Korean respondents

Job search models	Unconstrained model [a]						Constrained model [b]						$\Delta\chi^2_{(cons-uncons)}$ [c]	$\Delta df_{(cons-uncons)}$ [d]
	χ^2_{uncons}	df_{uncons}	TLI	IFI	CFI	RMSEA	χ^2_{cons}	df_{cons}	TLI	IFI	CFI	RMSEA		
Model 1														
PHT model	1535.35	714.00	.89	.90	.89	.04	1541.51	722.00	.90	.90	.89	.04	6.16	8.00
Model 2														
Revised PHT model	1490.06	705.00	.89	.90	.90	.04	1499.34	717.00	.89	.90	.90	.04	9.28	12.00
Model 3														
TPB model	1387.43	711.00	.91	.91	.91	.04	1400.04	721.00	.91	.91	.91	.04	12.61	10.00
Model 4														
Revised TPB model	1378.53	708.00	.91	.91	.91	.04	1396.32	720.00	.91	.91	.91	.04	17.79	12.00

Notes. Sample size: N = 347. TLI = Tucker-Lewis index; IFI = Incremental fit indext; CFI = Comparative fit index; RMESA = Root-mean-square error of approximation.

[a] Unconstrained model assumes only the number of factors is constrained to be equal between groups.

[b] Constrained model assumes both the factor structure and the beta weights are constrained to be equal across populations.

[c] $\Delta\chi^2_{(cons-uncons)}$ denotes an increment in chi-square values from the hypothesized constrained model to the hypothesized unconstrained model shown above.

[d] $\Delta df_{(cons-uncons)}$ denotes an increment in the degree of freedom (df) from the hypothesized constrained model to unconstrained model shown above.

Table VI. Bootstrapped results for testing mediation in the multi-group models [a]

Job search models	Hypotheses in this study	Indirect effect	Strandard error	95% Confidence intervals [b]		Two-tailed significance
				LLBC	ULBC	
Model 1: PHT model						
GSE → JSSE → CP	Hypothesis 1A	.59	.09	.44	.79	***
GSE → JSSE → preparatory JSB	Hypothesis 1B	.41	.08	.27	.59	***
GSE → JSSE → active JSB	Hypothesis 1C	.62	.12	.40	.89	***
Model 2: Revised PHT model						
GSE → JSSE/CP → preparatory JSB	Newly added	.50	.10	.33	.73	***
GSE → JSSE/CP → active JSB	Newly added	.73	.15	.47	1.04	***
Model 3: TPB model						
GSE → JSSE → CP	Hypothesis 2A	.57	.07	.45	.72	***
JSSE → CP → preparatory JSB	Hypothesis 2B	.07	.03	.01	.13	*
CP → preparatory JSB → active JSB [c]	Hypothesis 2C	.19	.08	.03	.35	*
Model 4: Revised TPB model						
GSE → JSSE → CP	Hypothesis 2A	.57	.07	.45	.71	***
JSSE → CP → preparatory JSB	Hypothesis 2B	.07	.03	.02	.14	*
CP → preparatory JSB → active JSB [c]	Hypothesis 2C	.21	.08	.05	.37	*

Notes. Sample size: N = 347. GSE = Generalized self-efficacy; JSSE = Job search self-efficacy; CP = Career planning; JSB = Job search behavior. LLBC = Lower limit of bias-corrected confidence interval. ULBC = Upper limit of bias-corrected confidence interval.

[a] All the coefficients shown above are estimated based on the multi-group structural equation modeling results for constrained models.

[b] Bias-corrected bootstrap confidence intervals (bootstrap resample size = 5,000) are presented.

[c] The indirect effect (CP → preparatory JSB → active JSB) in model 3 partials out the direct effect of JSSE on active JSB (as shown in Figure 2) while that in model 4 controls for direct effects of both GSE and JSSE on active JSB (as shown in Figure 4).

* $p < .05$, ** $p < .01$, *** $p < .001$.

Appendix 1. Questionnaire items

General Self-Efficacy Scale (GSES)

Initiative

1. If something looks too complicated I will not even bother to try it.

2. I avoid trying to learn new things when they look too difficult.

3. When trying to learn something new, I soon give up if I am not initially successful.

Effort

1. When I make plans, I am certain I can make them work.

2. If I can't do a job the first time, I keep trying until I can.

3. When I have something unpleasant to do, I stick to it until I finish it.

4. When I decide to do something, I go right to work on it.

5. Failure just makes me try harder.

Persistence

1. When I set important goals for myself, I rarely achieve them.

2. I do not seem capable of dealing with most problems that come up in my life.

3. When unexpected problems occur, I don't handle them very well.

4. I feel insecure about my ability to do things.

Job Search Self-Efficacy (JSSE)

How confident do you feel about

1. Making a good list of all the skills that you have and can be used to find a job.

2. Taliking to friends and other contacts to find out about potential employers who need your skills.

3. Talking to friends and other contacts to discover promising job openings that are suitable for you.

4. Completing a good job application and resume.

5. Contacting and persuading potential employers to consider you for a job.

6. Making the best impression and getting your points across in a job interview.

Career Planning

1. I have a plan for my career.

2. I know my career goals and objectives.

3. I know my career interests and how to apply these to my job.

4. I spent time reviewing my career plan.

5. I am able to analyse and assess my abilities, interests and values to determine my career options.

6. I have identified areas where I need to improve my skill and knowledge level.

7. I know about general economic and societal trends that affect my career.

8. My awareness of career alternatives has helped to clarify my career goals and means for achieving them.

9. Having an accurate view of my strengths, weaknesses and career direction helps me to have realistic expectations for career outcomes.

10. Using information about how well I am doing at work, I formulate plans to achieve specific career goals.

11. I have a strategy for achieving my career goals.

Appendix 1. Continued

Job Search Behaviours

Preparatory job search behaviours

1. Read the help wanted/classified ads in a newspaper, journal, professional association or the internet.

2. Prepared/revised your resume.

3. Filled out job application.

4. Read a book or article about getting a job or changing jobs.

5. Talked with friends or relatives about possible job leads.

Active job search behaviours

1. Listed yourself as a job applicant in a newspaper, journal, professional association, or the internet.

2. Sent out resumes to potential employers.

3. Had a job interview with a prospective employer.

4. Contacted some type of job search organization (e.g., employment agency, executive search firm).

5. Directly contacted (e.g. via telephone, email) a prospective employer.