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Indrit Troshani

University of Adelaide Business School, indrit.troshani@adelaide.edu.au

Cate Jerram

University of Adelaide Business School, cate.jerram@adelaide.edu.au

Michael Gerrard

University of Adelaide Business School, michael.gerrard@adelaide.edu.au

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Exploring the organizational adoption of Human Resources Information Systems (HRIS) in the Australian public sector

Indrit Troshani
University of Adelaide Business School
Adelaide, SA, Australia
Email: indrit.troshani@adelaide.edu.au

Cate Jerram
University of Adelaide Business School
Adelaide, SA, Australia
Email: cate.jerram@adelaide.edu.au

Michael Gerrard
University of Adelaide Business School
Adelaide, SA, Australia
Email: michael.gerrard@adelaide.edu.au

Abstract:

Human Resources Information Systems (HRIS) are becoming an increasingly important tool in helping modern organizations manage their human assets effectively. However, to date the organizational adoption of HRIS remains an under-researched phenomenon. Adopting the technology-organization-environment model as an analytical framework, this exploratory investigation draws on qualitative evidence collected from Australian public sector organisations to isolate the factors concerning the organizational adoption of HRIS in the public sector before discussing implications and future research directions.

Keywords: technology adoption, human resources information systems (HRIS), public sector, Australia.

INTRODUCTION

In today's knowledge economy, organizational success depends almost disproportionately on performance of human resources (HR) (Lippert and Swiercz 2005). Although acknowledged to be one of the most challenging aspects of modern businesses (Browning et al. 2009; Davila 2005), until recently HR management has been widely viewed as a non-core low status cost centre within organizations (Bussler and Davis 2001). In the last decades HR has shifted its focus to knowledge sharing and strategic workforce analysis and has been increasingly evolving into being a significant contributor in the strategic management of organizations (Rodríguez and Ventura 2003). For example, HR data can be used as a resource for achieving cost savings and inimitable competitive advantages in all core management aspects including planning, organizing, leading and controlling (Browning et al. 2009). At least partially, HR management shifts are attributed to HR technologies such as human resources information systems (HRIS) (Bussler and Davis 2001). HRIS constitute dynamic systems that are comprised of systematic procedures and functions for acquiring, storing, manipulating, retrieving, analysing, and disseminating pertinent information concerning an organization's human resources (Tannenbaum 1990). HRIS can keep track of information concerning applicant/employee qualifications and demographics, hiring procedures, job descriptions, professional development, performance evaluation, payroll, retention, and attrition (Harris and DeSimone 1995).

In attempts to increase the effectiveness of managing human assets and provide guidance to management, organizations are becoming increasingly reliant on HRIS. In fact, the number of organizational adoptions of HRIS has increased dramatically (Ball 2001). Furthermore, HR-specific regulatory and competitive pressures concern all organizations irrespective of their size (Hendrickson 2004). The information that HRIS deliver can help strategic planning by identifying current and forecasting future workforce demand and supply requirements. It can, thus, become an invaluable tool in the hands of employers for improving their ability to respond swiftly to changing competitive landscapes by way of helping decision-makers craft suitable strategies including tailoring remuneration and reward packages, making suitable training investment and accurate salary growth forecasts and redeployment programs as market conditions change (Lippert and Swiercz 2005). Although extant literature has

predominantly focused on the impact of HRIS in organisations (Alcázar et al. 2005; Browning et al. 2009; Rodríguez and Ventura 2003), it takes HRIS in organisations for granted with relatively little systematic attention being paid to the issues that surround their adoption. Yet, adopting HRIS can be challenging as it can be costly and it can take a long time before espoused pre-adoption benefits become available after HRIS are fully adopted (Ashbaugh and Miranda 2002). To date, HRIS adoption remains under-researched both in public and private sectors, and therefore, addressing it can provide a valuable contribution to both research and practice (Blount and Castleman 2009; Henriksen and Mahnke 2005).

The objective of this paper is to investigate and isolate the factors concerning the organizational adoption of HRIS in the public sector. By employing the technology-organisation-environment (TOE) model as an analytical tool, we isolate specific technology, organizational, and environmental factors that affect the adoption of HRIS in public sector organizations which are generally characterized by high complexity. This study culminates with a conceptual framework which it validates by employing qualitative evidence using the adoption of HRIS in the Australian public sector. It contributes to the existing body of knowledge by enhancing current understanding of the organizational adoption HRIS. In particular, the environmental emphasis on strong regulatory compliance concerning industrial relations and privacy constitutes an extension of extant research, and therefore, the main contribution of this study. A better understanding of HRIS adoption factors is necessary as extant literature is inadequate and limited in relation to the unique challenges that are associated with the successful adoption of HRIS public sector organizations (Ball 2001; Hagood and Friedman 2002; Lippert and Swiercz 2005).

We anticipate that the adoption of HRIS in the public sector may be different to that in other types of organizations, in the private sector for example, due to many reasons. First, public sector organisations have different underlying goals to those operating in the private sector, in that the former may have multiple, intangible, or even conflicting goals, unlike the latter that are typically guided by market signals, feasibility and economic viability considerations, including profit taking (Caudle et al. 1991). Second, unlike private sector organisations that generally adopt innovations proactively, due to bureaucratic culture, public sector organisations generally introduce innovations reactively. That is, they wait for evidence to become available to justify their decisions to adopt innovations. Additionally, due to budget timing restrictions, public sector organizations may be subject to the temporal constraints of public sector budgeting cycles which in turn may be dictated by political influences or periodic changes in program priorities and top-level management (Themistocleous et al. 2004). Third, typically characterised by a monopolistic nature, public sector supply of its many services may face less pressure to be efficient.

In pursuit of our objective, we first briefly explain the TOE model. The discussion of the method follows. Results are subsequently discussed before the contribution, limitations, and future research are highlighted in the conclusion.

THEORETICAL BACKGROUND

Wolfe (1994) argues that technology adoption is complex and context-sensitive. To investigate the adoption of HRIS in the Australian public sector we adopt the technology-organization-environment (TOE) framework as a suitable analytical tool (Tornatzky and Fleischer 1990). It includes three aspects of an organisation that can impact the adoption of technological innovations. First, the technology context concerns both internal and external technologies available to an organisation. Second, the organizational context includes the characteristics of the organisations, such as firm size, degree of centralization, quality of human resources, complexity of its managerial structure, and availability of financial resources. Third, the environmental context represents the arena where adopting organizations conduct their business. The TOE framework has been applied to investigate the adoption of a wide variety of technological innovations. Specific technology, organisation and environment factors vary across the different application domains, which suggests that i) these studies are consistent in confirming the usefulness of the TOE framework in technology adoption research, and ii) additional research is required to investigate the adoption of under-researched technologies such as HRIS.

Technology context

Perceived benefits-cost trade-off of particular technological innovations can affect the “possible gains and barriers” associated with their adoption (Chau and Tam, 1997, p.6). Perceived benefits represent the benefits an organisation expects to receive upon adoption in relation to an organisation’s specific setting. For example, technologies are expected to generate competitive advantage via practical benefits including increased levels of quality and service, efficiency, reliability, etc. (Fillis et al. 2004; Warren 2004). On the other hand, perceived costs include financial resources that are incurred in adopting

technological innovations (Chau and Hui 2001; Swatman and Swatman 1992). Perceived costs may include financial investment related to the innovation as well as administrative costs. Financial investment costs may include licensing fees of innovation-related applications, set-up costs, operating costs and user training costs related to adoption (Chau and Hui 2001). High perceived costs are likely to make technologies unattractive, adversely affecting their adoption (Hong and Zhu 2006).

Organizational fit has been defined as the congruence between the technological innovation and i) an organisation's goals and values (Rogers 1995; Sia et al. 2004) on the one hand, and ii) technology competency on the other (Markus and Robey 1988). Depending on the extent to which the technology fits with both value and technology competency dimensions within the organisation where it is being adopted, Simpson and Docherty (2004) maintain that the integration of technology-related applications with existing systems may be difficult to implement. Greater fit between the technology and organisational goals and values can lead to enhanced organisational effectiveness (Nadler and Tushman 1992). The technological innovation is also likely to encounter lesser overall resistance as the organisation may have a greater positive predisposition towards adopt it (Sia et al. 2004). The extent to which technology's technical requirements fit with the organisation's technology competency is also important. Fit, or lack thereof, can be due to diverse sets of complex technical issues such as distribution of the data and the manner in which it is stored in an organisation, the standards adopted in data processing and communication, the data and information architecture, and the heterogeneity of IT platforms and infrastructures across processing sites (Lu et al. 2006). Consequently, organizational fit is being increasingly recognised as a core construct that explains success in technology adoption (Swan et al. 2000).

Organizational context

Human capability refers to the extent to which technical skills and technological know-how are available in an organisation (Lin 2006). For example, organisations can delay the technology adoption until they acquire sufficient technical skills and technological know-how to operate it successfully (Attewell 1992; Chau and Tam 1997). Evidence in the literature suggests that organizations that exhibit technology competency are more apt to successfully adopt new technologies (Zhu and Kraemer 2005). Human capability can be achieved via user training (Chau and Hui 2001). For example, there is a positive relationship between training of employees in adopting organisations and the propensity with which technologies are adopted (Warren 2004). Training includes skills, knowledge, and confidence required in operating innovation-related applications successfully. Therefore, training affects innovation acceptance because it enhances technology competency which in turn determines the speed and the coverage of the adoption in organizations (Warren 2004).

Management commitment reflects top management support for technology adoption (Molla and Licker 2005). The greater the support from top management, the easier it will be for adopting organisations to overcome difficulties and complexities encountered during adoption (Tan et al. 2007). Management commitment can be affected by understanding of and attitudes towards technological innovations and the extent of their involvement in adoption processes. For example, characteristics of decision makers such as their innovativeness and ICT knowledge can have a major impact on adoption decisions (Thong 1999). Additionally, decision-makers that have risk-averse orientations towards new technologies may be more likely to exhibit negative attitudes towards their adoption. A possible consequence of such attitudes is the failure to allocate necessary resources (Basu et al. 2002; Fillis et al. 2004), also a significant barrier to innovation adoption.

Organisation size is one of the most tested factors of organizational technology adoption, though, empirical results across various studies have been mixed and inconsistent (Lee and Xia 2006). Inconsistencies lie in the conflict between resource availability and organizational inertia (Zhu and Kraemer 2005). Some studies suggest that due to financial advantages and buffers against financial loss, larger organisations should be more likely to adopt technological innovations earlier than smaller organisations (Flanagin 2000) which are generally said to suffer for resources poverty including limited technology budgets and in-house expertise (Thong 1999). However, this counters arguments presented in other studies according to which smaller organisations can be more agile in adopting technologies faster than larger organisations due to flexibility and adaptability factors. Technology adoption requires significant collaboration and coordination to occur, which can be generally be accomplished faster in smaller organisations than larger ones (Hitt et al. 1990).

Degree of centralization refers to the extent to which power and control are concentrated in the hands of few individuals (Rogers 1995). It also refers to the degree of delegation of authority in an organization, that is, the less authority is delegated in an organization the greater its centralization (Belassi and Fadlalla 1998). The relationship between centralization and technology adoption has been previously

examined in the literature, though findings are inconsistent (Belassi and Fadlalla 1998). For example, some studies have found that technology adoption is facilitated in organizations that exhibit high degree of centralization because top management can make adoption decisions irrespective of resistance from lower level managers or employees (Shaukat and Zafar 2010; Williams 1994). By contrast, other studies show that a high degree of centralization can negatively impact the decision to adopt technologies that are more compatible with the interests of lower level employees than those of higher level employees (Yang et al. 2007).

Environmental context

Regulation compliance has been recognised in previous research as a critical environment factor that can impact technology adoption (Lyytinen and King 2006; Williamson 1983). Williamson (1983) argues that there are two ways in which government can affect innovation adoption by way of regulatory pressure: “One is to take specific actions to increase or decrease payoffs – by taking tax and other measures to encourage research and development. ... The second way of influencing innovations is by altering the climate in which they are received.” (p.126). For example, in response to the paper reduction act in 1997 US Federal government agencies were required to upgrade to electronic data interchange (EDI) systems (USMBA 1997). The implication of this policy was that small businesses that needed to deal with the agencies also had to upgrade to EDI-capable systems, thereby, encouraging EDI adoption (Kuan and Chau 2001). Government can also play a vital role for encouraging technology adoption by raising awareness, training, and funding (Lawson et al. 2003; Simpson and Docherty 2004).

Successful adoptions An environment with success stories and adopting champions can be conducive in technology adoption (Gharavi et al. 2004). Every successful use of a technological innovation leads more users to strongly consider it as an option for adoption (Liu et al. 2008). Also, champions can strategically motivate other potential adopters and thus facilitate adoption (Teo and Ranganathan 2004). This is because they are seen as industry leaders who define adoption trajectories and “provide blueprints for organizing [technology adoption] by specifying the forms and procedures an organization of a particular type should adopt if it is to be seen as a member-in-good-standing of its class” (Gharavi et al, 2004, p. 763). Exemplar adoptions of technological innovations are conducive to the emergence of a social learning phenomenon based on the “law of imitation” (Hamblin et al. 1979). This has the potential to create “fads and fashions” and thus cause prospective adopters to adjust technology-related evaluated benefits upwards which can result in bandwagon pressures and that can in turn prompt organisations to take mimetic actions favouring adoption (Abrahamson and Rosenkopf 1997).

Conceptual framework

Summarizing the previous discussion, we propose the conceptual framework as shown in Figure 1 for the organizational adoption of HRIS. Based on the previous literature, adoption in a technological innovation context may thus depend on technological, organizational, and environmental contextual factors. The sign shown besides each factor indicates the direction of the influence on adoption decisions, namely, enabling, i.e. (+) or inhibiting, i.e. (-). Where both signs are shown, i.e. (+/-), the direction of the influence can be interpreted as being most commonly enabling although occasionally inhibiting.

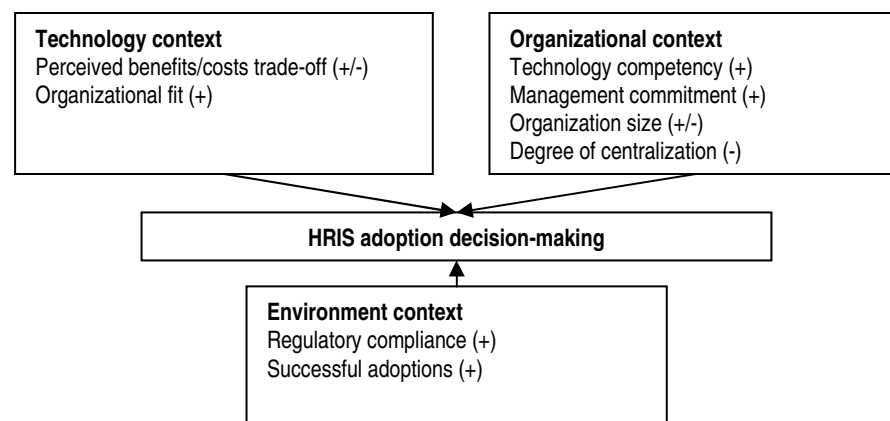


Figure 1: A conceptual framework for the adoption of HRIS

METHOD

This research is concerned with the extent to which interpretations concerning HRIS adoption are sensible in the Australian context. Given the intricate nature of HRIS, their adoption can be better understood by examining the interpretations of relevant organisational stakeholders (Wolfe 1994). This paper's qualitative exploratory approach enables the study of dynamic, intricate, and multifaceted processes and the exploration of emerging themes (Cassell and Symon 1994). Qualitative empirical data were collected via semi-structured face-to-face interviews which were used because of their flexibility. Interviews provide rich insights for exploring, identifying, and understanding viewpoints, attitudes, and influences (Healy and Perry 2000). Moreover, they also allow greater control over the interview situation (e.g. sequencing of questions) while providing opportunities for making clarifications and collecting supplementary information (Walsham 1995). Sixteen key informant representatives of public sector organisations agreed to be interviewed. They were considered knowledgeable within their organisations on HRIS topics. Thus, they were able to contribute meaningful information to the exploratory research. The informants were identified using the snowballing technique (Aaker and Day 1990). At the end of each interview, the interviewee was sufficiently familiar with the aims of the research to refer the investigators to other experts. Each interviewee was deliberately asked for more than one other expert to reduce the chances of a snowballing research project being locked into the mindset of one network. For example, interviewees were probed for experts from other public sector departments or for experts that the interviewees had rarely or never met. To maintain anonymity, only the categories of the interviewees' organisations have been identified in Table 1.

A one page document summarising the study objectives and the open-ended questions in the form of a standard topic list was provided to all informants a week prior to the interviews to give them time to prepare while allowing them maximum freedom in expressing their viewpoints (Flick 2002). Designed using our theoretical framework, the interview topics and questions included: effectiveness of HRIS and their development and support; HRIS adoption drivers and inhibitors, including technological, organisational, and environmental factors, and future directions.

Table 1. Categories of informants' organisations

Category	Number of Interviewees	Number of organizations	Identifier
Communications & Media	2	1	Organization#1
Education	1	1	Organization#2
Health	2	2	Organizations#3-4
Financial Services	5	3	Organizations#5-7
Natural Resources	2	1	Organization#8
Utilities	3	2	Organizations#9-10
Defence	1	1	Organization#11
Total	16	11	

The interviews were all recorded and transcribed. In each interview, the investigators asked questions about topics raised in previous interviews, to find agreements between the interviewees or disagreements between them with explanations for those disagreements. The interviews stopped when stability was reached, that is, when agreement among interviewees is achieved and disagreement among them is explained on all topics. Driven by our conceptual framework, the contents of the interview transcripts were analysed thematically. Codes were developed as patterns in the data emerged which provided the basis for cross-case analysis and helped identify and analyse patterns of themes (Miles and Huberman 1994). Data belonging to each theme were incrementally assembled and viewed in a code-and-retrieve fashion before the themes were triangulated against extant literature and representative quotations were shortlisted from the interview transcripts for illustration purposes. Construct validity has been adequately addressed in several ways. First, multiple sources of information were used (Yin 1994). While interviews constitute the primary source of information, some of the informants provided supporting secondary data comprising archival papers and web resources. The secondary data were used for verifying and triangulating the interview findings. Second, the informants belong to different categories of public sector organisations, and therefore, provided different perspectives. Considering different perspectives constitutes an important type of triangulation of qualitative information sources by preventing biased opinions (Choudhrie et al. 2003). Third, at least two investigators conducted all interviews and analysed them (Denzin 1989). This kind of triangulation reduces the potential bias which is commonly cited as a limitation of interviews (Yin 1994). Finally, the chain of evidence, tracing the conclusions to the interview summary and to the interview transcripts was also maintained. According to Yin (1994), these enhance construct validity as well as the reliability of the research, thereby boosting its overall quality. However, the study reported in this paper is based on the Australian public sector. Therefore, its external

validity cannot be ensured. Consequently, our findings may not be readily generaliseable beyond this study suggesting that further research is required in other contexts (Shanks et al. 1993).

RESULTS

In this section we discuss factors concerning technology, organization, and environment contexts and the manner in which they affect the adoption of HRIS in the Australian public sector.

Technology context

Perceived benefits-costs trade-off Interviewees consistently argued that perceived HRIS benefits and the manner in which these impact the delivery of HR functions can drive their adoption:

It's more having a look at how things are affecting the staff, the employees, and what impact the HR side of things can have on their work and what benefits can you get from the HR practitioners processing to the end result. (Organization#6)

Specifically, the benefits that were expected to result from HRIS adoption include integration and accessibility. Achieving these in delivering HR functions, including workforce planning, recruitment, performance management, career and development planning, learning management, and remuneration, was unanimously regarded to be beneficial for strategic decision-making, and hence, drive adoption:

We are going to a situation where managers can manage their staff using sophisticated tools [HRIS] that make their life very easy.... The big thing is the information that they can integrate and produce will actually start to add some real value to the top level decision making. And it is all about managers and employees interacting with the software. and I think then the world will open up for HR metrics to be able to feed into the strategic decision making about our workforce. (Organization#1)

HRIS adoption was expected to impact the operational aspects of HR functions positively by delivering significant efficiency improvements. Operational efficiencies represent an adoption driver as that is "where the big, big savings are" (Organization#1) in adopting organizations.

HRIS were widely perceived to be highly complex which, at least partially, is a reflection of the complexity of the HR domain. Consequently, HRIS user-friendliness was generally considered to be a major driver for HRIS adoption. However, the HRIS in the interviewees' public sector organizations were characterized by lack of user friendliness which had become a barrier to their adoption:

... because of the usual unfriendliness we couldn't see managers using that system [HRIS] basically. We just couldn't. So, we stopped partially from the implementation. So armed with the experience, many of us tend to look with some reluctance of continuing with [HRIS]. (Organization#1)

HRIS adoption costs were perceived to be significant, including licensing, implementation, maintenance, training, and transition costs. While licensing costs were considerable, these were perceived to represent the lesser proportion of overall adoption costs (Organization#1). Nevertheless, there was uniform agreement that cost-benefit trade-off assessments were necessary for justifying investments in HRIS (Organization#8). However, due to manifestations of "resentment, [or] rejection" (Organization#7) some interviewees did question whether what were originally perceived to be adoption benefits had in fact become materialised as the HRIS was being assimilated in adopting organisations.

Organizational fit Generally, software vendors provide standardized HRIS. However, public sector organizations in addition to common HR functions are also characterised by domain-specific idiosyncrasies. As a result, there was general agreement amongst interviewees that HRIS that are available for adoption were "too stock standard" (Organization#7) which explains why interviewees uniformly believed that organizational adoptions of HRIS exhibit lack of organizational fit at various degrees:

Any big software HR system is the same; they are all the same. They have all got problems, they all don't give you what you want, ... [and need] a lot of customising. But you know, every organisation has got its own business rules anyway. ... I don't know of any systems in the world that would fit the bill here or in any other public sector place, something has to be done to them. Everyone that I have spoken to, and I can assure you that I have spoken to every agency that has put in a big system in this country, will say lots of problems getting in, that is the nature of software, big system. (Organization#1)

We found that lack of organizational fit between adopted systems and organizational requirements were addressed in three ways: i) changing business processes to suits HRIS functionality; ii) customizing adopted HRIS; and iii), combining i) and ii). However, many interviewees were concerned about process re-design trends qualifying them as “pretty awful, pretty cumbersome” (Organization#1). At least partially, process re-design has triggered the emergence of “feral systems” (Organization#8) which had proven to be costly and not always effective and accurate (Organizations#6-7). Some interviewees indicated that their organizations undertook systems modifications with vendor support which was unanimously considered to be a key adoption driver. While some vendors were willing to support HRIS modifications to support organizational processes by issuing software patches as part of service and maintenance agreements, others were willing to do so for a fee which was considered to be an adoption inhibitor (Organizations#7-8).

Organisational context

Human capability There was agreement amongst interviewees that an organization’s human capability is comprised of three components, namely, HR domain knowledge, technical IT/IS skills, and communication skills. Taken together, these human capability components can be a key driver for HRIS adoption to succeed. However, this combination of skills was considered to be “a huge area of skills shortage” (Organization#8), and it was particularly pronounced in public sector HR. In fact, public sector HR was widely characterized to be of high complexity which was attributed to the “enormous flexibility” (Organization#3) of employment practices and “unlimited work patterns” (Organization#3) that are afforded to public sector employees, including flexible and complex leave rules, flexible employment commitment (e.g. relatively easy to change from full-time to part-time to casual), high variability of superannuation and salary sacrifice schemes. Taken together, these complexities have contributed to making public sector HRIS “quite messy” (Organization#11) and the required skills set and knowledge unique and rare. Consequently, training was considered to be critical for human capability to be achieved and maintained (Organizations#8-9).

Management commitment was considered to be a key driver for the successful adoption of HRIS in the public sector as it represents a source of support and funding which are both critical for adopting HRIS and adapting them to suit organizational requirements as “it always comes down to the dollars and cents” (Organization#4). There was agreement that lack of management support and funding constitutes an inhibitor for the successful adoption of HRIS and for achieving organizational fit:

...to change the system requires money and it's not a cheap thing to change in the [HRIS] environment so one of our biggest issues is to actually gain the funding to do it.
(Organization#6)

Organizational size was also found to be a factor impacting HRIS adoption. There was agreement that government departments with large numbers of employees can use size to support their business case for adopting HRIS because potential benefits can be spread across a larger user base:

It's expensive but then you equate that to 26,000 [employees] ... if you have that against three or four thousand sort of thing it's a lot of money to expend on providing that [HRIS] service. I'm not sure what some of the other ones are costing these days but nothing is cheap, even a lot of our stuff is done in-house and it costs me an arm and a leg because the IT team charge us back and if they've got to bring consultants in ... they [senior management] can probably see the value... if you can provide the benefit for us, well, we're benefiting 26,000 people against I'm benefiting three or four thousand is it just as easy if I keep using spreadsheets or whatever it happens to be or do a manual system. (Organization#6).

However, we found organizational size can also increase complexity, that is, “the bigger the organization, the more complexity” (Organization#3) which can, in turn, adversely affect the flexibility with which HRIS can be adopted which is consistent with extant literature and stressed in interviews (Organization#6).

Degree of centralization characterises the hierarchical level at which adoption decisions are made in organizations. For example, one of the PIRSA interviewees argued:

We are part of the administrative units within the [state] public sector and as a whole of administrative unit process we were told that we would have [HRIS]. (Organization#8)

Although interviewees were consistent in indicating that some consultation does occur with respect to identifying functional, legislative, technical, and cultural requirements specifications, the ultimate decisions are centralized (Organizations#7, 11). While interviewees appreciate standardization impacts of adoption approaches dictated by a centralized organizational culture, they were also critical in

pointing out that adopted systems may not easily address the specific HR idiosyncrasies that characterize the different government departments thus adversely affecting organizational fit. In any case, there was consistency amongst interviewees that the centralization culture has fostered “red tape” (Organization#4) which constitutes an inhibitor in HRIS adoption.

Environment context

Regulatory compliance. There was agreement amongst interviewees that regulatory requirements concerning employment and industrial relations legislation can drive HRIS adoption first, by driving the removal of non-compliant systems, and second, by driving the adoption of compliant systems:

We now have to push it [new HRIS] because of recent changes to the Nursing Act cannot be accommodated in [old HRIS]. So we have to go to [new HRIS]. (Organization#4)

Generally, employees identify and adopt systems that that help them fulfil their regulatory requirements:

It was mandated in [government organization] about four years ago that we would only record occupational health and safety related training because of the legislative requirement to indicate that we were meeting our required audits. ... from a compliance and work cover audit perspective we need to have data that shows that everyone has been inducted, that they understand what are the legal requirements for them as an employee and our duty of care to them. So I think it serves our purpose in that we've got a tick in the box that this many employees are actually compliant. (Organization#8)

Successful adoptions. There was agreement amongst interviewees that success stories and champions that adopt HRIS can have a positive impact on adoption. Successful adoptions can generate pressure because potential organizational adopters observe HRIS benefits, thereby triggering social learning phenomena and bandwagon adoption pressures. This enables driving individuals to persuade decision makers in their organizations to adopt HRIS or even upgrade to newer versions:

That product [HRIS recent version] was on the market when we implemented [HRIS older version], but it was quite a brand new product and the government felt a bit anxious about putting something in that wasn't really tried and tested so we didn't go that way. (Organization#8)

Most interviewees consistently argued that local success stories involving large reputable organizations, in general, and federal and state government departments, in particular, constitute a catalyst for HRIS adoption.

DISCUSSION AND CONCLUSION

This study contributes to the existing body of knowledge by enhancing current understanding of the organizational adoption of HRIS in the public sector which is an under-researched area. By employing the TOE framework and supporting qualitative evidence (Chau and Hui 2001), we find that the results of our study are consistent with the current technology adoption literature. In particular, collected data confirms that the adoption of HRIS in the public sector depends on environmental, organizational and technology context factors in three ways (Rogers 1995; Tornatzky and Klein 1982; Van de Ven and Rogers 1988; Wolfe 1994). First, adoption champions in public sector organizations need to emphasize and demonstrate the benefits that HRIS can introduce in their organisations, including integration, accessibility, and operational efficiency and the extent to which these benefits can justify adoption costs and inherent HRIS complexity. For adoption to encounter minimal resistance by users HRIS need to deliver these benefits by way of user-friendly functionality. With standardization trends adopted by HRIS vendors, complete organizational fit between adopted HRIS and organizational processes seemed elusive for adopters. This suggests that negotiating post-adoption vendor support is essential if organizations are to minimize costly customizations and the emergence of feral systems that might be necessary for bridging gaps resulting from inadequate organisational fit. Second, management commitment is crucial for both supporting adoption initiatives and for ensuring that suitable resources are made available for sustaining adoption efforts including training and development of organizational human capability that is characterized by the combination of specific HR domain knowledge, technical IT/IS and communications skills. Given the degree of centralization that characterizes the public sector, in general, extensive input needs to be harvested by organization-wide HRIS user involvement as a way of informing HRIS selection criteria before adoption decisions are made. Third, wider environmental context factors can have a deep impact on the success of HRIS adoption efforts. In particular, the need and urgency for achieving regulatory compliance can be a strong driver accelerating adoption of compliant HRIS if these are available. The environmental emphasis on strong regulatory compliance concerning industrial relations and privacy constitutes an extension of extant research and therefore a

contribution to the existing body of knowledge. Successful adoptions were also considered to be a driver suggesting that adoption campaigns featuring successful adopters are likely to start bandwagon effects, enticing non-adopter public sector organizations to create business cases or strengthening them for adopting HRIS.

While, in this paper we use the experience of various participating organizations to make a contribution to current understanding of public sector HRIS adoption, we also recognise this review can be more comprehensive. We appreciate that a limitation of this study is that the HRIS adoption factors examined in this paper constitute only sixteen public sector organizations thereby providing limited insights for generalizing to the wider public sector. However, the exploratory nature of this study is not well suited to a generalization objective. We recognise that further research is needed that investigates HRIS adoption both potentially from other perspectives in the Australian public sector, and particularly, in other contexts including public and in private sector organization in order to address this limitation. Additionally, the TOE framework is static, in that, it overlooks the complex interactions between or among identified factors. Thus, we call for further research to examine the interactions of the factors identified in this study using in-depth (rather than semi-structured) interviews.

Furthermore, transition from HRIS adoption to complete assimilation and the extent to which espoused benefits (and costs) become materialised during HRIS usage may be another avenue for further research. Nevertheless, we also argue that, given the wide range of participating organisations and the rich nature of data collected, certain practical implications can also be derived. Managers, practitioners, and decision makers across public sector may find this research insightful in the formulation of policies and HRIS adoption initiatives. Specifically, they can apply the insights from the proposed conceptual framework to achieve greater efficiencies in HRIS adoption by developing actionable adoption tactics and strategies for improving the chances of achieving HRIS adoption success.

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