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Full Length Research Paper

The effect of end user computing competence on human resource job performance: Mapping for human resource roles

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The purpose of this paper is to explore the relationship between end user computing competence and job performance by different human resource (HR) roles. A research model was formulated based on two theories from both the technology-to-performance chain (TPC) model and the HR five role model. The study used a multiple hierarchical regression approach, in which 122 HR professionals within eight financial companies participated. The study found that end user computing competence positively influenced the job performance of the HR professionals, whereas the net explanatory power and the impacted end user computing competency factors varied across HR roles. These findings contribute to research related to end user computing competence and an expanded understanding of the factors that improve an HR professional's job performance by different HR roles. The theoretical and managerial implications of these findings are discussed.

Key words: End user computing competence, human resource (HR) roles, job performance, human resource competence.

INTRODUCTION

In 2009, as the CedarCrestone human capital management (HCM) survey showed, organizations with the best human resource (HR) practices continuously explore new information technologies (IT) and apply them when warranted (CedarCrestone, 2009). According to other sources, the HR software market has been among the fastest-growing corners of the business software world, and spending on HR technology has been holding steady despite the economy (Workforce Management, 2008; Towers, 2009). Increasingly, IT is reshaping the core competencies in HR. The effective use of IT has become one of the HR competency domains, and an increasing number of people with advanced technological backgrounds are involved in HR (Bell et al., 2006). HR professionals will need not only technical training in new systems use but also the conceptual knowledge to select, manage, and evolve with new technology (Jones and Hoell, 2005).

Additionally, when bringing IT into HR increasingly calls for an integration of diverse expertise, interdisciplinary comprehension, and modernization of the HR profession (Bondarouk and Ruël, 2009). Lack of IT competence clearly impacts the adaptation and implementation of an IT-supported application (Olivas-Luján et al., 2007). Therefore, successful IT application and the user's IT competence will affect the outcome of IT investments (Akpomi and Ordu, 2009; Huang and Wong, 2010) and have an impact on the HR roles (Haines and Lafleur, 2008; Yusoff et al., 2010). However, in the areas of HR and IT, rigorous empirical studies are uncommon, and few studies have addressed the relationship between IT, HR, and performance (Haines and Lafleur, 2008).

Although, IT is often considered as a driver of change within HR (Bell et al., 2006), little research explores what types of HR roles require more end user computing competence. In addressing the issue of the end user computing competence, HR roles, and performance at individual level, both the technology-to-performance chain (TPC) model (Goodhue and Thompson, 1995) and the HR five-roles model (Ulrich and Brockbank, 2005) are

important theoretical bases in the IT/HR field. Therefore, this paper seeks to address the gap between the two models with a review of IT/HR literature and to provide empirical evidence from an investigation of whether end user computing competence and performance of an HR professional are linked and whether the HR role moderates the association between the end user computing competence and performance.

BACKGROUND AND HYPOTHESIS

Technology-to-performance chain

The technology-to-performance chain (TPC) was proposed by Goodhue and Thompson in their 1995 paper published in MIS quarterly. The TPC is a proven model that demonstrates how technologies lead to performance impacts at the individual level and how technologies must be utilized and adapted to the task that they support to have a performance impact (Staples and Seddon, 2004). It is clear that maximizing IT potential presumes not only that the technology be adopted and used but also that it be used well. Competence with IT is especially important because of its effect on performance of IT usage (Marcolin et al., 2000). The competence is defined as a set of knowledge, skills, or abilities required by individuals in order for them to be competent or effective in their workplace performance (Han et al., 2006).

End user computing competence

In the context of IT usage in HR functions, HR professionals generally act as end users. The end users' computing competence influences how well they can apply IT knowledge, applications and information systems to their tasks in an organizational computing environment (Yoon, 2009). Ngai and Wat (2006) found that insufficient IT expertise is a major barrier to embracing human resource information systems. Thus, this study adopted the end user computing competency developed by Yoon (2009) to measure HR, IT competence rather than the IT expertise for an IT professional. The end-user computing competency is composed of four major components: computing mindset, computing knowledge, computing application and computing potential.

The computing mindset indicates concepts and attitudes, acknowledgement, understanding, and sense of values related to a computing department that can affect end users' computing competence. Computing knowledge means basic knowledge about computing, knowledge of solutions and systems and knowledge of computing security. Computing application refers to ability to use computing basics, apply computing solutions and computing systems to given tasks, manage business information and establish security systems. Computing potential recognizes relevant degrees and certificates, completion of education and training, and accomplishment of knowledge production related to computing or IT departments as a potential progress factor for improving end user computing competency. Because the end user computing competence is an antecedent to the user's performance (Marcolin et al., 2000), the following hypotheses are proposed:

H_{1a}: Computing mindset is positively associated with the performance of an HR professional.
H_{1b}: Computing knowledge is positively associated with the performance of an HR professional.
H_{1c}: Computing application is positively associated with the performance of an HR professional.
H_{1d}: Computing potential is positively associated with the performance of an HR professional.

Corresponding with the TPC model, performance impacts will occur when the technology meets the users' needs and provides features that support the fit of the requirements to the task. Task-technology fit (TTF) is the degree to which a technology assists an individual in performing his or her portfolio of tasks. TTF is a significant predictor of a user's intention to use new technology, whereas the technology will be accepted by individuals only if the functions of the technology correspond with the tasks to be performed (Yen et al., 2010). Therefore, the TTF model is most theoretically consistent with the idea of user competence (Marcolin et al., 2000) and seeks to predict performance (Cane and McCarthy, 2009). Implementing IT can have an operational, relational, or transformational impact on the HR function, depending on the expectation of the primary HR role in the organization (Marler, 2009; Ruël et al., 2004). If the IT implementation is not compatible with the roles of HR professionals, there may be a diminished influence on their jobs (Gardner et al., 2003). Accordingly, the question arising from such an argument is: what are the different kinds of roles for HR professionals?

HR roles

The cluster of HR roles research is linked to the five-role model proposed by HR gurus-Ulrich and Brockbank (2005) in their book of 'The HR Value Proposition'. The five-roles model was synthesized and revised based on Ulrich's famous four-role model from mid-1990s to mid-2000s for HR professionals. In summary, HR professionals are employee advocates, charged with ensuring that the employer/employee relationship is of reciprocal value. In addition to advocating for employees today, they develop the future workforce and help employees unlearn old skills and master new ones as human capital developers. They are also functional experts, designing and delivering HR practices that ensure individual ability and create organization capability. As strategic partners, they focus

on being business savvy to help line managers at all levels reach their goals. To tie it all together, they must be genuine leaders who are credible, both within their HR functions and to those outside (Ulrich and Brockbank, 2005). However, different HR roles have different attitudes toward the perceived usefulness and acceptance of IT (Voermans and van Veldhoven, 2007) and the level of required IT competence are significantly related to HR roles (Long and Wan-Ismail, 2008). Therefore, HR roles may moderate the association between the end user computing competence (computing mindset, computing knowledge, computing application and computing potential) and the job performance for an HR professional. Hence, the following is proposed:

H_2: End user computing competence has different performance impacts on the different roles of an HR professional.

METHODS

Participants and procedures

A great amount of anecdotal research has shown that organizational factors, such as computing support, user training, management support and infrastructures significantly affect IT usage (Lee et al., 2003; Olivas-Luján et al., 2007). Thus, we chose a sponsor group/company that directly holds and manages eight subsidiaries with the same IT and HR system, and this condition to participate in the study controls for organization factors. The participating subsidiaries represent a diversified sample that covers organizations of varying sizes and sectors, and in total, the subsidiaries represent more than twenty-five thousand employees in Taiwan. The corresponding HR division is centralized with 123 HR professionals, provides HR services for the eight companies and employees, and the HR functions and positions cover the five HR roles in accordance with the purpose of this study.

The HR division has introduced human resource information systems (HRIS) for performance management, compensation, recruitment and selection, personnel and benefit administration with employee self-service, and an HR portal and an e-learning platform. Other electronic HR applications are being developed. After we instructed all the respondents, the survey was e-mailed to those 122 respondents' (excluded the Chief HR Officer, [CHRO]) immediate supervisors and included a request for them to complete the web-based questionnaire to understand the end user computing competence possessed by their subordinates. We also obtained their actual performance date, HR roles, and required personal profiles from the HRIS to avoid common method bias. According to Hardy (1993), separate subgroup regressions can be used to examine possible differences between subgroups. Therefore, this study adopted separate subgroup regressions to identify potential differences in end user computing competency elements that enhance job performance among the five HR roles.

Measures

The instrument in the present study has been developed from previous studies because using the well-established and accepted scales can provide high convergent and discriminate validity. A Likert scale was used on the questionnaire with the following ratings: 1-strongly disagree, 2-disagree, 3-moderately agree, 4-agree, and 5-strongly agree.

End user computing competence

Competence was measured using four dimensions with 14 items adopted from Yoon (2009) by asking the respondents to indicate the level of end user computing competence for their subordinates.

HR roles

HR professionals fulfill multiple, not single, roles, and no one professional plays all HR roles (Ulrich and Brockbank, 2005). Thus, a variable was determined to indicate whether each HR professional was or was not involved in any HR role according to the job description for separate subgroup regressions. The results of HR roles were all confirmed with the 22 HR managers and the CHRO.

Job performance

Staples and Seddon (2004) suggested that research using more-objective measures of individual performance would enhance the internal validity of TPC model. This study used job performance as a dependent variable to explore the required HR and IT competency elements for different HR roles. We acquired each respondent's performance measurements from an objective record in his/her company's HRIS after getting approval from the CHRO, who was told the individual performance record would be anonymous. The performance was appraised to the extent of which predetermined work objectives had been met by the respondent's manager per annum, and the final performance rating was determined by a performance committee led by the CHRO to ensure internal rating consistency. The performance rating was scaled as follows: 5-exceptional performer, 4-above target performer, 3-on target performer, 2-below target performer, and 1-unsatisfactory performer.

Control variable

Previous research has shown age, gender, and length of service in a company to have an effect on the attitude towards IT. These variables may affect the attitude toward IT usage in the HR function as well (Voermans and van Veldhoven, 2007), and therefore affect the performance in the context of IT utilization in the HR function. In addition, there are several interesting findings that show a strong correlation between job level (for example, manager versus non-manager) and performance rating (Kahya, 2007). All of the aforementioned variables are taken into account in this study as control variables.

Research model

The study adopted multiple hierarchical regressions on the micro-level to ascertain whether the end user computing competence, adding the control variables, has a significant influence on the job performance for an HR professional, and thereafter tested the moderating effect of HR roles in the relationship between the end user's computing competence and job performance. The research model is presented in Figure 1.

RESULTS

Descriptive statistics

A profile of the survey sample from the HR professionals

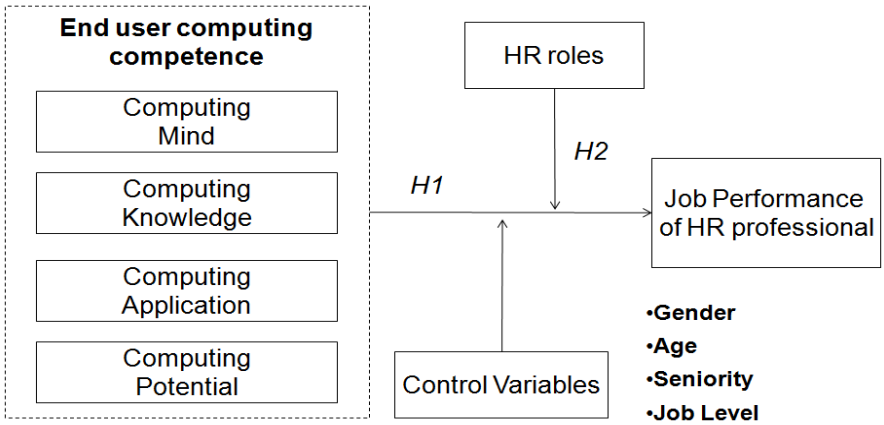

Figure 1. Research model.

of eight business sectors, and the descriptive statistics of all variables included in this study is shown in Table 1. A total of 122 usable data were received from those HR managers with a 100% response rate.

Validity and reliability

Scale items and reliabilities of the constructs of the end user computing competence utilized in this study are provided in Table 2. The collected data were investigated for validity of construct by confirmatory factor analysis. Individual item loadings for four rotated factors were all above .60, explaining 87.78% of the variation in the construct. The values of Cronbach's alpha for internal consistency with the fourteen items were all above 0.7, which is acceptable for capturing the dimensions (Nunnally, 1978). Furthermore, we assessed the degree of multicollinearity, and there was no serious problem based on the variance inflation factor (VIF), which should be fewer than 10 (Chatterjee et al., 2000).

Hierarchical regression analysis

As seen in Table 3, a series of hierarchical regression analyses were performed to test whether IT competence has positive influences on job performance. In step 1, four control variables were entered into the regression. Overall, the model explained 16.5% of the variance in job performance ($p<.01$). Job level was significantly related to job performance ($\beta = 0.36$, $p<0.01$). The remaining three control variables, gender, age, and seniority, were not significantly related to job performance ($\beta=0.04$, 0.17, and -0.06, respectively, $p>0.05$). In step 2, the four independent variables, computing mindset, computing knowledge, computing application, and computing potential, were added to the regression. As shown in Table 3, the R2 was increased to 67.2%. The four variables explained as a significant amount of variability beyond that of the control variables ($\Delta R2 = 0.51$, $p<0.01$). The standardized regression weight was significant for computing mindset ($\beta= .40$, $p<.01$), computing application ($\beta = 0.29$, $p<0.01$), and computing knowledge ($\beta = 0.25$, $p<0.01$), but not for computing potential ($\beta = -0.10$, $p>0.05$). Therefore, H_{1a}, H_{1b}, and H_{1c} were supported, whereas H_{1d} was not.

Further, the hierarchical regression was performed by different HR roles as shown in Table 3. The results found that IT competence has different impact on the job performance for different HR roles, and the net explanatory power was the greatest for human capital developer followed by strategic partner, HR leader, employee advocate, and functional expert sequentially. Specifically, computing mindset was positively associated with the job performance for employee advocate, human capital developer, strategic partner, and HR leader, but not for functional expert. Computing knowledge was positively associated with the job performance for employee advocate, human capital developer, and strategic partner, but not for function expert and HR leader. Computing application was positively associated with functional expert only. Computing potential was negatively associated with employee advocate and functional expert. Thus, H_2 was supported.

DISCUSSION AND CONCLUSION

Overall, our results demonstrated that end user computing competence affects job performance for HR professionals, whereas it has different performance impact on the different roles of the HR professional. In general, all the hypotheses were confirmed, but some of the results require qualification and discussion. The results indicate that HR professionals need to be able to

Table 1. Descriptive statistics.

Sector	**Number**	**Percentage (%)**
Financial holding	3	2.5
Banking	56	45.9
Security	17	13.9
Property and casualty insurance	11	9.0
Life insurance	24	19.7
Fund management	2	1.6
Direct marketing	5	4.1
Asset management	4	3.3
Gender	**Number**	**Percentage (%)**
Male	29	23.8
Female	93	76.2
Education	**Number**	**Percentage (%)**
Master	50	41.0
Bachelor	58	47.5
College	10	8.2
High school	4	3.3
	Mean	**SD**
Age	36.32	7.00
Seniority in the Group	7.29	6.62
Job level	**Number**	**Percentage (%)**
Manager	22	18.0
Non-manager	100	82.0
Performance rating	**Number**	**Percentage (%)**
5 (Exceptional performer)	6	4.9
4 (Above target performer)	30	24.6
3 (On target performer)	33	27.0
2 (Below target performer)	35	28.7
1 (Unsatisfactory performer)	18	14.8
HR role dedication (person time)	**Number**	**Percentage (%)**
Employee advocate (EA)	44	36.1
Human capital developer (HC)	64	52.5
Functional expert (FE)	77	63.1
Strategic partner (SP)	20	16.4
Leader (LD)	24	19.7
IT competence	**Mean**	**SD**
Computing mindset	3.14	0.74
Computing technology knowledge	2.86	0.69
Computing utilization ability	2.82	0.76
Computing potential ability	1.30	0.83

leverage technology for HR practices and take advantage of IT by automating HR processes and becoming more effective in communicating with its internal/external customers (Long and Wan-Ismail, 2008). The study results further show that computing mindset is the most critical end user computing competency factor for all HR professionals except functional experts, who focus more on computing application than do individuals in the other

Table 2. Confirmatory factor analysis and reliability testing.

Factors	Measure items	Factors loading				Cumulative variance (%)	Cronbach's α
		1	2	3	4		
Computing knowledge (CK)	CK1: Knowledge related to hardware, software, networks, and databases	0.806	-	-	-	22.82	0.916
	CK3: Knowledge related to e-business (B2B, B2C, and B2E)	0.805	-	-	-		
	CK4: Knowledge related to security of computing systems	0.783	-	-	-		
	CK2: Solution knowledge related to ERP, SCM, KMS, and CRM, etc.	0.748	-	-	-		
Computing potential ability (CP)	CP1: Master's or Ph.D. degree related to computing fields	-	0.921	-	-	45.35	0.973
	CP3: Number of papers and articles published in journals	-	0.910	-	-		
	CP2: Completion of domestic & overseas education and training related to computing departments	-	0.871	-	-		
Computing mindset (CM)	CM1: Understanding and acknowledgement for computing departments	-	-	0.883	-	67.07	0.913
	CM3: Ethic consciousness and morality in a computing environment	-	-	0.854	-		
	CM2: Understanding of progress trends of domestic & overseas computing departments	-	-	0.850	-		
Computing utilization ability (CU)	CU4: Ability establishing and managing computer security	-	-	-	0.829	87.78	0.948
	CU2: Ability using ERP, SCM, CRM, and KMS etc., solutions	-	-	-	0.818		
	CU3: Ability applying computing systems to e-business (B2E, B2C, and B2B)	-	-	-	0.813		
	CU1: Ability using spreadsheet, presentation, and word-processing	-	-	-	0.661		

The number and content of constituent variable scores were identified by principal components analysis followed by Varimax rotation.

roles.

Functional experts are generally involved in creating solutions to routine HR problems through a company intranet or secure internet site. In most firms, the primary application of HR technology to date is in transactional HR work, which is primarily delivered from functional experts. Even for the higher level functional expert, conducting research and turning it into practice, they demand specialization in HR field and are not expected to be HR generalists (Urlich and Brockbank, 2005). Thus, a functional expert may be just required to apply IT as a tool to search and use information on the Internet, use presentation and word processing, make full use of human resource information systems and knowledge management systems, and apply these solutions to a B2E (business to employee). They must also have the ability to establish and manage computing security for protecting employee data rather than to capture the computing mindset, knowledge, and potential.

The consequences of IT usage in HR (termed electronic human resource management, e-HRM) include operation, relation, and transformation (Strohmeier, 2007). Operation refers to bring faster-processes, cost reduction, and a release from administrative burdens (Hawking et al., 2004; Ngai and Wat, 2006; Ruël et al., 2004), therefore, leading positive assessments of the HR functional expert (Haines and Lafleur, 2008).

Relation refers to the new and extended possibilities of interactions between people, which lead to accumulate social capital-trust, mutual understanding, and shared values and behaviors that bind people together and make cooperative action possible (Lengnick-Hall and Moritz, 2003; Ruta, 2009), such as virtual communities or e-learning (Lee and Lee, 2009). For example, an employee advocate and human capital developer should have computing mindset and knowledge to cooperate with IT well, and they should search emerging technology to establish an effective employee communication and/or social networking for example, web 2.0. Transformation

Table 3. Hierarchical regression analysis for all HR roles.

Independent variable	ALL (β)	EA (β)	HCD (β)	FE (β)	SP (β)	LD (β)
Step 1						
Gender	0.043	0.033	0.097	0 .021	0.022	0.035
Age	0.167	0.311	-0.007	0.163	-0.171	-0.086
Seniority	-0.061	-0.166	-0.042	-0.069	0.199	0.035
Job level	0.359**	0.457**	0.300*	0.461*	0.673*	-0.078
Step 2						
Computing mindset	0.404**	0.575*	0.396**	0.123	0.697*	0.525**
Computing knowledge	0.249**	0.525**	0.350**	0.126	0.722*	0.098
Computing application	0.293**	-0.058	0.081	0.529**	-0.136	0.538
Computing potential	-0.102	-0.305*	0.138	-0.228*	-0.233	-0.290
R^2	0.672**	0.775**	0.730**	0.693**	0.781**	0.508**
ΔR^2	0.507**	0.490**	0.565**	0.444**	0.520**	0.508**

Note: β represents the standardized regression coefficients for the full model, including control variables and four dimensions of end users computing competence. * p<0 .05, ** p<0.01.

concerns the HR role relating to organization performance and strategy support as a strategic partner (Strohmeier, 2007). A strategic partner should have computing mindset and knowledge to understand the value of an enterprise system and/or business intelligence on strategy implementations and the development of organizational structure and reward systems (Wooldridge and Floyd, 1990). Their mindset and knowledge enable strategic partners to collect data and transform it into strategically valuable information (Bell et al., 2006) for acting in a business literate and savvy way (Ulrich and Brockbank, 2005).

In contrast to functional experts, the job performance of employee advocates, human capital developers, and strategic partners rely on relation and transformation more than operation. Application itself may be required, but it may not be the critical performance indicator compared, with the computing mindset and knowledge for those HR roles. HR Leaders, as well as the business manager, should not be expected to know everything about IT. However, HR leaders should have a computing mindset to understand and acknowledge IT and to know about the resources available to access and leverage IT knowledge (Bassellier et al., 2001), which, in turn, can lead HR to integrate its functions with other functions for business success. Having a positive computing mindset may be more important to an HR leader's job performance than that individual's specific computing knowledge, application, or potential.

An interesting finding in this study was that computing potential has negative impact on the job performance for functional experts and employee advocates. Panayotopoulou and Papalexandris (2004) found that internal focus of an HR role as administrative expert or specialist is linked to competencies related to 'customer' relations, and an employee advocate is expected to listen and respond to individual needs (Ulrich and Brockbank, 2005), which all require face-to-face interaction with employees and line managers. For employee advocates, Voermens and van Veldhoven (2007) found that, when workers or managers prefer HR in the employee champion role, they have more-negative attitudes towards e-HRM. For functional experts, e-HRM often substitutes electronic communications for face-to-face interactions and reduces the reliance employees have on HR personnel (Ruta, 2005), while decreasing the interpersonal trust level (Stone et al., 2006).

On one hand, the negative performance effect caused from computing potential could be explained by its definition, which recognizes the IT academic background related relevant degrees and certificates, completion of education and training, and paper publication (Yoon, 2007). When people come from this background and enter into the role of HR functional experts or employee advocates, they might be enthusiastic for using this potential to substitute face-to-face interactions to enhance efficiency and cost savings. Consequently, this good intention yielded a number of dysfunctional consequences for his/her performance (Stone et al., 2006). On the other hand, when employees prefer a strategic role for HR, they would be more positive towards an e-HRM implementation (Voermens and van Veldhoven, 2007).

Human capital developers' focus on a future talent pipeline aligned with business strategy; strategic partners have to align HR activities with business strategy and support organization change; HR leaders should integrate and coordinate HR functions with other resources to assist in strategy development and achievement (Ulrich and Brockbank, 2005). When those three strategic HR roles are equipped with more end user computing competence (particularly for computing

mindset and knowledge), their job performance might be enhanced in ways consistent with the study conducted by Hanes III and Lafleur (2008), which finds that 'IT allows the HR function to further help the organization accomplish business goals and define business strategies'. The aforementioned argument could be used to explain why end user computing competence has a stronger performance predictive power for human capital developers, strategic partners, and HR leaders than employee advocates and functional experts.

Ulrich and Brockbank (2005) argue that HR professionals must learn to leverage IT to provide faster services to their internal clients on a global scale, reduce the costs per transaction, provide centralized services and information that will make it easier to manage and leverage the total workforce, and spend more time focusing on making strategic contributions. The study supported the aforementioned argument and found that end user computing competence is a significant predictor of job performance for an HR professional. The finding indicated that the performance leverage effect of end user computing competence for human capital developers, strategic partners, and HR leaders is greater than employee advocates and functional experts at individual level. The most essential factors for employee advocates, human capital developers, and strategic partners were computing mindset and computing knowledge. The only critical factor of end user computing competence was the computing application and computing mindset for functional experts and HR leaders, respectively.

IMPLICATION FOR MANAGEMENT

This research has important implications for management. If HR professionals develop and improve their IT competence, they can efficiently perform their given tasks and effectively increase their task performance in a business environment heavily reliant on e-HRM. HR managers should proactively move to reinforce weak areas of end user computing competence in different HR roles. Training and encouraging hands-on experience with IT are a first step in developing and strengthening the end user computing competence in areas lacking this valuable resource (Bassellier et al., 2003). A more immediate approach to developing additional end user computing competence in the HR function is to view it as a necessary skill set in the hiring process. Although, the typical hiring process in non-IT areas focuses almost entirely on their functional competencies (Davis et al., 2009), this study highlights the value of evaluating a candidate's end user computing competence, with different factors for different HR roles, when hiring or analyzing training need decisions. Furthermore, this study introduces a valid instrument for measuring IT competencies for HR. The instrument is easy to administer. HR managers can periodically perform self-evaluations using the tool. An item-by-item analysis can be performed to identify large discrepancies in the individual item scores, formulate actions to correct specific problems, and improve the scores, as well as the HR competencies.

RESEARCH LIMITATION AND FUTURE SUGGESTIONS

Like most empirical research, there are some limitations of this study that should be pointed out. First, the small sample was derived from the most-profitable and second-biggest financial holding group with eight financial service companies in Taiwan. This might overlook important information from other financial groups and industry sectors. Therefore, future research might help us to generalize our conceptual research model and the findings of our analyses. Secondly, because the sample data are a snapshot of the firms' conditions, we may have neglected the importance of a dynamic aspect. A longitudinal study is needed to trace the dynamics of HR activities as time goes by. This will offer us more clues to refine our research model. Finally, although, the definition of HR roles was based on job descriptions and confirmed with the 22 HR managers and the CHRO, the construct is captured through a subjective approach. Future research may use a multidimensional approach to capturing HR roles at an individual level.

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