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OPERATIONS, INFORMATION & TECHNOLOGY | RESEARCH ARTICLE

A task-technology fit view of job search website impact on performance effects: An empirical analysis from Taiwan

Kuo-Yu Huang^{1*} and Yea-Ru Chuang²

Abstract: Job search websites (JSWs) are widely used in online job recruitment. However, much of the research on JSWs has focused on technology. To capitalize on the performance associated with JSWs, research addressing the role of JSWs in e-recruiting is required. A nationally representative sample of jobseekers (N = 1,282) was surveyed regarding the JSWs use behaviors of the jobseekers. Task-technology fit is one factor that has been shown to influence both the use of information technology and its performance impacts on effectiveness. This study used the technology-to-performance chain as a framework to address the question of how task-technology fit influences the performance impact of JSWs. The results provided strong evidence of the importance of task-technology fit, which directly influenced performance impacts in e-recruiting, in addition to exerting an indirect influence through the level of utilization. As expected, task-technology fit had a strong influence on jobseeker unemployment duration. In contrast to expectations, social norms did not play a role in the performance impacts of JSWs. However, facilitating conditions and habit had a significant effect on the perceived impact of e-recruiting in JSW utilization.

Subjects: Management of IT; Behaviour; IT Research; IT Teaching

Keywords: task-technology fit; technology-to-performance chain; job search website; e-recruiting

ABOUT THE AUTHORS

Kuo-Yu Huang is a senior official at the Ministry of Labour in Taiwan, as well as a doctoral candidate at the Graduate Institute of Business Administration, College of Management, Fu Jen Catholic University. In addition to his long-term focus on the labor market to promote employment measures, he has extensive experience in designing web forms for employment sites, implementing job-matching methods, and programming job-seeking tools, and developing technology acceptance models; Moreover, he has published research concerning the cognitive factors influencing jobseekers to use employment websites. His research focuses are e-recruitment and information technology application.

Yea-Ru Chuang is a professor at the Department of Information Management, College of Management, Fu Jen Catholic University. Her teaching and research interests focus on information ethics and human behaviors and information technology.

PUBLIC INTEREST STATEMENT

This paper presents a theoretical analysis of the impacts of using job search websites (JSWs) as job-seeking tools on the perceptions, attitudes, and unemployment duration of jobseekers.

A JSW is one of the most widely used websites for searching for jobs on the Internet. The extensiveness, efficacy, and employment rates of JSWs are substantially higher than those of other websites; however, few studies have explored the cognitive factors that influence jobseekers to adopt and use JSWs. Therefore, this article presents a technology-to-performance chain model that was used to understand the factors influencing the adoption of JSWs and to further comprehend the effects of JSW usage and job searching task–JSW technology fit on unemployment duration.

The overall attitudes, facilitating conditions, and habits of 1,282 voluntary respondents showed that factors influencing jobseekers to adopt JSWs as well as JSWs' usage and task-technology fit could shorten jobseekers' unemployment durations.









1. Introduction

One of the most significant developments in the use of information technology (IT) in the labor market during the previous 20 years is the adoption of job search websites (JSWs) to support online recruitment processes (Kuhn & Mansour, 2011). A JSW is an information system that facilitates e-recruiting. Employers utilize JSWs to advertise their job vacancies, whereas jobseekers submit their resumes to JSWs. JSWs offer tools that improve the ease and speed with which suitable matches between job searchers and employers can be identified and contact initiated (Brenčič, 2014). JSWs are used as online resources by jobseekers and recruiters, reducing the financial and time costs of job and employee searches and improving matching productivity (Cappelli, 2001; Cober, Brown, Blumental, Doverspike, & Levy, 2000; Kuhn & Mansour, 2011; Maurer & Liu, 2007).

JSWs are widely employed in online recruitment. For example, among Americans who have searched for work in the past 2 years, 79% utilized online resources in their most recent job search (Smith, 2015). Therefore, with the ubiquity of JSW use, JSWs have drastically improved access to information on available jobs and job seekers (Brenčič, 2014). Consistent with this finding, analyses of the impact of JSWs on job searching are extremely scant (Lin, 2010). Much of the research on erecruiting has focused on technology or adoption of JSWs, whereas few studies have investigated JSWs in the context of job searching (Brenčič, 2014; Laumer, Eckhardt, & Trunk, 2010; Lin, 2010; Yoon Kin Tong, 2009).

To determine the impact on performance of JSWs and capitalize on their effectiveness, research addressing the role of JSWs in job searching is required. In addition to research investigating the factors influencing JSW use, research on the factors underlying the impact of JSW use on job searching performance is required. Task-technology fit is one factor that has been evidenced to influence both the use of information systems and their performance impacts (Goodhue & Thompson, 1995). This paper considers the role of task-technology fit in JSW adoption and addresses the question of how task-technology fit influences the impact of JSWs on jobseeker performance.

2. Literature review

2.1. JSW adoption research

The major focus of JSW research has been the adoption of JSWs by jobseekers. The research model employed in this study was derived from the technology acceptance model (TAM) (Davis, Bagozzi, & Warshaw, 1989), theory of planned behavior (TPB) (Ajzen, 1991), and unified theory of acceptance and use of technology (UTAUT) (Venkatesh, Morris, Davis, & Davis, 2003). For typical research derived from these models, Yoon Kin Tong (2009) proposed an extended TAM model to identify a few key determinants of e-recruitment technology adoption. The results identified perceived privacy risk and application-specific self-efficacy as key external variables of perceived usefulness. Furthermore, perceived usefulness is the key determinant of jobseeker intention to use JSWs, indicating that more job vacancies on JSWs leads to more jobseekers surfing on such JSWs. Following a review of the technology acceptance literature, Lin (2010) extended the TPB to develop a research model to identify the determinants of jobseeker intentions to use JSWs. The results identified that attitude, subjective norm, and perceived behavioral control factors play a significant role in influencing jobseeker intentions to use e-recruitment services. Moreover, perceived usefulness and perceived ease of use had a significant effect on attitude, interpersonal influence had a significant effect on subjective norms, and perceived ease of use and self-efficacy had a significant effect on perceived behavioral control. Another research model was proposed by Laumer et al. (2010), which was based on and extended the UTAUT (Venkatesh et al., 2003), indicating that performance expectancy is the main factor in adopting e-recruiting services; the relative importance of the other factors (i.e. effort expectancy, social influence, and facilitating conditions) varies considerably. Although facilitating conditions are a crucial influencing factor for younger (12-20) students, older (21-25) students are further influenced by their peer groups and their communications with the companies they apply to.



Moreover, transaction cost economics, based on the work of Williamson (1985), has also been employed to explain JSW use. For example, Hsieh, Cheng, and Wu (2013) indicated that the information completeness, asset specificity, and trust of JSWs had a significantly positive effect on job applicant attitude toward such websites. Among all relevant factors, asset specificity was found to have the strongest effect on job applicant attitude; they concluded that job applicant establishment of a strong asset specificity relationship with JSWs enhances their attitude toward future JSW use.

Behavior intention and attitude studies have indicated a range of factors that might influence JSW use; however, such studies have not considered how such factors, or JSW use itself, are associated with job search outcomes. JSW research is characterized by a variety of studies conducted in a wide range of contexts with various explanatory variables, outcome variables, and models. Therefore, generalizing from such research, particularly in determining the relationships among job search context, JSW use, and searching outcomes, is difficult.

2.2. Task-technology fit

To further understand the factors influencing job search outcomes following JSW utilization, conducting research that incorporates models that have shown promise in predicting IT adoption may be useful; the technology-to-performance chain (TPC) presented by Goodhue and Thompson (1995) is one such model.

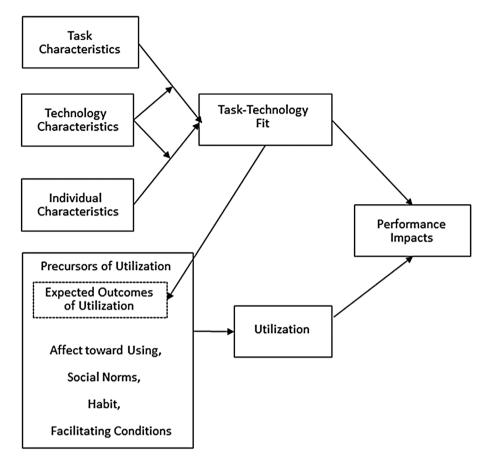
Goodhue and Thompson (1995) proposed that research on IT adoption must recognize both the task for which the technology is employed and the fit between the task and the technology, defining task–technology fit as "the degree to which a technology assists an individual in performing his or her portfolio of tasks" (p. 216). Concerning jobseeker utilization of a JSW, task–technology fit refers to the ability of the JSW to support jobseekers in a range of job searching activities while accounting for a given variety of jobseeker abilities. Job searching activities include submitting resumes, reviewing job openings, and comparing listed working conditions among postings; suitable matches can be identified and contact can be established between jobseekers and employers.

Goodhue and Thompson developed the TPC as a model to assist users and organizations in understanding and more effectively employing IT. The TPC combines insight from research on user attitudes, as predictors of utilization, with the concept of task-technology fit, as a predictor of performance impacts. As shown in Figure 1, the TPC proposes that task-technology fit is a function of task characteristics, technology characteristics, and individual characteristics. Furthermore, task-technology fit directly influences performance impacts, in addition to indirectly influencing utilization through precursors of utilization such as the expected outcomes of use, attitude toward use, social norms, habit, and facilitating conditions. Goodhue and Thompson also proposed that utilization directly influences performance impacts, under the basic argument that for a technology to have a positive impact on individual performance, the technology must fit with the tasks it is intended to support, and it must also be utilized.

The performance impact of task-technology fit has been investigated, applying elements of the TPC in various domains. Goodhue and Thompson (1995) initially tested a subset of the TPC by employing participants from a transport company and an insurance company, finding strong evidence of the influence of task-technology fit on performance, as well as moderate support of the influence of technology and task characteristics on task-technology fit.

Other domains in which elements of the TPC model have been tested include software development (Dishaw & Strong, 1998), managerial decision-making (Goodhue, Klein, & March, 2000), elearning (McGill & Klobas, 2009), and social networking sites (Lu & Yang, 2014). The most comprehensive test of the model to date is represented by the study by Staples and Seddon (2004), which considered the mandatory use of a library cataloging system by university staff and the voluntary use of spreadsheet and word processing software by students. Staples and Seddon found

Figure 1. Technology-toperformance chain (Goodhue & Thompson, 1995).



strong evidence of the impact of task-technology fit on performance, attitude, and beliefs regarding use. However, the influence of level of utilization on performance was less clear.

The role of task-technology fit has yet to be investigated in the e-recruiting domain. Considering the need for rigorous research on the factors influencing the adoption of JSWs, the TPC could provide a useful framework for this study.

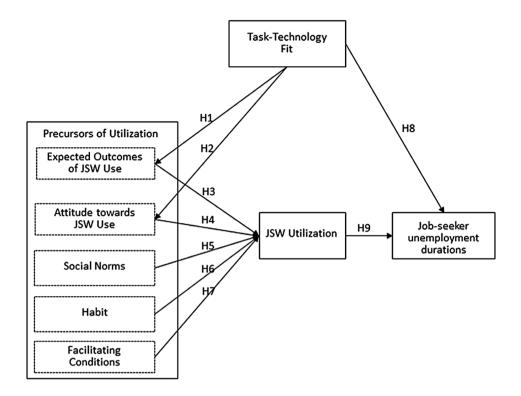
3. Research questions

This study considered the role of task-technology fit in JSW adoption, applying the TPC to address the following question: How does task-technology fit influence the impact of JSWs on jobseeker performance?

Consistent with the TPC and previous TPC-related research, the relationships described herein were initially hypothesized to answer the research question. Figure 2 illustrates the proposed research model for this study.

The TPC proposes that task–technology fit has a positive influence on the expected outcomes of use (i.e. task–technology fit correlates with anticipated outcomes of system utilization). Concerning JSW use, the outcomes that jobseekers might anticipate include quick and easy job searching and employment performance improvement. Nevertheless, Goodhue and Thompson did not investigate the relationship between task–technology fit and expected outcomes of use in their original study (Goodhue & Thompson, 1995), and neither did Goodhue, Littlefield, and Straub (1997) in a subsequent related study. Rather, they assumed that the relationship existed and investigated a direct relationship from task–technology fit to utilization. Staples and Seddon (2004) and McGill and Klobas

Figure 2. Proposed research model.



(2009) tested this relationship, determining that task-technology fit had a positive influence on the expected outcomes of use. Therefore, this study hypothesized that this relationship would be exhibited in the context of JSW use.

• H1: Task-technology fit positively influences the expected outcomes of JSW use.

An attitude is a positive or negative evaluation of an object or behavior (Ajzen & Fishbein, 2005). Ajzen and Fishbein (2005) argued that attitudes toward objects do not strongly predict specific behaviors toward such objects; rather, the attitude toward the specific behavior determines whether the behavior is performed. Therefore, attitude toward JSWs use, rather than attitude toward JSWs, was examined in this study. Goodhue and Thompson (1995) did not propose a direct association between task–technology fit and attitude toward use in their original model; Goodhue (1997) also argued that task–technology fit operates primarily through changes in the expected outcomes of use. However, in their 2004 investigation on the TPC, Staples and Seddon (2004) explored the relationship between task–technology fit and attitude toward use, revealing that task–technology fit significantly influenced attitude toward use when use was mandatory, but not when use was optional. Furthermore, in the study by McGill and Klobas (2009), task–technology fit was determined to exert a significant positive effect on attitude toward use when users had little choice about whether to use a system. With the increasing prevalence of JSWs in job searching, jobseeker use of JSWs is becoming increasingly mandatory. Therefore, the following hypothesis was proposed:

• H2: Task-technology fit positively influences attitude toward JSW use.

Triandis (1977) identified the role of expected outcomes of use in influencing behavior. Whereas Goodhue and colleagues did not investigate this relationship (Goodhue & Thompson, 1995; Goodhue et al., 1997), Thompson, Higgins, and Howell (1991) determined that the expected outcomes of use have a strong influence on utilization, and Staples and Seddon (2004) found that influence in this regard existed when use was voluntary. Therefore, the following hypothesis was proposed:



• H3: Expected outcomes of JSW use will positively influence JSW utilization.

In the TPC, attitude toward IT use is proposed as a predictor of utilization (Goodhue & Thompson, 1995). Previous research on this relationship has yielded mixed findings. Although McGill and Klobas (2009) found that attitude toward use influenced the use of a learning management system, Staples and Seddon (2004) did not find a relationship in either of the two domains they studied: (a) mandatory use of a library cataloging system by university staff and (b) voluntary use of spreadsheet and word processing software by students. Despite this uncertainty concerning the role of attitude, consistent with Goodhue and Thompson's inclusion of attitude toward system use as a predictor of utilization in the TPC, the following hypothesis was proposed:

• H4: Attitude toward JSW use influences JSW utilization.

Social norms refer to an individual's beliefs about whether most other people, who are perceived as crucial, want the individual to perform a certain behavior. In the case of jobseeker use of JSWs, the other people might include co-workers, family members, and/or friends. The role of social norms in IT adoption has been investigated with inconsistent results. Some authors have reported that social norms influence utilization (Venkatesh & Davis, 2000), whereas others, such as Dishaw and Strong (1999), have determined that social norms do not influence intention to use. Venkatesh and Davis (2000) argued that the influence of social norms is restricted to environments in which use is mandatory; consistent with this finding, Staples and Seddon (2004) found that social norms influenced utilization when usage was mandatory, but not when it was voluntary. Additionally, Laumer et al. (2010) investigated the role of social influence in e-recruiting among students and observed that social influence affected utilization by older students. However, considering the general uncertainty concerning the role of social norms in the adoption of JSWs, investigating this in the present study was crucial. Therefore, the following hypothesis was proposed:

• H5: Social norms positively influence JSW utilization.

Habit is the extent to which people tend to perform behaviors automatically through learning (Limayem, Hirt, & Cheung, 2007). Kim and Malhotra (2005) equated habit with automaticity. Therefore, habit can be measured as the extent to which a person believes the behavior to be automatic. When habit is defined independently of past behavior, it can be added as an explanatory variable to the TPB. In IT research, such habit (conceptualized as "stickiness") has been found to directly influence technology acceptance and use (e.g. Baptista & Oliveira, 2015; Venkatesh & Agarwal, 2006; Venkatesh, Thong, & Xu, 2012). Therefore, we proposed the following hypothesis:

• H6: Habit positively influences JSW utilization.

Various conditions supporting system use (e.g. ease of system access and the relationship between the user and support staff) can influence use and performance. The importance of facilitating such conditions is reflected in the findings of Thompson, Higgins, and Howell (1994) that these conditions are more crucial among less experienced users for personal computer use, and several authors have commented on the importance of support in the adoption of Internet banking (e.g. Baptista & Oliveira, 2015; Im, Hong, & Kang, 2011). Although Staples and Seddon (2004) did not determine that facilitating conditions influenced use, a positive effect was found in this regard in the agile information systems study by Hong, Thong, Chasalow, and Dhillon (2011). In the e-recruiting domain, Laumer et al. (2010) studied JSW adoption and determined that facilitating conditions had a significant direct effect on intention to use among younger students. Consistent with the TPC, the following hypothesis was proposed:

• H7: Facilitating conditions positively influence JSW utilization.



Performance impact refers to the effect of a system on user behavior or outcomes. The influence of task–technology fit on performance is a key component of the TPC, and its role has been confirmed in numerous studies by Goodhue and colleagues (e.g. Goodhue, 1995; Goodhue & Thompson, 1995; Goodhue et al., 1997, 2000). The performance impact most commonly considered in research on information system success relates to management performance and decision–making (DeLone & McLean, 1992) and is measured by effectiveness, productivity, and performance in individual self-reports (Goodhue & Thompson, 1995). However, in the JSW domain, performance impact can relate to impact on job search results and unemployment durations of jobseekers (Kuhn & Mansour, 2011), among other factors. In this study, outcomes regarding jobseeker unemployment durations were considered. The following hypothesis was proposed:

• H8: Task-technology fit negatively influences jobseeker unemployment durations.

The positive influence of utilization on performance is another key component of the TPC. Although Staples and Seddon (2004) did not find a relationship between the level of utilization and performance, Goodhue and colleagues (Goodhue & Thompson, 1995; Goodhue et al., 1997) reported evidence of this relationship. Furthermore, Kuhn and Mansour (2011) revealed that Internet job searching reduces individual jobseekers' unemployment durations by approximately 25%. JSWs, social networking websites, and recruitment corporate websites are the most widely used websites for Internet job searching (Nikolaou, 2014), and the extensiveness, efficacy, and employment rates of JSWs are substantially higher than those of other websites (Kim, Chun, Kwak, & Nam, 2014; Nikolaou, 2014). Therefore, the following hypothesis was proposed:

• H9: JSW utilization negatively influences jobseeker unemployment durations.

4. Research methodology

4.1. Study content and sample

Participants of the survey conducted in this study were unemployed jobseekers with experience using a JSW for employment services offered by six public employment centers that are in charge of different districts throughout Taiwan. For obtaining the opinions of recently unemployed jobseekers, we drew a convenient sample from each center. The data were collected within a 6 month period in 2015, during which 1,800 randomly assigned jobseekers (300 unemployed jobseekers from each of the six employment centers) were asked to fill out a paper-and-pencil questionnaire; this can prevent the derivation of an "unrepresentative" sample from specific districts. To maximize the response rate, gifts were offered to the participants who completed the questionnaire. Ultimately, 1,451 questionnaires were collected; however, 169 were incomplete. Hence, only 1,282 questionnaires were used for further analysis. Participation in the survey was completely anonymous and voluntary; anonymity and confidentiality ensured that participants' responses to the paper-based survey would not affect the selection decisions in any way. The survey questionnaire was translated from English to Chinese and was checked by the second author, who is fluent in both English and Chinese; back translation was then employed. Each respondent required approximately 10 min to complete the questionnaire. Table 1 presents a summary of the demographics of the respondents.

4.2. Measures

Items to measure the constructs of interest were adapted for the JSW domain using instruments from previous studies on the TPC as a starting point (e.g. Goodhue & Thompson, 1995; Hartwick & Barki, 1994; Staples & Seddon, 2004), with new items being developed as required. Initially, a pretest of the questionnaire was conducted by employing 98 volunteers who had experience using JSWs, sampled using a snowball strategy (Patton, 1990). The respondents were asked to assess logical inconsistencies, item sequence, and the questionnaire format.

The questionnaire comprised two main sections. The first section asked questions about the participants and their previous experience with JSWs. The second section asked questions concerning



Demographic	Frequency	%	Demographic	Frequency	%		
characteristics			characteristics				
Gender			Unemployment durations				
Female	605	47	1 month or below	274	21		
Male	677	53	1–2 month	199	16		
Age			2–3 month	177	14		
15-20	28	2	3–4 month	153	12		
21-30	458	36	4–5 month	77	6		
31-40	371	29	5–6 month	102	8		
41-45	164	13	6 months or above	300	23		
46-55	213	16	No. of job search websites used				
56-65	48	4	Only 1 private JSW 233		18		
Education			2-N private JSWs	244	19		
Junior high school or below	32	3	Only 1–N public JSWs	107	8		
High school	257	20	2-N private or public JSWs	698	55		
Junior college	222	17					
University	622	49					
Graduate school or above	149	11					

the participants' perceptions of JSWs and their unemployment durations while searching for jobs. The constructs measured in the second section are described herein, and the items used to measure the constructs are listed in the Appendix A.

Task-technology fit was assessed with a multifaceted measure (Goodhue & Thompson, 1995). The considered aspects of task-technology fit comprised ease of use, three items from Doll and Torkzadeh (1988) ease of e-recruiting, three items from Laumer et al. (2010) and information quality, five items from Doll and Torkzadeh (1988). The 11 items were measured with a 7-point Likert scale with anchors ranging from 1 (strongly disagree or never) to 7 (strongly agree or always).

Expected outcomes of JSW use were measured using 6 of the 10 items employed by Staples and Seddon (2004). These items have been developed by Davis (1989) and Moore and Benbasat (1991). The items were measured with a 7-point Likert scale with anchors ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

Attitude toward JSW use was measured using four items that are based on items employed by Hartwick and Barki (1994), Taylor and Todd (1995), and Davis et al. (1989) and measured using 7-point semantic differential scales.

Social norms were measured using four items adapted to the JSW context from Hartwick and Barki (1994). The items were measured with a 7-point Likert scale with anchors ranging from 1 (strongly disagree) to 7 (strongly agree).

Habit was measured using four items adapted to the JSW context from Venkatesh et al. (2012). The items were measured with a 7-point Likert scale with anchors ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

Facilitating conditions were measured using five items that are based on items employed by Baroudi and Orlikowski (1988), Thompson et al. (1994), and Taylor and Todd (1995). The items were measured with a 7-point Likert scale with anchors ranging from 1 (strongly disagree) to 7 (strongly agree).



JSW utilization was measured using four items that are based on items used by McGill and Klobas (2009). The participants were asked how many hours per week they used JSWs, and how many hours per week they intended to use JSWs over the course of their periods of unemployment. The participants were also asked to indicate their previous use and intended use of JSWs with a 7-point scale with anchors ranging from 1 (*light*) to 7 (*heavy*).

As recommended by Staples and Seddon (2004), an objective measure of performance impacts was also sought. However, Kuhn and Mansour (2011) believed the effectiveness of Internet job search was the reduction of unemployment duration. This measure was obtained by asking the participants how long they had been unemployed while job searching. This aspect of performance impact was characterized as the jobseeker unemployment duration.

5. Data analysis

The relationships in the model were tested using partial least squares (PLS). PLS provides an alternative estimation approach to traditional structural equation modelling (SEM). A two-step approach commonly employed in SEM techniques was applied to evaluate model fit. This approach involves first testing the fit and constructing the validity of the proposed measurement model; subsequently, once a satisfactory measurement model is obtained, the measurement model is fixed when the structural model is estimated (Hair, Black, Babin, Anderson, & Tatham, 2006). SmartPLS Version 2.0 (University of Hamburg, Germany) was used to assess the measurement and structural models.

5.1. Measurement model

The measurement model was assessed in terms of individual item loadings, reliability of measures, convergent validity, and discriminant validity. All items loaded significantly on their latent construct (p < 0.001), exceeding the minimum threshold of 0.7 recommended by Chin (1998). Reliability was assessed using composite reliability and Cronbach's α . All multi-item constructs met the guidelines for composite reliability greater than 0.7 (Hair et al., 2006) and Cronbach's α greater than 0.7 (Nunnally, 1978). Convergent validity was assessed using average variance extracted. All multi-item constructs met the guideline of average variance extracted greater than 0.5 (Hair et al., 2006). Table 2 provides a summary of the reliability and convergent validity of the final scales employed in the study.

For satisfactory discriminant validity, each item must load more highly on its own construct than on other constructs. In addition, the average variance shared between a construct and its measures must be greater than the variance shared by the construct and any other construct in the model (Chin, 1998). Table 3 provides the construct intercorrelations and the square root of average variance extracted for each construct (in bold). In all cases, the square root of average variance extracted exceeded the corresponding construct intercorrelations, thereby exhibiting discriminant validity (Chin, 1998).

Table 2. Results of measurement scales					
Construct	Composite reliability	Cronbach's α	Average variance extracted		
Task-technology fit	0.94	0.92	0.68		
Expected outcomes of JSW use	0.92	0.89	0.76		
Attitude toward JSW use	0.96	0.94	0.89		
Social norms	0.93	0.85	0.87		
Habit	0.94	0.90	0.83		
Facilitating conditions	0.85	0.76	0.59		
JSW utilization	0.83	0.71	0.62		
Job seeker unemployment durations	NAª	NAª	NAª		

^aSingle item measure.

Table 3. Discriminant validity								
Construct	1	2	3	4	5	6	7	8
1. Task-technology fit	0.82							
2. Expected outcomes of JSW use	0.79	0.87						
3. Attitude toward JSW use	0.67	0.00	0.94					
4. Social norms	0.61	0.60	0.56	0.93				
5. Habit	0.09	0.06	0.09	0.05	0.91			
6. Facilitating conditions	0.69	0.56	0.72	0.58	0.00	0.77		
7. JSW utilization	0.50	0.36	0.54	0.37	0.16	0.53	0.79	
8. Job seeker unemployment durations	-0.20	0.23	0.12	0.16	-0.02	0.12	-0.03	NA

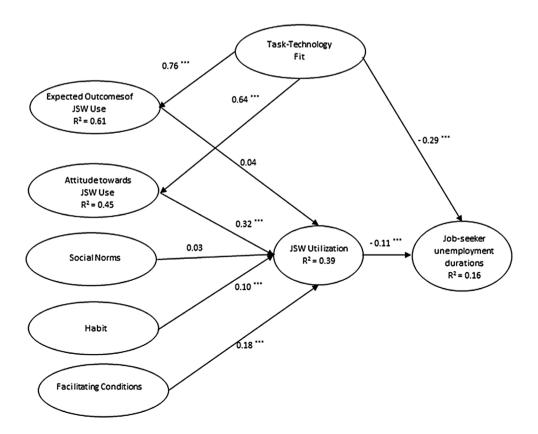
5.2. Structural model

Two criteria were used to assess structural model quality: (a) the statistical significance of estimated model coefficients and (b) the effectiveness of the model in explaining the variance among the dependent variables. If the TPC was a valid representation of JSW impact, all proposed relationships in the model were expected to be significant. The bootstrapping technique implemented in SmartPLS 2.0 was applied to evaluate the significance of these hypothesized relationships. The R^2 of the structural equations for the dependent variables provided an estimate of variance extracted (Hair et al., 2006), and therefore indicated the success of the model in explaining these variables.

6. Results

Figure 3 indicates the standardized coefficients for each hypothesized path in the model and R^2 for each dependent variable. The path significance levels were estimated using the bootstrap resampling method with 500 iterations, as suggested by Goodhue, Lewis, and Thompson (2007). A goodness of fit (GoF) was applied (Tenenhaus, Vinzi, Chatelin, & Lauro, 2005), defined as the geometric

Figure 3. Structural model results.





Hypotheses and corresponding path(s)	Path coefficient (degree of freedom = 1280)	t-value	Support for H?	
H1: Task-technology fit positively influences the expected outcomes of JSW use	0.762	62.82*	Yes	
H2: Task-technology fit positively influences attitude toward JSW use	0.644	34.16*	Yes	
H3: Expected outcomes of JSW use will positively influence JSW utilization	0.042	0.35	No	
H4: Attitude toward JSW use influences JSW utilization	0.323	8.32*	Yes	
H5: Social norms positively influence JSW utilization	0.031	0.92	No	
H6: Habit positively influences JSW utilization	0.100	4.32*	Yes	
H7: Facilitating conditions positively influence JSW utilization	0.181	6.78*	Yes	
H8: Task-technology fit negatively influences jobseeker unemployment durations	-0.290	9.61*	Yes	
H9: JSW utilization negatively influences jobseeker unemployment durations	-0.113	5.61*	Yes	

^{*}Level of significance at p < 0.001 (2 tailed test).

mean of the average communality and average R^2 (for endogenous constructs). The observed GoF was 0.59, exceeding the large effect size criterion of 0.36 (Wetzels, Odekerken-Schröder, & Van Oppen, 2009, p. 187).

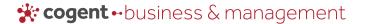
Table 4 presents a summary of the hypotheses tested, the path coefficients obtained from the PLS analysis, and t-values for each path obtained through bootstrapping. At the 1% confidence level, statistically significant paths (i.e. significantly different from zero) were found, indicating that seven of the nine hypotheses were supported by the results.

Task-technology fit had a significant positive effect on both expected outcomes of JSW use and attitude toward JSW use; therefore, H1 and H2 were supported. Contrary to expectations, expected outcomes of JSW use did not influence JSW utilization in this study; therefore, H3 was not supported. As hypothesized, attitude toward JSW use had a significant positive influence on JSW utilization; therefore, H4 was supported.

Although the factor of social norms was not found to influence JSW utilization in this study, habit had a significant positive influence on JSW utilization; therefore, H5 was not supported, but H6 was. The final considered precursor of utilization was facilitating conditions, which had a significant positive influence on JSW utilization; therefore, H7 was supported.

Task-technology fit negatively influenced jobseeker unemployment durations in e-recruiting; therefore, H8 was supported. Furthermore, JSW utilization had a weak negative influence on jobseeker unemployment durations; hence, hypothesis H9 was supported.

Ability to explain the variance among the dependent variables was the second criterion used to evaluate the model. The R^2 values were measures of the ability of the model to explain the variance among the dependent variables (Figure 3). The model explained 16% of the variability in jobseeker unemployment durations. The variability in JSW utilization and the precursors of use were also of



interest; the model accounted for 39% of the variability in JSW utilization, 61% of the variance in expected outcomes of JSW use, and 45% of the variance in attitude toward JSW use.

High path coefficients can be expected for the relationships between task-technology fit and both expected outcomes of use and attitude toward use, and such coefficients support the assumption regarding the impact of task-technology fit on beliefs and attitudes regarding the use of a system; Goodhue and Thompson (1995) proposed these relationships but did not test them. Overall, the finding of this study support for most parts of the TPC model and for the argument that task-technology fit increases in predictive power as a predictor of technology performance impacts and utilization.

7. Discussion and conclusion

This study investigated the role of task-technology fit in JSW adoption, addressing the question of how task-technology fit influences the performance impact of JSWs. As proposed, task-technology fit was observed to play a crucial role in the acceptance and use of JSWs. The TPC (Goodhue & Thompson, 1995) was employed as the framework for the study, and evidence was found for the usefulness of the model in the e-recruiting context.

7.1. Influence of task-technology fit on precursors of utilization

As proposed in the TPC (Goodhue & Thompson, 1995), task-technology fit had a significant positive effect on the precursors of JSW utilization, characterized in this study as expected outcomes of use and attitude toward use. Our observed influences of task-technology fit on expected outcomes of use and attitude toward use are consistent with the results of McGill and Klobas (2009) and Staples and Seddon (2004). Although Goodhue and Thompson (1995) didn't propose a relationship between task-technology fit and attitude toward use in their original model, Staples and Seddon found that task-technology fit influenced attitude toward use when use was mandatory, but not when use was optional. In the present study, task-technology fit had a significant positive effect on attitude toward JSW use; because jobseekers in the study believed that they could choose whether to use the JSW, this finding is consistent with that of Staples and Seddon.

7.2. Role of precursors of utilization

7.2.1. Expected outcomes of JSW use and attitudes toward JSW use

As hypothesized, attitude toward JSW use had an influence on the level of JSW utilization. This result is consistent with those of Laumer et al. (2010), Lin (2010), and Yoon Kin Tong (2009), who determined that attitude toward use influenced intention to use in their study on JSW in job searching.

Comparing the findings concerning the influence of attitude toward use on JSW utilization with those regarding expected outcomes of JSW use is warranted. In contrast to initial expectations and to the argument by Goodhue (1997) that task-technology fit primarily affects expected outcomes of use, the expected outcomes of JSW use did not influence JSW utilization in this study. One explanation, consistent with the findings of Staples and Seddon (2004) regarding student perceptions of mandatory use, may be that influence of JSW use existed when use was voluntary, but not when use was mandatory.

Ajzen and Fishbein's study on the relationship between expectations, beliefs, attitude, and behavior (Ajzen, 1991; Ajzen & Fishbein, 2005), which expanded on Triandis's (1977) study on expected outcomes, suggests that the relationship between task-technology fit and utilization is likely influenced by expected outcomes and attitudes toward utilization. Additional research is needed to test this relationship in the e-recruiting domain.

7.2.2. Social norms

In the initial conceptualization of this study, people who might influence jobseekers' beliefs about JSW use included co-workers, friends, and family members; the construct of social norms was



conceptualized to include the influence of all these groups of people. According to the measurement model analysis, social norms were not found to influence JSW utilization in this study.

Previous research on the role of social norms in influencing use intention has yielded mixed results, and only one study was conducted on this topic in the e-learning domain. Venkatesh and Davis (2000) determined that social norms significantly affect use intention directly only when usage is mandatory and experience level is low. In the current study, the participants' use was mostly voluntary and their experience level with JSWs was not low. Therefore, these findings are inconsistent with those of Venkatesh and Davis (2000), as well as partially consistent with those of Laumer et al. (2010), who revealed that social norms affect intention to use a JSW among older students, but not among younger students.

These findings raise a question regarding the measurement of social norms in the JSW context. Theories of normative influence on intention and behavior refer to salient or relevant norms, which are norms that are crucial to a person in the context of the behavior of interest (Ajzen, 1991, 2002). From this perspective, identifying social norms that may influence JSW utilization is difficult. Considering the findings of prior studies, indicating that jobseeker–recruiter interaction and collaborative uses of JSW affect jobseeker performance, one possible salient social norm comprises recruiters and peers. Further research on normative influence on JSW utilization should incorporate these and any other salient social norms that may apply in the context of the study.

7.2.3. Habit

Habit had a weak positive influence on JSW utilization; we believe that a stronger habit leads to stronger use intention, consequently influencing behavior. Therefore, the past behavior of jobseekers has an effect on their current assessment of whether to continue the behavior in the future. The research model validates the relationship between habit and JSW utilization, in line with earlier research (Baptista & Oliveira, 2015).

Studies on the role of habit in influencing use intention in the e-recruiting domain are extremely scant. It is possible that if jobseekers are not especially sensitive to changes in the e-recruiting context, or have little tendency or insufficient cognitive capacity to process environmental information in a controlled and detailed manner, they tend to depend on established habit to guide their behavior (Verplanken & Wood, 2006). Further research is required to confirm this situation in the e-recruiting domain.

7.2.4. Facilitating conditions

The final considered precursor of utilization was the factor of facilitating conditions. Facilitating conditions have been considered to play a crucial role in ensuring JSW behavior intentions among younger students (Laumer et al., 2010). Furthermore, facilitating conditions influenced JSW utilization in this study. This finding is inconsistent with that of Staples and Seddon (2004). One reason why facilitating conditions played a role in the present study is that the JSW was well established and stable; additionally, jobseekers had relatively high levels of experience with the JSWs. Exploring the role of facilitating conditions in a wider range of environments could be useful.

7.3. Influence on JSW performance impact

Consistent with the TPC and research by Goodhue and colleagues (Goodhue & Thompson, 1995; Goodhue et al., 1997), and in contrast to the findings of Staples and Seddon (2004), JSW utilization positively influenced performance impact on recruiting in the current study. Thus, increased use of a JSW can lead to decreases in unemployment durations.

The role of task-technology fit in directly influencing performance is a key element of the TPC and has been confirmed in studies in other domains by Goodhue and colleagues, among other researchers (Goodhue, 1995; Goodhue & Thompson, 1995; Goodhue et al., 1997, 2000; Staples & Seddon, 2004). In the present study, although task-technology fit was found to influence the performance

impact of e-recruiting, it had only a moderate (but significant) effect on jobseeker unemployment duration, confirming its role in JSW adoption. The jobseekers in this study evidently felt that the JSW contributed to their job searching; this was reflected in their unemployment durations.

7.4. TPC and JSW adoption

This study applied the TPC to address the question of how task-technology fit influences the performance impacts of JSWs. The seven hypothesized paths that were supported in this investigation of the TPC suggest that task-technology fit plays a crucial role in influencing JSW adoption as perceived by jobseekers, both through precursors of utilization and through direct effects on e-recruiting performance (unemployment duration). Task-technology fit indirectly influences JSW utilization through attitude toward JSW use and directly influences e-recruiting impact; moreover, utilization directly influences e-recruiting impact. Furthermore, habit and facilitating conditions influence utilization, and hence performance impacts.

The model accounted for approximately 39% of the variability in JSW use in e-recruiting, and as described by Staples and Seddon (2004), most of the explanatory power of the model derived from task-technology fit. Although task-technology fit significantly influenced jobseeker unemployment duration, the effect was weak, and only a small proportion of the variability among unemployment durations was explained. Jobseeker results are influenced by various other factors including ability, personal beliefs, working environment, wage, and the suitability of the recruiter to the jobseeker (Brenčič, 2014). Therefore, this study makes a crucial contribution by highlighting the role that task-technology fit may have in influencing jobseeker performance concerning JSWs; task-technology fit is clearly essential for adopting JSWs. This study also makes a vital contribution by acknowledging the role that jobseeker perceptions play in the adoption of the JSW, regarding habit and facilitating conditions, which are crucial to JSW use.

Overall, the attitudes, facilitating conditions, and habits of the respondents showed that factors influencing jobseekers to use JSWs as well as JSW usage and task-technology fit could shorten jobseekers' unemployment durations.

Future research should further investigate the role of task-technology fit in JSW success, as well as the role of individual motivational beliefs on JSW outcomes determined in this study. A valuable direction for future research would be to examine whether the TPC model must be revised for current users or to compare this model with those in current research on technology acceptance. Although many TPC model constructs have been examined and potentially validated in other studies on technology acceptance (e.g. TAM, TPB, and UTAUT studies), additional elements could be still be available for incorporation into the TPC model to enhance its explanatory power.

Our R^2 value of performance impacts was lower than our expectations, indicating that there could be covariates or other predictors (e.g. wage) affecting our model; however, considering our focus on technology in this study, we did not investigate other possible interactions.

To summarize, our results suggest that the TPC model is a useful tool for understanding the potential impact of JSWs on job searching performance. However, the relationships within the model appear to be dependent on JSW usage.

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Appendix A

Items used to measure constructs

Task-technology fit

- JSWs are easy to use.
- JSWs are user friendly.
- It is easy to get JSWs to do what I want them to do.
- My interaction with the JSW application form would be clear and understandable.
- I find the JSW application form easy to use.
- · Learning to use the JSW application form is easy for me.
- Do you think the output from JSWs is presented in a useful format?
- Is the information from JSWs accurate?
- Do JSWs provide you with up-to-date information?
- · Do you get the information you need in time?
- Do JSWs provide output that seems to be just about exactly what you need?



Expected outcomes of JSW use

- Using JSWs will help me to accomplish my jobs search more quickly.
- Using JSWs will improve my performance during job search periods.
- Using JSWs will increase my productivity.
- Using JSWs will enhance the effectiveness of my job search posts.
- Using JSWs will make it easier to complete my recruiting tasks.
- Using JSWs will give me greater control over my recruiting tasks.

Attitude toward JSW use

- Using JSWs in my job search is: very unpleasant, moderately unpleasant, slightly unpleasant, neutral, slightly pleasant, moderately pleasant, or very pleasant.
- My frequent use of JSWs is: very poor, poor, fair, good, very good, excellent, exceptional.
- Using JSWs frequently in my job search is: very dissatisfied, moderately dissatisfied, slightly dissatisfied, neutral, slightly satisfied, moderately satisfied, very satisfied.
- All things considered, using JSWs in my job search is: far below, moderately below, slightly below, met expectations, slightly above, moderately above, far above.

Social norms

- My co-workers think it is important for me to use JSWs.
- My friends think it is important for me to use JSWs.
- My family thinks it is important for me to use JSWs.

Habit

- The use of JSWs has become a habit for me.
- · I am addicted to using JSWs.
- I must use JSWs.
- Using JSWs has become natural to me.

Facilitating conditions

- The support staff make it easy to use JSWs.
- JSW support is always available when I want it.
- Online training on how to use JSWs is available to me.
- A specific person (or group) is available for assistance with JSWs difficulties.
- I can always access a computer to use JSWs when I need to.
- · Job search materials download quickly.

Utilization

- On average, how many hours per week do you use JSWs while unemployed?
- How many hours a week do you expect to use JSWs (while unemployed)?
- Your usage of JSWs so far while unemployed has been: light... heavy.
- Your expected use of JSWs in the future is: light ... heavy.

Jobseeker unemployment duration

How long did you remain unemployed while using JSWs?





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