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This issue features a selection of papers from participants in various stages of their DBA journey, from early stages of research design to near-completion, and on a variety of different topics – from human capital to IT integration to the adoption of environmental strategies.

These papers help showcase the impact of the DBA, which was the central theme of the 2013 Symposium. AMBA will continue to work with its accredited DBA partners in 2014 and beyond to continue to raise the profile of this valuable qualification, which is an important part of AMBA’s accreditation portfolio for postgraduate degrees in general management.

Acknowledgement: Special thanks to the members of the DBA Consortium – comprised of DBA Directors from AMBA’s accredited DBA programmes – for their help and support in editing this volume.

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Editorial Board
Employee ‘Line of Sight’: the key to unlocking human capital potential?

Costas A. Photiou – Newcastle University Business School/Grenoble Ecole de Management; Dr Tracy Scurry – Newcastle University Business School; and Prof. Mark Smith – Grenoble Ecole de Management

Abstract

This study builds on previous theory and research on strategy, human resource management and performance to propose a conceptual framework that suggests employee ‘Line of Sight’ to the strategic objectives has significant mediating effects on this relationship. We focus beyond the practice-strategy alignment to concentrate more specifically on the human resources. This is consistent with current debates to put the human back into strategic human resource management and to explore the circumstances and the process whereby HRM leads to enhanced organisational performance (the so called ‘black-box’).

Introduction

In recent years there has been increased focus on talent and human capital in organisations. Academics, practitioners and policy makers, have all acknowledged the potential for human capital to drive performance of individuals, organisations and society. For example, in a UK policy report Macleod and Clarke [1] argue that it is “how the workforce performs that determines to a large extent whether companies or organisations succeed”. Within this context there is increasing emphasis on the strategic importance of ensuring that organisations manage employees in order to maximise their performance. Such arguments stem from the Resource-Based View (RBV) of the firm which argues that organisations can achieve sustainable competitive advantage from resources that are valuable, rare, inimitable, and non substitutable [2]. Resources can be tangible (financial, physical) or intangible (culture) as well as human resources; “the productive services human beings offer the firm in terms of skills, knowledge, and reasoning and decision making capabilities” [3]. In an environment where tangible resources are becoming increasingly standardised this perspective emphasises the importance of maximising the contribution of human resources to deliver competitive advantage.

Viewing employees as a critical component to competitiveness and success has been the basis for the high levels of academic interest in Strategic Human Resource Management (SHRM) since the 1990’s. To date, extant reviews of the literature [4, 5], demonstrate considerable evidence to support an association between HRM and performance, yet scholars recognize that there are still many unanswered questions [6].

In attempting to explore the relationship, between HRM and performance, increasing focus is being placed on exploring the role of mediating and moderating factors. This issue has previously been noted by Guest who commented that there is a need for theory on HRM, theory on performance, and theory on how the two are linked [7]. However, despite advances in the field [8, 9, 10, 11, 12] it is argued that key questions remain unanswered, in particular related to the circumstances and processes which influence the impact of HRM on performance [13].

A growing body of work is calling for scholars...
to move beyond exploring the alignment of HRM practices to strategy, to a perspective that explores the alignment of employees to the organisation’s objectives through the concept of ‘Line of Sight’ (LOS) [14, 15, 16]. While not conceptually or empirically exhaustive the existing literature on LOS has demonstrated that employees who understand and articulate the organisation’s strategic goals and how they can contribute in achieving those goals are associated with positive organisational outcomes [17].

The assumption is that whilst HRM practices foster or sustain LOS, the success of the practices is dependent on the LOS.

The research reported in this paper investigates the mediating role of LOS on the relationship between HRM and performance. We begin the discussion by reviewing the concept of employee alignment (or fit) with the strategic objectives. We then present theory on LOS and discuss how it relates to current debates in the SHRM literature. Then, we make a number of propositions and present some preliminary findings from the Cypriot private banking sector before we discuss the implications of LOS for theory and practice.

**Aligning Employees with Strategic Goals**

Practitioners and academics are increasingly recognising the importance of understanding strategy implementation, given the acknowledged potential for divergence between formulated and implemented strategy [18]. There are many potential reasons for strategic failure identified within the literature including communication break downs [19, 20], lack of opportunity for employees to contribute strategically due to job design, workload and management [21].

Consequently, significant research attention has been devoted to the employee’s role in attaining the firm’s strategic goals [22, 23, 24, 25]. Within the literature, employee alignment is broadly defined as ‘on the job actions that are aligned with the strategy’[26]. However, Colvin and Boswell argue for a distinction between action alignment (‘the alignment of employee actions with the objectives of an organisation’s strategy’) and interest alignment (‘the alignment of the interests of employees with the organisation, its strategy and goals’) [27].

Whilst it could be argued that interest alignment may be reinforced through HRM practices (e.g., rewards, motivation) the area of action alignment is more complex. Prior research has argued that 95% of employees do not know or do not understand the strategy of the organisation [28, 29], and 66% of corporate strategy is never implemented [30]. For these reasons, ensuring that employees are well-informed of and acting in alignment with the firm’s strategic objectives is seen to be of high importance.

Existing research has focused on achieving contribution from employees through the alignment of HRM practices with business strategy, based on the notion that alignment of HRM practices with business strategy leads to enhanced organisational performance [31, 32, 33, 34].

However, there is little empirical evidence to support this and it is argued that by concentrating on HRM practices prior research has not captured the objectives of fit.

This is the starting point for a growing body of work that explores notions of alignment through the concept of ‘Line of Sight’ (LOS) [36, 37, 38]. LOS is based on the notion of alignment.
However, contrary to earlier conceptualizations of alignment LOS is conceived as the alignment of the employees with the organisation’s strategic objectives instead of the alignment (or fit) of HR practices to the business strategy of the organisation. While, HRM practices may foster or sustain LOS by providing employees with the ability, motivation and opportunity to contribute strategically, it is argued that their success may depend on whether employees have ‘line of sight’ (i.e., understand how to contribute effectively) regardless of how employees become aligned (e.g., practices, structure, systems). Thus employee LOS is one of the factors that could link strategy, HRM, and performance outcomes.

What is ‘Line of Sight’ and what do we know?

LOS has received limited attention to date as it is a relatively a new construct therefore much of the discussion that follows is based on Boswell’s work (table 1) [39, 40, 41].

The notion of LOS originated in the compensation literature and focused on employees’ perception of the association between job performance and rewards [42, 43]. Boswell and her colleagues broadened this concept to investigate the link between the strategy of the organisation and the human resources. Their early exploratory attempt to study critical issues surrounding LOS involved human resource professionals from four companies who completed surveys and participated in focus group activities. This study was aimed at gaining a better understanding of the strategic alignment of employees with the organisation.

The findings explored four critical issues surrounding LOS. First, defining and detecting LOS; second, how LOS differs among employees; third, what moves LOS; and fourth, the consequences of LOS. Interestingly, although human resource professionals had similar views about the general issue (i.e. how it should be defined, who should/can have it), they had different perceptions about what organisations can do to enhance it and how it

<table>
<thead>
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<td><strong>Overview of Studies</strong></td>
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| Study 1: Exploratory study of LOS | Focus groups of HR executives from four high-growth, knowledge-based companies. | Telecommunication, Biotechnology, Healthcare, Computer technology | • Defining LOS  
• Measuring LOS  
• What moves LOS  
• Consequences of LOS |
| Study 2: Empirical investigation on the drivers and effects of LOS | Survey research of 661 employees and managers | Healthcare | • Work practices and characteristics as drivers of LOS  
• How LOS varies across individuals  
• Effects of LOS |

Source: Boswell, Bingham and Colvin (2006, p. 500)
can be assessed.

Following on from this exploratory research, Boswell [44] completed an empirical investigation which assessed how LOS varied: Across various employee characteristics, important work outcomes, and how it differentiated to established concepts. As this was the first empirical research to focus on the strategic alignment of an organisation’s human capital the construct was conceptualised and operationalized as having two main components: deep understanding of the organisation’s strategic objectives (LOS-O) and an accurate understanding of the actions that contribute to those objectives (LOS-A).

In general, the results of this field study provided initial evidence of how employee LOS varies across employees and that understanding how to contribute is probably of greater importance to employee attachment than understanding strategic goals [45]. The two LOS components correlated positively and significantly suggesting that an employee who understands the organisation’s objectives is more likely to also understand how to contribute.

Boswell’s results also confirmed that employees at higher levels in the organisation had greater understanding of how to contribute. This is consistent with the notion that communication may break down from ‘the top’; and similar to Mintzberg’s argument that those at lower levels are likely to share or hear “only vague echoes of [an organisation’s] goals” [46]. Boswell noted “this finding is also consistent with discussions surrounding organisational level incentives and the difficulty for lower level employees to see how they impact firm performance.” [47]

In addition, Boswell found employees with greater organisational tenure had greater levels of LOS, suggesting it may take time to understand the organisation’s strategic direction and how to contribute. However, the number of positions held in the company negatively related to LOS. Boswell explained that moving around causes one to become less focused and unclear or it may be that employees who lack LOS are moved to different positions in an attempt to find better fit.

While Boswell’s and her colleagues research concentrates on the individual level of analysis (i.e., the employee), recent work by Buller and McEvoy [48] proposed the need for a multi-level framework of analysis which incorporates organisational and group factors that facilitate the effective formulation, implantation and adaption of strategy. They redefine LOS as the alignment of “organisational capabilities and culture, group competencies and norms, and individual KSAs (knowledge, skills and attitudes), motivation and opportunity with one another and with the organisation’s strategy.” [49] Thus, they present a framework for creating LOS at all levels of the organisation that goes beyond Boswell’s conceptualization. Our focus concentrates on the worker hence we adopt Boswell’s definition of LOS that concentrates on the individual level of analysis (i.e., the employee).

LOS has the greatest implications for both academic study and practitioners in strategic HRM. From an academic perspective LOS offers a conceptual framework from which to unpick what has been referred to as the ‘black box’ [50] – the mechanisms linking organisational HRM policy and practice on the one hand and the performance of workplaces, business units and the organisation as a whole. From a practitioner perspective the concept of LOS offers a practical framework from which practices and policies to promote understanding and implementation of strategy can be framed and implemented. Furthermore developing this link offers the opportunity to address the lack of strategic
influence often experienced by HR managers and a tool to encourage line managers to adopt HR practices.

**Strategic HRM, ‘Line of Sight’ and the ‘Black Box’**

A substantial body of research focuses on the association between HR practices and organisational performance [51, 52, 53]. One stream of research has explored the role of HR practices in developing the knowledge skills and abilities individually and collectively in an organisation’s human resources [54, 55]. Several other studies have pointed to the role of social capital focusing on the nature of the relationships, processes, and systems that directly influences performance outcomes [56, 57, 58]. Taken together, it is argued that both human and social factors (i.e., people, relationships and interactions) account for long-term organisational performance [59] as important mediators in the HRM and performance relationship [60, 61].

While, HRM is frequently measured in terms of a system or bundles of internally-consistent HRM practices, it is argued that we need to move beyond measures which focus on the existence of practices to those which account for the implementation and experience of practice [62]. Similarly, Guest and Bos-Nehles argue we need to increase our knowledge of the factors that determine effective HR implementation [63]. They highlight the role of line managers in facilitating effective implementation of HR practices.

Line managers are required to direct employee actions and outputs congruent with the organisation’s strategic goals, not simply towards effective performance of tasks specific to a particular job [64]. This is however, a complex task and although there has been a broad recognition of the critical role of line managers in HR process [65] and implementation [66] there is limited empirical evidence exploring this.

Clearly, ‘too much attention has been paid to the presence of HR practices rather than their effectiveness’ [67]. With this in mind, we need to acknowledge a body of work that suggests ‘looking beyond the practice-strategy alignment to focus more specifically on the actual human resources (i.e., the employee)’ [68]. Strategic success may depend on employees’ knowledge of the strategic directions and how to contribute in realising those goals. It is therefore proposed that LOS has significant mediating effect on this relationship. Thus we expect the following:

**Proposition 1:** Employee ‘Line of Sight’ to the strategic objectives mediates the relationship between supervisor-based HRM and organisational performance.

In association with human capital – described here as strategic knowledge (e.g., LOS: understanding the strategic objectives and how to contribute) – social capital can play a prominent role in determining the desired outcomes. As noted by Wright & McMahan (2011: 102) ‘the combination of human and social capital provides the basis for what we would call ‘human capability’, or the ability of a group of individuals to cooperatively perform a function or a set of functions’ [69].

Although human capital can act as an intermediary mechanism in advancing the alignment between HR practices, business strategy and performance outcomes it is necessary for organisations to invest in developing and managing social capital by creating the opportunities, motivation and the ability of people to develop their relationships [70]. The nature of the relationships among employees determines the level of social capital in organisations [71] which in turn
influence social relationships, interactions and strategic outcomes \[72, 73\]. Researchers \[74, 75, 76\] have acknowledged that the potential value of relationships cannot be realised if the associated parties do not trust one another and are unwilling to share information. It is suggested that trust can take several distinct forms: two forms include generalised trust, referring to a kind of impersonal or institutional trust accorded to others because they are members of a social unit, and resilient dyadic trust, referring specifically to trust between two parties having direct experience with each other \[77\].

Gagnon and his colleagues noted that managers seeking to improve strategic alignment should increase levels of both strategic knowledge and trust within the workforce. Their results provide evidence that individual trust for the organisation positively influenced strategic commitment \[78\]. This led to the following expectations:

**Proposition 2**: Social capital (dyadic trust) mediates the relationship between HRM and organisational performance.

**Proposition 3**: Human Capability (human and social capital) mediates the relationship between HRM and organisational performance.

These propositions add to the exploration of the ‘the remaining void’ \[79\] between human resource management and performance referred as the ‘black box’. Although modest progress is being made there is insufficient understanding of the complexity of the link \[80\]. This has led to continuing calls for research \[81, 82\], that develops a better understanding of this ‘largely unexplained facet’ \[83\]. We represent these propositions in the model shown in figure 1.

We shall now go to discuss this framework in relation to empirical data collected in the Cypriot private banking sector.

**LOS in the Cypriot Private Banking Sector – an exploratory study**

We conducted this study in the Cypriot private banking sector working with several Top Management Team (TMT) members of the Island’s major banks. In July 2012, these Banks (excluding cooperative banks) accounted for 48% of the total market share in cash deposits and 37% of the total market share in lending \[84\]. The data was collected in 3 stages; these are detailed in Table 2.

To help ensure the validity of the study we developed the ‘Line of Sight’ (LOS) measure following Boswell \[85\] and the critical incident technique \[86, 87\]. To examine employees’ deep
understanding of the strategic objectives and accurate understanding of the actions aligned with those objectives, first we developed the Line of Sight-Objectives (LOS-O) then the Line of Sight-Actions (LOS-A). We did this using a number of methods: We examined previous measures [88], we conducted a key informant focus group and eight interviews of managers and employees from the Cypriot private banking sector.

The key informant focus group consisted of graduates or undergraduates from the Institute of banking studies in Cyprus which at that time offered MBA and banking related qualifications [89]. This convenience sample was broadly representative of the Cypriot private banking sector and comprised a variety of ages, educational qualifications (e.g., university degree, MBA, banking certificates) positions (i.e., managers, supervisors, and front line jobs) and organisational tenure. (These demographics are represented in Table 3)

The focus group was held at a neutral location and lasted approximately 90 minutes. The conversation was recorded with the participant’s permission. The main aim of the focus group was for the participants to uncover strategic objectives that were considered critical for their organisation in gaining competitive advantage and attaining strategic success.

Following on from the focus group, eight interviews were conducted with Branch and Area Managers of the participating organisations. The participants comprised of a broad representation of the organisation’s management at these levels. Each interview lasted for an average of forty five minutes. The aim of the interviews was to identify strategic objectives that the interviewees considered critical for their bank in gaining competitive advantage and attaining strategic success.

In both the focus groups and interviews we used open-ended questions. These gave participants the opportunity to discuss what they felt was important and also to focus their attention to specific areas that was necessary to collect information. Through the focus group and the interviews we prepared a list of potentially important strategic objectives of the participating organisations. These were used to

| TABLE 2: OVERVIEW OF DATA COLLECTION – CYPRIOT PRIVATE BANKING SECTOR |
|---------------------------------|---------------------------------|-----------------|
| **Overview of Data Collection** | **Data Collection Approach**     | **Study focus** |
| 1: Qualitative study of LOS    | • Focus group activity of bank employees and managers  |
|                                | • Interviews of managers         | • Identifying the strategic objectives (LOS-Objectives) |
|                                | • Survey research of members of the top management team | • Creating the aligned Actions (LOS-Action) |
| 2: Empirical investigation of the predictors, and the outcomes of LOS | • Survey research of 548 employees, managers and members of the top management team | • Antecedents of LOS |
|                                |                                | • Moderators of LOS |
|                                |                                | • Outcomes of LOS |
| 3: Collection of performance data | • Data from company records and from the central bank of Cyprus | • LOS as the driver of individual and organisational performance |
TABLE 3: FOCUS GROUP PARTICIPANTS – CYPRIOT PRIVATE BANKING SECTOR

<table>
<thead>
<tr>
<th>Bank</th>
<th>Positions</th>
<th>Org. Tenure</th>
<th>Gender</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank ‘A’</td>
<td>Manager</td>
<td>18 years</td>
<td>Male</td>
<td>BA + Banking + MBA</td>
</tr>
<tr>
<td>Bank ‘A’</td>
<td>Teller</td>
<td>5 years</td>
<td>Male</td>
<td>BA + MBA</td>
</tr>
<tr>
<td>Bank ‘B’</td>
<td>Supervisor</td>
<td>23 years</td>
<td>Female</td>
<td>BA + MBA</td>
</tr>
<tr>
<td>Bank ‘C’</td>
<td>Senior Officer</td>
<td>24 years</td>
<td>Male</td>
<td>BA + Banking + MBA</td>
</tr>
<tr>
<td>Bank ‘D’</td>
<td>Back Officer</td>
<td>10 years</td>
<td>Male</td>
<td>BA + MBA</td>
</tr>
<tr>
<td>Bank ‘E’</td>
<td>HR officer</td>
<td>3 years</td>
<td>Female</td>
<td>N/A</td>
</tr>
</tbody>
</table>

To develop an online survey which was distributed to the TMT of the participating organisations (using Qualtrics.com). This initial list was used as a reference from which we developed the final strategic objectives (LOS-Objectives) and then the strategic actions (LOS-Action) (see Boswell 2006; pp. 1497-1499). In the following section we present some preliminary findings from the early stages of the current research. These qualitative methods were useful to develop an understanding of strategic objectives that were considered critical in the banking sector from a group of individuals working within it. They served as a reference to the top management team of the participating organisations which helped in developing the final measures (LOS-Objectives and LoS-Actions) which were later communicated and evaluated by front line employees through a

TABLE 4: INTERVIEW PARTICIPANTS – CYPRIOT PRIVATE BANKING SECTOR

<table>
<thead>
<tr>
<th>Positions</th>
<th>Org. Tenure</th>
<th>Gender</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area Manager</td>
<td>28 years</td>
<td>Male</td>
<td>BA + MBA + ACCA</td>
</tr>
<tr>
<td>Area Manager</td>
<td>31 years</td>
<td>Male</td>
<td>College Degree</td>
</tr>
<tr>
<td>Branch Manager</td>
<td>18 years</td>
<td>Female</td>
<td>ACCA</td>
</tr>
<tr>
<td>Branch Manager</td>
<td>24 years</td>
<td>Male</td>
<td>BA</td>
</tr>
<tr>
<td>Branch Manager</td>
<td>25 years</td>
<td>Male</td>
<td>BA + MBA</td>
</tr>
<tr>
<td>Supervisor</td>
<td>27 years</td>
<td>Female</td>
<td>College Degree + Banking</td>
</tr>
<tr>
<td>Supervisor</td>
<td>18 years</td>
<td>Male</td>
<td>BA + Banking + MBA</td>
</tr>
<tr>
<td>Supervisor</td>
<td>21 years</td>
<td>Male</td>
<td>College</td>
</tr>
</tbody>
</table>
A number of strategic objectives were identified from the focus groups and interviews (see Table 5). Although they were all considered very important by the participants two objectives were particularly highlighted by all the participants. These were exceptional customer service and development of a sales culture. We shall now discuss briefly each of these two in turn.

All participants highlighted the importance of customer service in attaining strategic success. This was seen to be essential if banks were to attract and retain customers – key factors in ensuring ongoing success, often measured by financial indicators. One participant commented that: ‘Delivery of outstanding customer service by front line employees translates to happy customers, customer retention, leads to new customers and progressively to an enhanced business relationship that yields more profits for the branch and the bank’. Another participant commented that ‘Customers demand good delivery of service – which is a combination of knowledge and friendliness.’ Whilst it is difficult to define exceptional customer service, the role of front-line employees was seen to be central in achieving this goal.

Participants also underlined the importance of selling products and services to customers. Sales culture indirectly promotes customer loyalty as one participant commented: ‘We need to sell for two reasons: first to make profits and second to develop customer loyalty.’ Similarly, another participant explained: ‘We need to support the marketing campaigns of our bank by making sure that customers are promptly informed about the new products and services offered by the bank. An innovative product should reach the customer before competition does’.

Again, the role of front-line employees was considered critical in contributing to what was considered to have strategic value by the participants. Front line jobs have the most customer contact – informing, selling and getting feedback from customers. Sales culture was identified by the participants as being a fundamental strategic objective in enlarging the bank’s market share and achieving profitability.

Taken together exceptional customer service and selling products and services to customers were seen by the participants as being key strategic objectives for delivering strategic success. However, the measurement of service quality is almost impossible when ‘quality-control checks are not possible during delivery, when customers come to the firm with different sets of expectations and needs, and when management cannot stand over each employee as s/he delivers service to the customer’ [90]. As noted by Boswell ‘arguably, an awareness of these strategies and how to contribute should make actions aligned with a firm’s imperatives more likely or at least more possible’ [91].

**Discussion**

In this study we draw on previous theory and research to propose a conceptual model that
suggests employee ‘Line of Sight’ (LOS) to the strategic objectives is a key mediator in the relationship between HRM and organisational performance. Prior research on LOS has found when human resources are aligned with the firm’s strategic objectives and they have an accurate understanding of how to contribute to those objectives there should be alignment between organisational needs and employee contributions [92]. LOS focuses on the alignment of the employees with the organisation’s strategic objectives instead of the alignment of HR practices with business strategy. While previous research has failed to conclude positively that alignment between HR practices and business strategy leads to organisational performance [93, 94, 95, 96] we suggest that through LOS it is plausible to capture more effectively the notion of alignment in SHRM.

HRM practices (e.g., incentives, motivation, performance evaluation) and HR implementation process (e.g., through line managers and supervisors) may foster or sustain LOS yet attaining strategic success may depend on whether people understand how to contribute effectively.

**Implications for practice**

Human resource management underlines the importance of employees’ contribution to the firm’s strategic goals. This contribution largely depends on whether people understand what they need to do for the performance of the organisation at large yet researchers and practitioners have focused on aligning policies and less about aligning people. The foundation of ‘Line of Sight’ (LOS) focuses employees’ understanding of these strategic objectives and their ability to convert this understanding of the actions aligned with those objectives [97]. The mechanisms connecting human resource management and performance are not easy to make and not clearly understood [98, 99]. By placing the employee’s understanding at the heart of strategy implementation, the concept of LOS connects the individual with the human resource management and performance relationship.

Employees’ behavioural alignment with the strategic priorities of the organisation can become a source of sustainable competitive advantage. Employees who understand the strategic priorities and act on that knowledge are one step closer contributing towards strategic success. There are other potential advantages since employees who understand how their contribution fits with strategic goals are also more likely to feel a sense of belonging (or fit) [100]. This in turn relates to positive organisational outcomes, employee retention and reduced job strain (i.e., anxiety) reinforcing the importance of the LOS construct to employee well-being.

Furthermore LOS provides a framework to implement and audit HRM policies at a number of levels. For the organisation there is the possibility to check alignment of HR policy and practice—not only via the alignment of individual practices with organisational goals but also with employees’ understanding of those HR actions. For line managers, line of sight underlines the importance of communicating strategy of the organisation and how to make a contribution. This approach is likely to be top-down but the research presented here underscores the importance of relationships between line managers and their direct reports. These communication channels are key for transferring strategic information, giving performance feedback and ‘linking employee roles and behaviours to larger organisational goals is key’ [101]. The counter factual illustrates the point here—at the front line a lack of understanding may adversely affect performance as workers
may work on low-priority goals [102].

However, the greatest contribution for LOS is at the employee level since, for an employee, an understanding of the strategic direction and appreciation of the actions that lead to strategy implementation enables behaviours that are difficult to pre-define for management. The potential for achieving strategic success stems from these discretionary and unspecific employee behaviours.

Consistent with current debates to put the human back into strategic human resource management [103] and to explore the circumstances and the process whereby human resource management leads to organisational performance [104] we extend the dialogue through the inclusion of employee LOS to the strategic objectives of the organisation as a mediator in the centre of the ‘black box’. As employees’ knowledge skills and abilities become an even more important element for strategy implementation, enhanced organisational performance and competitive advantage, such as “line of sight” is likely to become a key differentiating factor in strategic success.
References


On Building Agile Capability in Organisations for Transformational Change: How are organisational identity and knowledge transfer linked?
Neha Chatwani – Grenoble Ecole de Management

Abstract
This research contributes towards understanding the relationship between knowledge and identity, for the purpose of building agile capability in organisations. It subscribes to the recent discussion that an overemphasis of knowledge typologies has contributed towards an interpretation of knowledge management as an information processing mechanism of data sets rather than a site for sense-making and the creation of narratives and stories, the traditional form of knowledge sharing. Whereas knowledge typologies serve towards a better understanding of knowledge transfer mechanisms in theory; in practice, in organisations where knowledge is enacted in day-to-day operations, it is difficult to distinguish between them. The results of this single case study at a non-profit organisation show how knowledge sharing, which is central to the agility paradigm – a concept for managing unexpected change – is an intensely human activity, closely related to the understanding of the collective identity of an organisation.

Understanding the research question
The topics of change and knowledge, though not always connected, are of central interest to the practitioner. Two well-known observations that continue to engage both academic scholars and practitioners triggered this research: first, that change management initiatives at the workplace frequently do not achieve what they set out to achieve [1] and second, that many organisations are challenged in designing knowledge management programmes that fully leverage their knowledge asset [2].

These observations are not novice. On the one hand with respect to change management, in 1995 Kotter [3] proclaimed that only about 30% of change management initiatives are successful. A survey administered by the consultancy firm McKinsey in 2010 [4] confirmed that that number had not substantially changed sixteen years later. While knowledge is widely regarded as a valuable organisational asset, there is little understanding about its relationship to other important organisational processes such as organisational performance or change management.

At the current juncture organisations are faced with an unpredictable and volatile environment. The “war on talent”, fuelled through demographic factors and heightened competitiveness, suggests that high-performing knowledge-based organisations generally recognise the important role of knowledge in steering through and surviving in a turbulent environment. How can knowledge and change be linked? In what way would identity play a role?

Agility is a emerging concept of transformational concept organisational change [5]. Knowledge is at the heart of the agility paradigm. This paradigm suggests that information gathered through organisational sensing processes [6] can result in knowledge flows, which in turn trigger (or enhance) organisational responses. These responses are perceived by the organisations’ sensing processes triggering further responses, thereby refueling the repetitive agility cycle and allowing the organisation to continually adapt by means of its knowledge flows. In this way agile organisations are consistently able
to acquire, build and share knowledge quickly, leveraging this knowledge on an ongoing basis in order to act decisively (responsiveness) by, for example, aligning and redeploying resources, talent and skills as needed [7]. In other words, agility is a capability that allows an organisation to adapt to turbulent and unexpected change by means of knowledge utilisation. It is about the organisations “capacity for continuous reconstruction” [8], fuelled by “economies of knowledge” and accelerated through “enterprise-wide learning” [9].

Considering that the question of identity is fundamental to the study of organisations, because it has a significant impact on actions and behaviours of organisational actors in them and that these hold the knowledge that enables organisations to build agile capability that supports continuous adaptation, a link between change, identity and knowledge can be proposed. Some research has already taken place linking knowledge transfer and identity [10]. The theoretical link between the two can be established from different perspectives. For example, sense-making processes are entailed in both knowledge transfer mechanisms [11] and identity construction [12]. The latter allows for postulating the idea that what organisational actors know and how they share knowledge is closely linked to who they think they are and even who they want to be. At the same time little is known about how the relationship between knowledge and identity is enacted in organisational practices and how this influences the organisation’s capacity for change.

Nag et al. suggests that knowledge and identity are both dynamic and fluid constructions and are typically expressed in organisational practices: “Practice... acts as a linchpin connecting organisational identity and knowledge. It is through practice that each influences the other – identity influences knowledge use by connecting knowledge to action, and knowledge use influences identity by providing the behavioural frames for its manifestation and maintenance” [13]. In this research the discourse of knowledge transfer practices by organisational actors reveal the relationship between knowledge and identity.

From the practitioners point-of-view this research aims to provide two important insights with respect to designing and implementing change initiatives in organisations. On the one hand it serves to exemplify the opportunity of building agile capability in organisations and on the other hand, to more concretely elicit how organisational actors, by means of their understanding of who they are and wish to be (identity), influence knowledge transfer practices, potentially hindering or enabling organisational change.

**Knowledge**

“Knowledge is created and organised by the very flow of information, anchored on commitments and beliefs of its holder” [14]. Therefore knowledge is keenly connected to the knowledge holder and is a demonstrated result of sense-making and learning processes, enacted through behaviours and practices of individuals both at the cognitive level and at the emotional level. Dove [15] advances the notion that in agility, managing knowledge is about managing what should be learned, when, and by whom; and that knowledge transfer is primarily about learning. Nag et al. speak of knowledge as an “on-going dialogue between practice (action) and meanings (cognition)”. Knowledge is expressed within routines, processes, and practices.

Consequently, as knowledge is expressed through action and is constantly evolving through learning and experience, it is not an object that can be easily held and transferred.
At any point in time its current representation or artifact can be held in databases or documents, but knowledge itself continues to evolve. In addition, the value of knowledge is retrieved and demonstrated in specific activities that organisational actors engage in. Broadbent [16] writes “knowledge is enriched information with insights into its context”. In short, the definition of knowledge for this research is that although representations of knowledge can be possessed, stored and transferred, knowledge itself is fluid, dynamic and context dependent.

Organisational identity

Organisational identity is based on two cognitive processes: sense-giving and sense-making that support the definition of central, distinctive and relatively permanent identity attributes of organisations [17]. Sense-giving is based on institutional claims that are proposed and announced by organisational leaders and individuals. They are organisational self-definitions. Sense-making is based on collectively shared beliefs of the organisational actors and their common understanding of who they are. They are continuously debated and (re)negotiated among themselves. Identification refers to the extent to which the organisational actors believe that their own beliefs about the organisation are also self-referring.

Identity work is the term used to describe the relational construction of a collective self, i.e. how organisational actors define themselves in contrast to those in other organisations or social settings, in their own estimation as well as in the eyes of others [18]. It can be found when “people [are] engaged in forming, repairing, maintaining, strengthening or revising the constructions that are productive of a sense of coherence and distinctiveness” [19]. It is as a result of identity work that organisational actors accept or reject practices, including depending on their ‘fit’ with organisational identity [20]. Brown & Starkey [21] found that knowledge which induces learning can provoke anxiety in view of a possible identity change. In this way organisational actors can respond to knowledge and learning by demonstrating identity tension which is resolved by identity work.

Research question and approach

In literature the link between identity and knowledge has been addressed and researched by a number of authors (e.g. Alvesson, Kane et al., Kogut & Zander [22]). At the same time, the role and function of identity in managing knowledge is still largely undiscovered. Little is known about how this relationship is enacted. The research in this paper serves to contribute towards a better understanding of how organisational identity and knowledge transfer are linked for the purpose of facilitating agile capability in organisations.

Creswell [23] postulated that researchers possess a world-view that influences their approach to research i.e. “a basic set of beliefs that guide action”. He differentiated between post-positivism (theory verification), advocacy/participatory, constructivism (theory generation) and pragmatism (real-world practice orientation). The research framework for this investigation can be described as constructive and pragmatic. First, because it seeks to contribute towards further understanding of existing theories, and second, because it is embedded in the reality of an organisation.

Research context and design

The research context is a well-known international non-profit medical emergency organisation with six operational centres. The research takes place at one of the operational centres, which is the unit of analysis for this case study. The centre defined four knowledge
sharing practices which are the focus of this study: briefings and debriefings; operations evaluations and lessons learned, innovations, and the reporting of adverse events.

The non-profit sector is defined by the United Nations through five crucial structural or operational attributes: (1) Organisations that are institutionalised to some meaningful extent; (2) Private, i.e. institutionally separate from government; (3) Non-profit-distributing, i.e. not returning profits generated to their owners or directors; (4) Self-governing and equipped to control their activities; and (5) Voluntary: involving some meaningful degree of voluntary participation. They include all organisations that aim at creating social value for society as a whole and do not immediately fit into either the profit making or public sector definitions. Non-profit organisations are often knowledge intensive organisations that deliver services, which rely on the expertise of organisational actors. In order to serve their beneficiaries well, they have a strong need to be agile and responsive. Their mission is reflective of who they are and serves as a measure of success. It is precisely because of this that “successful and well performing non-profit organisations have learned to define clearly what changes outside the organisation constitute results and to focus on them” [27]. At the same time, the mission “motivates activity and also limits the menu of possible actions”. Typically, in these organisations, actors demonstrate a high level of positive identification [28].

The research design is driven by the specific nature of the topic under scrutiny [29]. The research design of choice is an exploratory and qualitative single case study. It is selected to elicit the most relevant and precise data needed to empirically answer the question under investigation. Eisenhardt [30] suggests that such case studies are “a research strategy which focuses on understanding the dynamics present within single settings” and “richly describe the existence of a phenomenon” [31]. The nature of this research is exploratory – little is known about the relationship under investigation.

Further, the research question seeks to qualify a relationship between two different fields. A qualitative research approach allows for a more holistic, systemic analysis of the data thereby paying attention to the organisational context. It will also allow for a more flexible methodological design and data coding as well as for multiple interpretations of the data, if required; hereby permitting the richness of organisational data. The rigor of this empirical approach is linked to the researcher’s awareness of sources of possible bias and actions taken to mitigate these. Lincoln and Guba [32] spoke of trustworthiness as a measure of rigour in qualitative studies, referring to the credibility, transferability, dependability and confirmability of the research methodology. A number of case study tactics were undertaken to ensure this.

Data collection and analysis

For the data collection the snowball sampling method [33] was used, inviting interviewees to recommend other colleagues who could participate in the study or provide additional documentation. The multiple datasets consisted of narrative data i.e. primary data derived from the interviews and internal documents; and secondary data from public reports, websites and film material. Seventeen semi-structured interviews lasting up to 90 minutes were conducted with experts and managers at the operational centre who were involved in knowledge management initiatives from a variety of areas. A research field diary was also kept and was a useful instrument for reflexivity for the researcher and in the assessment of the
outcome of the data analysis.

The data analysis approach is based on grounded theory and is inductive but not strictly iterative. First, the narrative data was coded, reflecting the themes in the text and using the original vocabulary. Next, the codes were used like anchors allowing for a second level of categorisation of theoretical groupings. Several attempts were made to categorise the data from different perspectives before a data structure emerged. The data from various sources was triangulated, adding to the richness of the data analysis.

Results

The data structure shows that in their discourses on organisational identity and knowledge transfer practices these are dealt with as two separate topics. However, at the same time expressions of organisational identity appear to be reflected in knowledge transfer practices [1].

Table 1 shows how the organisational identity features emerged from the data set. On the one hand these were sense-giving identity features, which are central to the organisation, distinguishing it from other similar actors and are consistently articulated in both internal and external reports as well as in the interviews. These features are based on the humanitarian principles of neutrality, impartiality and independence. In addition, proximity to beneficiaries and witnessing their plight as expatriate volunteers and advocacy about their situation emerge as distinctive features of these institutional claims. On the other hand they were descriptions of how organisational actors made sense of paradoxical or contradictory occurrences in their every day work.

The identity attributes that emerged from the data set were reflected in the knowledge transfer practices, for example, in the evaluation reports on operations. In the field the organisation forges partnerships with local actors “which are mutually beneficial, planned and formalised alliances made with diverse organisations who espouse the same humanitarian values (to save lives and alleviate suffering) to achieve commonly defined objectives”. However, the reports show that under certain circumstances partnering leads to compromises. For instance, it may be important to collaborate with a religiously affiliated group in order to gain access to a target population, thus compromising neutrality, or the organisation may choose to delay advocacy in order to complete operations. Typically and in order to preserve neutrality, for example, in areas of ethnic conflict this organisation will set up operations on all sides in order to maintain access to their services to all parties involved. Sometimes, particularly in areas of high security alerts, the operations may need to be handed over to locally recruited staff compromising the identity attribute of witnessing by the organisations’ expatriated volunteer staff.

In this way organisational actors consistently and incrementally, adapt and align knowledge transfer practices with their organisational identity attributes. They do this through identity work, which is dynamic and lends itself to mechanisms called tactics - specifically, cognitive tactics. These are cognitive choices driven by the need to fulfill the mission and are not intuitive or random. The cognitive tactics involve leveraging individual identity attributes compromising one in favor of another in order to support the mission under specific circumstances. It allows the identity claims to be (re)prioritised such that not all identity attributes need to be reflected to the same degree in all practices. Simultaneously it seems that certain identity attributes are never compromised. This is an important insight as it shows that not all of organisational identity is porous and dynamic in
<table>
<thead>
<tr>
<th>FIRST ORDER (close to original narrative)</th>
<th>SECOND ORDER (theoretical constructs)</th>
</tr>
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<tbody>
<tr>
<td>Keep a sense of reality, go to the field 3-4 times a year</td>
<td>Identity: proximity/volunteerism/witness (distinctive)</td>
</tr>
<tr>
<td>Automatic refreshment of people, energy, high motivation</td>
<td>Sense-giving: institutional claims: central, enduring, distinctive identity features</td>
</tr>
<tr>
<td>Proximity and witnessing are understood distinctly</td>
<td>Sense-making paradoxes in interviews</td>
</tr>
<tr>
<td>I also went to xxx but the reception was not the same</td>
<td>Identity: distinctiveness</td>
</tr>
<tr>
<td>We are quite ego-centric</td>
<td></td>
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<tr>
<td>Financially independent have “the capacity to shake the tree” and remain vocal</td>
<td>Identity: advocacy and independent (distinctive/central)</td>
</tr>
<tr>
<td>Opportunities for advocacy not always fully exploited</td>
<td></td>
</tr>
<tr>
<td>Re-invigorating capacity to question</td>
<td>Identity: innovation (new/re-emerging)</td>
</tr>
<tr>
<td>Promoting medical innovations cornerstone of humanitarian action</td>
<td></td>
</tr>
<tr>
<td>The humanitarian principles of neutrality, independence and impartiality</td>
<td>Identity: neutrality/impartiality (central/enduring)</td>
</tr>
<tr>
<td>Guardian of the Geneva conventions</td>
<td></td>
</tr>
<tr>
<td>I notice we have become like big machinery</td>
<td>Identity: emergency-big machine</td>
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<tr>
<td>We are driven by emergency power</td>
<td></td>
</tr>
<tr>
<td>People are always about what they are doing next</td>
<td></td>
</tr>
<tr>
<td>Discuss about everything and debate</td>
<td>Identity: informal-formal (rigid)</td>
</tr>
<tr>
<td>Some rigid linear management lines</td>
<td></td>
</tr>
<tr>
<td>Informal style everything is transparent, informal discussion in the corridor</td>
<td></td>
</tr>
<tr>
<td>Blocked if you do not know who is responsible for what</td>
<td></td>
</tr>
<tr>
<td>Dynamic and big, you are never stuck somewhere</td>
<td>Identity: freedom-frustration</td>
</tr>
<tr>
<td>Democratic organization, enormous place of freedom, big space</td>
<td></td>
</tr>
<tr>
<td>Created by pass roads when no support</td>
<td></td>
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<tr>
<td>Frustration when things don’t work</td>
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the same way. An example of this is impartiality. It is impossible “to accept serious compromises to its operational principles of independence and impartiality.” There is an unwanted level of compromise when compromises are clearly not acceptable any more for the organisation. In these cases it appears that identity work breaks down and operations cease.

From the data structure, identity work can be observed in organisational actors on two levels. On the one hand they strive to maintain institutional identity claims, and on the other hand they navigate through paradoxes of everyday work trying to make sense of the contradictions. This sense-making process shows paradoxical or contradictory identity attributes, particularly in the interviews and to some extent in internal reports. Their debate reflected a dynamic understanding of their identity and a debate in their understanding of ‘who they are’ and ‘who they would like to be’ in fulfilling their mission in the best possible way. In this way the processes of sense-giving and sense-making are interlinked in these discourses by organisational actors.

The reverse – that is, knowledge practices impact and form organisational identity, albeit likely more gradually - is also illustrated in the results. Although it had been identified as a knowledge transfer practice by the organisation for this case study, the emergence of innovation as an identity attribute suggests that specific practices may allow for the emergence of identity attributes, or alternatively, reestablish an identity attribute that had become dormant.

Finally, the results also show that all the organisational actors are positively identified with their organisation. Table 2 provides some of the original quotations from organisational actors illustrating this point.

| TABLE 2: POSITIVE IDENTIFICATION OF ORGANISATIONAL ACTORS (ORIGINAL QUOTATIONS) |
| POSITIVE IDENTIFICATION |
| I am really attached, what we do, the way we work |
| We share the same values, a vision of humanitarian work, of human values, of what we can do together |
| This organisation is a way of positioning in life, one of the greatest things in my life |
| Interesting to work here with people who share the same ethics as me. The same humanitarian ethics, associative principles |
| It corresponds to my philosophy of life, the humanitarian position, the commitment |

Insights for practitioners

Although the results of this study can be dismissed by attributing them to the particularities of the non-profit organisation under investigation or by pointing out methodological limitations of a single case study, the results do provide important food for thought:

- Understanding knowledge management and its transfer within the particular context of an organisation is central to building its agile capability for managing unexpected and turbulent change. Knowledge management research to date has mainly taken place in profit-making industries where the focus has been on managing knowledge well to increase profits. In non-profit organisations knowledge is managed to better serve the beneficiaries. In both instances knowledge management is closely linked with the organisation’s mission and purpose. The results in this paper suggest that in non-profit organisations where organisational actors are positively identified with their organisational identity, knowledge practices also serve to express this identity.
observation may be particularly interesting in non-profit organisations that have only recently started to deploy knowledge management programmes and are challenged to replicate possible ‘success stories’ from commercial enterprises. It appears that the success of these knowledge management initiatives also depend upon the extent to which they express organisational identity attributes.

- The results show that rather than managing change by emphasising an organisational vision, i.e. where do we want to go; a keener understanding of organisational identity, i.e. who we are and who we would like to be as an expression of organisational mission, might be key. By entering the door of organisational identity and establishing a collective sense of identity to which knowledge flows are continually aligned, knowledge sharing is purposefully fostered and always adapted to what is needed by the organisation and hence facilitates the building of an agile capability. In this way the incremental adjustment of knowledge flows by aligning it to organisational identity, which is relatively stable but also dynamic (i.e. elastic), enabling the mastering of turbulent change.

- In knowledge transfer practices organisational actors demonstrate identity work when these are aligned with identity attributes through cognitive tactics. In practice, this identity work can be expressed as resistance to the change process. This research suggests that the practitioner needs to pay attention not to write off this resistance as a negative hindrance to change but to embrace it as a meaningful sense-making process for reconciling disparities and paradoxes.

From this point of view, resistance is an expression of organisational actors assessing the possibility of aligning knowledge flows with organisational identity. This is of value to the change process. Supporting organisational actors to work through the paradoxes likely enables sustainable organisational change.

- The organisational actors in this case study all demonstrated a high-level of identification with the organisation and its mission. These can be an important variable in knowledge flow. Further, the organisation’s leadership clearly announces its identity to its organisational actors and other similar organisations in the field. It not only fosters the enactment of these identity attributes but also openly debates the challenges of translating these into practices. In this sense the recommendation to managers is to ‘talk the walk’ rather than ‘walk the talk’ by retroactively aligning actions with what has been said, rather than engaging in a conversation about what can be done and by whom. In short, the managers need to actively engage in the processes of constructing identity in their organisation in order to facilitate the organisation’s ability to build its agile capability through knowledge flows.

Conclusion

The findings in this research suggest a dynamic and complex link between knowledge transfer practices and organisational practices. In a non-profit organisation where organisational actors are positively identified with their organisation, the data outcomes show that knowledge transfer practices are incrementally aligned with identity attributes through identity work by means of cognitive tactics. The reverse is also shown, i.e. that a change in practices may eventually lead to adjustments in organisational identity. Identity work shows, on the one hand how organisational
actors reiterate institutional claims, and on the other hand how they debate and make sense of their everyday practices. As organisational identity not only includes the notion of ‘who we are’ but also of ‘who we want to be’, the results of this research suggest that the dynamic relationship between knowledge practices and organisational identity can be leveraged to steer and facilitate the building of agile capability in organisations for the purpose of transformational change.
References


Tacit Knowledge, Knowledge Sharing & Innovation Performance
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Abstract

Researchers have linked the influence of tacit knowledge with its two dimensions, cognitive and technical to innovation performance among teams in firms. The current study aims at investigating the role of these two dimensions and introduces a new dimension “effectuation”, to find out whether the interplay of these three dimensions can lead to positive outcomes in the firms performance and innovative capability. So, the purpose of this study is two folded: First, it proposes a new multidimensional model that adds a new dimension, “Effectuation”, presented by “means” to the tacit knowledge model. Second, to find out whether sharing this knowledge would lead to positive outcomes in the firms’ performance.

Introduction

Nowadays, the criterion for survival hinges upon the ability to innovate. It is this capability that ultimately determines whether a company is able to assure its viability [1]. The economy today is witnessing a competing activity in the service industry. Thus, service firms are encouraged to provide high quality and innovative services to achieve their competitive advantage [2].

Not surprisingly, knowledge has always been a primary tool in production, practical application, and the generation of wealth in organisations. It is paramount to bear in mind that the success of some organisations on a micro-level is a constant dialogue created between the different dimensions of knowledge: tacit, and explicit [3]. From this viewpoint, several questions arise in an attempt to find answers to discern how and why tacit knowledge has a decisive influence on performance. Furthermore, researchers have not presented an integrative model that presents the interplay of these different dimensions and the effective role in sharing this knowledge. To fill this gap, this paper presents a model of tacit knowledge with its two dimensions: cognitive and technical skills. In addition, it introduces effectuation as a new dimension to the model. Based on a survey of 162 team members from a Lebanese service company, this research

The media industry in the Middle East Region in general, and in Lebanon in particular, is gaining a lot of importance today. Consequently, people working in this sector are facing many challenges and thus need to change their cognitive mindset and learn new approaches to reach their competitive advantage. This triggers the researcher to examine his model in LBCI, a Lebanese media company which is considered as a pioneer in the media industry [4] and see whether these variables play an effective role in its success. Another reason is the resistance of the researcher’s colleagues to exchange their knowledge; they prefer to hide knowledge rather than share it. Finally, from the researcher’s personal experience, companies today are called upon to be creative by utilising skilled employees and experts in the field.

Literature review

Significant attention has been paid to knowledge with Polanyi [5] – and his classification of knowledge, whether explicit or tacit - with Teece [6], and with Nelson and Winter [7]. This work examines the development of organisational knowledge that takes place through the interaction of different dimensions of knowledge among people or teams working in an organisation. As previously mentioned, scholars have conducted extensive studies in
knowledge management, but more attention should be paid to the manner in which knowledge is created and how to handle its creation. By distinguishing between the two types of knowledge, codified or ‘explicit’ knowledge, and implicit or ‘tacit’ knowledge, a new dimension of knowledge creation gradually emerges. Explicit knowledge is external, ubiquitous, easily exchanged, codified and stored [8].

**Tacit knowledge**

Tacit knowledge is extremely personal – it is viewed as non-verbal, hard to express or store, and alternative or optional knowledge that we are unaware of. In the same vein, Polanyi [9] presents tacit knowledge using a philosophical image, by dividing it into cognitive and technical elements. The cognitive elements present viewpoints, beliefs, and perspectives. Conversely, the technical elements of tacit knowledge deal with skills, talents, know-how, and experience. The literature of knowledge management reveals that tacit knowledge is a multidimensional concept, however, little empirical work has focused on industry, and the major part has been directed towards academic firms. The importance of this topic is revealed when Lee, Naylor, and Chen [10] sustain that “with the accumulation of customer knowledge, a more informed firm should be able to plan and carry out its marketing programme to cater to un-met customer needs better than its rivals”. This work at hand presents a model inspired by Nonaka who divides tacit knowledge into two overlapped dimensions: cognitive and technical.

From this standpoint, the author of this research proposes ‘effectuation’ as a third dimension for the model of tacit knowledge, and tries to find whether the interaction between these three dimensions can lead to positive outcomes.

**Effectuation**

Effectuation is defined as a learning process consisting of special techniques, skills and heuristics [12]. It is a form of “uncertainty” [13] and expertise [14] from empirical studies of entrepreneurship. Effectuation is a “general theory of decision-making in uncertain situations”. Here, effectuation emphasizes the selection between various effects and favors control over prediction, i.e. “to the extent we can control the future we do not need to predict it” [15]. Many researchers are anchoring deeper in studying effectuation and exploring its influence on innovation performance [16].

Simon [17] presents effectuation as a process that is suitable for situations and environments with uncertainty, where the manager is seeking a new venture and cannot predict the results of his future actions. In her book, Sarasvathy [18] gives the example of a chef cooking a meal in an attempt to illustrate the inverse relationship between effectuation and causation. To prepare a menu, the chef has two alternatives: in the causal logic, he knows the menu very well and buys the ingredients needed. In the effectuation logic, the chef looks in his kitchen for ingredients and utensils to prepare the menu that sometimes materializes and develops as he is preparing the food.

Hence, this work draws on the effectuation theory [19] to introduce some testable propositions that link the development of team expertise through one of its dimensions; “Means”. This dimension is divided also into three categories: Who I am, Whom I know and What I know. The latter, will be the focus of this study as it reveals skilled employees with specific type of expertise [20]. The literature shows that a high number of studies on Means (What I know) is positively related with venture performance. This motivated the author to
choose this dimension for the study and ignore the others (Who I am, and Whom I know).

From an organizational perspective, leading researchers believe that knowledge sharing should not only be incorporated in the firm strategy, but should also be “available in an explicit form to make it difficult if not impossible to quickly spread or share it within the organization” [21]. As pointed out by Judson et al., [22] tacit knowledge should be shared in order to play as a key factor in the growth of expertise and for the appreciably high performance of organizations.

Knowledge Sharing

The importance of knowledge hinges also upon sharing this knowledge within the social environment in order to gain advantage of its importance. This is why it is defined as the exchange of knowledge and is considered as the most valuable activity in firms [23]. Researchers link the relationship between firms that share knowledge, and their capability to innovate due to enhanced decision making [24]. From here, knowledge sharing is gaining an important role and it is good to examine new variables to explore the relationship between knowledge sharing and innovation performance. Some researchers link between the quality of innovation in organizations and their learning or knowledge base [25]. Consequently, a proliferation of studies and books examine learning organization and [26]. And some recent researchers find out that the compass points to innovation in terms of the transfer of knowledge among employees or member of teams [27].

Innovation

A recent definition of innovation is by Morris [28] where he finds “innovation that seeks to make products and services dramatically different and better, to establish new standards”. A previous definition of innovation was presented by Mezias and Glynn [29], “innovation is a non-routine, significant, and discontinuous organizational change”. In reviewing the literature, one can find that innovation performance in service organizations has been a primary focus among scholars for the last two decades, for one simple reason: which is the involvement of the service industry to 70 % of the GDP (Gross Domestic Product) which is significantly increasing [30]. In the same vein, some researchers refer to innovation in service companies as indispensable today [31]. And the most essential factors that manipulate innovation are the top manager support and approach toward his employees [32].

So, the purpose of this study is to provide some insights into the effect of tacit knowledge and service- innovation-performance (SIP). There are numerous internal and external variables influencing knowledge or innovation in the literature. It is not feasible to include all these variables in a single study. Consequently, the researcher has chosen to isolate some of them; however, their isolation does not signal that they are irrelevant or not involved in the phenomenon. They can be studied or employed in other research. Furthermore, the relationship between tacit knowledge, effectuation, knowledge sharing, innovation, and performance is the result of theories and findings from the literature.

Model and Hypotheses

The following model explains the general framework of the research. Tacit knowledge is presented by a philosophical image and divided into; cognitive skills and technical skills [33]. Cognitive skills are defined as self-schema that are needed to accomplish a certain task [34]. Technical skills refer to the technical tasks
that need technology and how to use the appropriate technology to accomplish this task [35]. Following these, two hypotheses emerge:

**Hypothesis 1 (H1):** A stronger level of cognitive skills is positively related to service innovation performance.

**Hypothesis 2 (H2):** A stronger level of technical skills is positively related to service innovation performance.

“What I know” refers to skilled workers and expert employees who are considered as major performance drivers. This lead to the following hypothesis:

**Hypothesis 3:** A stronger level of “what I know” is positively related to service innovation performance.

The literature refers to three different factors that affect knowledge sharing activities on employees. These factors are on the individual level, organizational level, and the technology level [37]. The individual level is measured by enjoyment in helping others, (3 items) [38]. The organizational level is measured by managerial support and rewards (4 items). The technology level is measured by the use of technology (3 items) [39].

**Hypothesis 4 (Ha):** Enjoyment in helping others is positively related to innovation performance.

**Hypothesis 4 (H4b):** Top management support is positively related to service innovation performance.

**Hypothesis 4 (H4c):** The use of technology is positively related to service innovation performance.

Innovation in service companies is defined as new ideas, activities that attract customers. It is also defined as the capability to convert R&D into new services, and also to implement technological innovations with respect to its products and services [40]. The term is often employed in social studies. Service innovation performance is a scale borrowed from a previous study [41] and is assessed by 6 items.

**Methods**

Data collection process took two months, from the beginning of January to the end of February, 2013. Before data collection, the researcher conducted a pilot test [42] with 30 respondents to ascertain that the measure items are explicit, relevant and meaningful. All the questions included are close-ended. The measure uses a seven point Likert scale that ranges from 1 = strongly disagree, to 7 = Strongly Agree.

**Data Analysis and results**

**Measurement model**

Confirmatory factor analysis CFA is conducted to assess if measures of a construct are compatible with the apprehension of the nature of that construct.

Factor loadings of indicators show significance...
for all items which exceed 0.5. Each indicator is significant at 0.01 levels. The fit of the model is perfect. χ² (0) is zero (< 3.00). Comparative fit index (CFI) and NNFI are > 0.98, TLI is 1.000 (> .95 ), and RMSEA is 0.054, (<.08). The reliability of constructs and their average variance are conducted as measures for convergent validity [43].

To test for reliability of the constructs, Cronbach’s Alpha coefficient is assessed. The purpose is to make sure that the item scales are aligned in measuring the underlying scale’s attributes [44]. In measuring cognitive and technical skills, with their 7 scale items, the result shows a cronbach Alpha coefficient of .624 for cognitive skills construct and 0.571 for technical skills.

“What I know” with its 4 scale items, shows a Cronbach’s Alpha coefficient of .724, which is also acceptable [45]. “Enjoyment in helping others” is measured by 3 items are cronbach alpha result is 0.716. “Managerial support” is measured using 4 items and cronbach result is 0.783. And “Technology support is measured by 3 items and cronbach shows reliability of 0.755. As to the dependent variable in the model, service innovation performance, it is measured by 3 items for innovation with cronbach 0.846, and performance, 3 items also with a reliability of .617 [46].

The measurement model shows acceptable reliability, convergent and discriminant validity for all variables.

**Structural Equation Model**

This statistical technique is widely used in quantitative studies. Today, researchers are interested in SEM as it presents compatible characteristic to test theory. Structural Equation Modeling exploits a variety of models to show relationships between observed variables.

According to Kline [47], SEM provides confirmatory factor analysis (CFA) to test measurement models. Also, the population was chosen from a service media company in Lebanon. After data cleaning process using listwise deletion, the final number of responses was 162, representing 79% of the surveyed sample.

To perform structural equation model analysis, the statistical program, AMOS 21 is used. The two models are defined (Table 1). Model 2 is nested within Model 1: In Model 2, the path is fixed between cognitive skills and means to zero, because it is non-significant in the full model (Model 1).
Fit indices for each of the two models of innovation performance are in Table 3. It tests if Model 1 fits the data well to start the nested models analysis. However, the fit of the full model (Model 1) is acceptable by CFI, 0.959 (> .95), TLI, 0.961 (> .95), RMSEA, 0.067 (< .08), SRMR, 0.070 (< .08). Model 2 is tested (one restricted model) to examine if an easier formulation of innovation performance might offer a greater fit to the data than did Model 1 (the full model). Models are listed below, along with their fit statistics.

Model 2 best fits the data. The fit of Model 2 is perfect. $\chi^2$ (0) is 0.000 (>3.00). CFI is 1.000 (> .95). TLI is 1.000 (> .95). RMSEA is 0.054 (< .08). SRMR is 0.000 (< .08). The model that has the lowest AIC (Kline, 1998) is preferred. Thus, Model 2 that has the lowest AIC is the best model of all the models. Cognitive and technical skills do not significantly affect innovation performance. Means positively affects innovation performance. The R2 values 0.318 for innovation performance. The trimmed full model (Model 2) provides an explanation for 31% of the variance in innovation performance. Thus H1 and H2 are not supported. The results show that cognitive and technical skills, the two dimensions of tacit knowledge, are not positively related to innovation performance. However, H3, H4 (a), H (b), and H(c), are supported. This means that “what I know” and knowledge sharing are positively related to innovation performance.

**Discussion and implications**

When the journey of this study began, the objective was to investigate the role of the two dimensions of tacit knowledge, cognitive and technical and introduce a third dimension to tacit knowledge model, “effectuation”. Testing these dimensions took place in the realm of a service company. In addition, the aim was to link knowledge sharing among employees with innovation performance in firms. The results of a structural equation approach demonstrated that the hypothesized relationship between the two dimensions of tacit knowledge and
innovation performance were not supported. Also, effectuation reveals a positive relationship with innovation performance.

In the same field, the results showed a perfect fit for the knowledge sharing construct, and thus strongly supporting the hypothesized relationships between knowledge sharing and innovation performance. The literature about knowledge management reveals the importance of tacit knowledge in different areas of studies. Although, researchers link tacit knowledge, with its two popular dimensions, cognitive and technical, and enhanced job performance [48], further explanation is required in order to maintain this concept’s value.

Theoretical Implications

The results of our tests are important from both theoretical and managerial perspectives. Theoretically, this work presents a research model for empirical studies that examine the relationship between tacit knowledge with its two dimensions, cognitive and technical, and innovation performance. The results illustrate that there is no significant relationship between these dimensions and innovation performance. This phenomenon could be explained in two ways: first, measuring tacit knowledge is still problematic [49], and second, understanding these two underlying dimensions needs further development.

In addition, the results show that knowledge sharing positively affect innovation performance. Although this result is not surprising, it advances a potential schema that plays an important role in firms’ innovation capabilities. The sense of confidence among employees encourages them to share their knowledge with their colleagues at work. Top management support and organizational rewards are strong motivators, as they influence knowledge sharing. The results reveal too that involving a broad number of variables incorporated in this construct - technology use and knowledge sharing culture- enhances firms’ performance as well [50]. Moreover, the positive relationship between effectuation or “what I know” and innovation performance, is the main contribution of this study; it expands the relationship between effectuation and innovation performance on the team level. This paper is a shift from the field of entrepreneurial discipline where entrepreneurs are considered as co-creators of opportunities to the discipline of knowledge and expertise in team members.

Managerial Implications

From a practical perspective, this research proposes a number of implications that would help managers achieve enhanced results in their firms. Perhaps the most essential contribution of this research is the significant

### Table 2: Results of Structural Equation Model

<table>
<thead>
<tr>
<th>HYPOTHESES</th>
<th>HYPOTHESES PATH</th>
<th>PATH COEFFICIENT</th>
<th>RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Cognitive → innovation performance</td>
<td>Male</td>
<td>BA + MBA + ACCA</td>
</tr>
<tr>
<td>H2</td>
<td>Technical → innovation performance</td>
<td>Male</td>
<td>College Degree</td>
</tr>
<tr>
<td>H3</td>
<td>Means → innovation performance</td>
<td>Female</td>
<td>ACCA</td>
</tr>
<tr>
<td>H4(a)</td>
<td>Enjoyment → innovation performance</td>
<td>0.989</td>
<td>Supported</td>
</tr>
<tr>
<td>H4(b)</td>
<td>Managerial → innovation performance</td>
<td>0.079</td>
<td>Supported</td>
</tr>
<tr>
<td>H4(c)</td>
<td>Technology → innovation performance</td>
<td>0.086</td>
<td>Supported</td>
</tr>
</tbody>
</table>
relationship between effectuation and innovation performance on one hand, and knowledge sharing and innovation performance on the other. If managers could nurture and propagate an effectual culture among their team members, they would be creating a deep-rooted philosophy based on expertise in the uncertain environment the majority of service companies are experiencing today. In addition, the positive effect of effectuation on innovation performance reveals that the former is not a trait, and effectuation could be experienced by all employees in firms.

The results of this research confirms too that managers should not only incorporate knowledge sharing in their strategies, but also employ it by suggesting rewards, bonuses, promotions, technological facilities. This study reveals that the success of this SME specifically in creating a work environment in contrast to its surrounding implies that innovation could be sustained at the team level through creativity and effectuation. Thus, it is recommended that managers allow for, support and prepare their personnel within respective teams for better innovation capabilities through effectuation, and learning.

Limitations of the Study

This study has a number of limitations that hinder the generalization of its results. First, the sampled population is obtained from one service innovating SME among a group, thus possibly not representing the total population. Second, tacit knowledge with its different dimensions might display different results on a larger sample. Also, effectuation is measured by one of its dimensions “mean”, and other results might arise with the other dimensions.

Recommendation for further research

Our findings and limitations in this paper suggest clear avenues for further studies. First, we believe that effectuation, not only allows entrepreneurial practices, but also encourages reshaping innovation through the lens of effectuation. Therefore, researchers are invited to investigate effectuation from different dimensions and not only through the “means”. Second, there is a need to further scrutinize the impact of effectuation in other settings; for instance, in both SMEs and larger organizations. Third, we chose our sample from LBCI, which is considered a pioneer in Lebanon’s media industry as previously mentioned. Although team members are considered a significant sample for testing innovation performance in service industry and for testing our model as well, we do believe that the generalization is questionable. For instance, what applies to LBCI does not necessarily apply to other media companies in Lebanon. Fourth, the use of service innovation performance could be explored in other firms. Therefore, this paper’s aim was to fill a gap in the literature about tacit knowledge and innovation performance; however there still exist a lot of questions that could be addressed in forthcoming papers.
References


The Impact of Data Warehouses on Decision Making
Amirah Bahaaudeen – Grenoble Ecole de Management

Abstract

Data warehouses are an important area of practice and research, yet few studies have assessed their influence on decision-making quality. This study investigates how data warehousing can improve decision making by providing timely access to accurate, integrated, and historical data and to advanced techniques of information retrieval and analysis. There is a growing need in higher education to access accurate enterprise-wide information. Therefore, to test the proposed model for the influence of the characteristics of data warehouses on decision-making quality, quantitative data have been collected from USA universities and colleges with data warehouses.

Introduction

This study examines the impact of data warehouse technology on high-level decision-making. Of particular interest is the quality and timeliness of the decision making process. Managers require integrated, consistent, reliable, and timely information. Critical information resides often in multiple departmental databases. Inconsistent information causes inaccurate forecasts and decisions, which lead to higher operational and production costs. Therefore, data warehouse technology has emerged as an advanced technology to support the managerial decision-making process by providing integrated, historical, and high quality information that is organised and presented in a timely manner. The purpose of this paper is to explore to what extent the data warehouse characteristics of integration and time-variance (the availability of historical data) can improve the quality of information, quality and speed of the decision making process.

This research was carried out as a pilot qualitative phase, in which decision makers from higher education institutions in the United States of America were interviewed. After that, a quantitative phase started. Surveys were sent to decision makers and administrators at the higher levels of the university administration from American colleges and universities. The survey results will be analysed using a model, described below, that relates the data warehouse characteristics of integration, time-variance, and factors of information quality, like accuracy, completeness, correctness and consistency, to the quality in three phases (to be discussed below) of the decision making process. The results will have direct practical applicability for organisations considering implementing data warehouse technology.

At higher administrative levels, decision makers usually require reports whose data resides in various heterogeneous transactional systems and in databases physically located on different machines. The capabilities of these separate systems are limited to producing reports of detailed and summarised local data. Integration of the information from different systems can only be done manually, and is thus time consuming and prone to error. As a result, there are situations where information is not interpreted consistently across the campus, causing “multiple versions of the truth”. Data warehouses are constructed to solve the difficulty of collecting necessary information from various reports, and to provide “a single version of the truth”.

Most academic research on data warehousing focused on the implementation process, more than on applications, as is typical in IT research. Research on data warehousing in a higher education environment often investigates which
implementation approach is appropriate for the higher education setting [1]. Little business research was done on using data warehouse technology in supporting decision makers and improving the decision-making process quality in general and in higher education in particular [2]. Also, research usually focuses on business organisations rather than academic institutions [3, 4]. This research contributes to the literature by providing empirical evidence about the impact of the data warehouse technology on decision-making quality in higher education. The research highlights the complexity of the decision making process in higher education and the lack of adoption of available technology for decision-making. The research also considers if the perception of information quality is improved by the data warehouse technology.

Research Question

Given how essential quality information is for decision makers to make smarter and faster decisions, the study aims to answer the following general research question:

“Does data warehouse improve decision-making quality?”

In particular, it aims to answer the sub-questions:

“Does the integration of different data sources in a data warehouse affect the quality and timeliness of the decision-making process?”

and

“Does time variance in a data warehouse affect the timeliness and quality of the decision-making process?”

Data Warehouses and Decision Support

Data Warehousing has emerged as one of the most powerful decision support technologies. It has become the source of strategic information for the enterprise to enable strategic decision making. It is an informational environment that provides an integrated view of organisational data from its multiple operational systems and makes the organisation’s historical information easily available for strategic decision making [5]. A data warehouse is a database optimised for decision support and provides decision makers with factual information [6]. Therefore, many organisations, whether industrial or educational, are implementing data warehousing as their decision support solution [7, 8, 9].

Hedelin and Allwood [10] discussed the demand of managers about information and communication technology when making strategic decisions. All interviewed managers wanted to store and reuse knowledge in a timely way, integrate knowledge from multiple sources, have the ability to analyse information from different databases, and find different types of external information, including information about their competitors. Hence, the data warehouse storage facility is important as it includes current transactions, statistics and integrated information from various systems. Consequently, decision makers perceive integrated data warehouses as advantageous because they do not need to search for information in different places, and therefore have to ask others less.

Research has shown the effectiveness of data warehousing as a viable decision-support environment in the organisation. Wixom and Watson [11] investigated implementation factors that affect success of data warehousing systems. They found that data and system quality had a significant relationship with perceived net benefits in terms of time and effort taken to make decision-making. Shin [12] studied the influence of variables pertaining to system, information and service quality on user satisfaction for the data warehouse. The findings showed that managers and knowledge workers
used the system to perform complex tasks, to support their decision making, and to seek information critical for enhanced productivity. Nemati et al. proposed knowledge warehouse architecture as an extension to the data warehouse model to enhance the retrieval and sharing of knowledge across the organisation which improves the mental model(s) and understanding of decision makers thereby improving their decision-making.

Despite the research on data warehouse adoption and implementation factors, little empirical research has been conducted about how the higher system quality of the data warehouse improves the quality of decision making and the impact of the use of the data warehouse on the quality of decisions. Therefore, the purpose of this study is to investigate the effect of system quality of the data warehouse, in terms of data integration and availability of time-variant data, on user satisfaction of information quality and user perception of decision-making quality.

Therefore, it is hypothesised that:

**Hypothesis 1:** There is a significant relationship between the presence of a data warehouse and decision-making quality.

**Data Warehouse’s Impact on Information Quality**

Making decisions based on poor information quality leads to higher costs and impacts decision quality. The role of information in strategic decision-making is crucial for decision makers who follow a rational approach to solving problems. Hence, it is critical for organisations to ensure the quality of the information that managers use in a structured decision-making process and to manage the quality of the associated data management processes. Wang and Strong identified information quality and user satisfaction as the two major dimensions to evaluate the success of information systems. DeLone and McLean (D&M) developed an information systems success model, based on studies done to identify factors that contribute to information systems success. In the original D&M IS Success Model, which was updated later in 2003, they proposed that there are six dimensions that relate to information systems which have direct impact on individual performance and eventually have some organisational impact. There has been much research on the topic of IS success that used, validated, tested and extended the D&M model. Using the D&M IS model in order to measure the success of data warehouses, Shin and Wixom and Watson found that the relationship between information quality provided by the data warehouse and decision making support is significant. The D&M model is implicitly used in the model of this research. In this study, the data warehouse characteristics are proposed to affect information quality, which in turn is hypothesised to have an impact on the decision making effectiveness and efficiency.

Parssian, Sakar and Jacob assessed two data quality characteristics – accuracy and completeness – that are of critical importance to decision makers. Their research is about assessing the quality of information products based on the quality of the source data and associated processes. Consequently, their analysis of the quality of the data sources can be used in data warehousing analysis to determine how source data of different quality could impact the reliability of reports and information received by decision makers. In their research, they highlight the importance of completeness as a critical data quality attribute, particularly for data warehouses that integrate data from multiple internal and external data sources.
The data warehouse environment contributes to improving the data quality because the data within the data warehouse is cleansed, aggregated, consolidated and accumulated [3]. Therefore, it is hypothesised that:

**Hypothesis 2:** The quality of the design and choice stages is significantly influenced by the information quality as well as by the quality of the previous stage(s).

**Decision Making Quality and Technology**

One of the essential tasks of managers at all levels is to make decisions. Understanding the different phases of the decision making process is therefore essential in order to understand how technology is used to support rational decision-making. Herbert Simon [23] identified three major phases for rational decision-making processes: the intelligence, design and choice phases. Using Simon’s model of rational decision-making, Huber [24] proposed a theoretical model of the effects of advanced information technologies on organisational decision-making. Huber proposed that the use of advanced information technologies leads to more rapid and accurate identification of problems and opportunities and leads to organisational intelligence that is more accurate, comprehensive, timely and available. The quality of organisational decisions is presumably a consequence of the quality of the organisational intelligence and of the quality of the decision-making processes. Therefore, Huber proposed that the use of advanced information and decision support technologies leads to higher quality and speedier decisions.

Because Huber did not specify the technology or use empirical data to prove his propositions, others have done empirical work based on Huber’s propositions. Molloy and Schwenk [25] found support for Huber’s proposition that IT improves the efficiency and effectiveness of the decision making process. The use of information technology for data access and data processing improved the accuracy, sophistication and completeness of the analysis across all three decision-making activities (intelligence, design, and choice phases). IT led to generations of a greater number of analysed alternatives and led to improvement in the quality of the decision-making activities. Leidner and Elam [26] found support for Huber's propositions that the use of Executive Information Systems (EIS) increased the speed of problem identification and decision-making.

Much research investigated the impact of information systems and technology on improving decision-making. Oz, Fedorowicz and Stapleton [27] studied the effect of Expert Systems (ES) on improving the quality, speed of and confidence in decision-making. Bharati and Chaudhury [28] found that information quality and system quality provided by web-based information systems influences decision-making satisfaction. Martinsons and Davison [29] examined how information systems can support strategic decision making in international settings.

The model of this paper is influenced by Simon's classification of decision making in order to study the effect of data warehouse characteristics on the quality of each phase and on the overall decision-making quality and timeliness. In the current research, the decision-making quality is considered in terms of the perception of the quality of its process and not in the perception of the quality of its outcome. This approach is supported by Rausch [30], who argued that “decision outcome” should not be a criterion for gauging decision quality, because many external influences may affect outcomes. Examining decision outcomes could help with the next decision but it is too late for the current
one. He also mentioned that quality can be built into the decision before its implementation by integrating quality into the decision-making process.

Therefore, it is hypothesised that:

**Hypothesis 3:** There is a positive relationship between the decision-making process improved by information quality and the overall decision-making quality.

**The Research Model**

The fundamental question of this research is whether data warehouses have a positive impact on improving problem identification and decision-making quality in higher education settings. Within the context of this research, the characteristics of the data warehouse are the independent variables while decision-making quality is the dependent variable.

The model of research developed for this study is depicted in the following conceptual framework when a data warehouse is present:

The independent variable, ‘characteristics’, will be measured in terms of data integration and time-variant data characteristics as its two most important characteristics most likely
to influence decision-making quality. Those are expected to be heavily enhanced by the presence of a data warehouse. The dependent variable, ‘decision making quality’, will be measured by the decision makers’ perception of the decision-making quality and speed of the decision making process as a result of improved information quality. Information quality, problem identification phase quality, design phase quality and choice phase quality are the mediating factors hypothesised to affect decision making quality. Information quality will be measured by decision makers’ satisfaction of information. Attributes of information quality that are proposed to be relevant to the decision-making quality are completeness, accuracy, correctness and consistency. The attributes of problem identification quality, design phase quality and choice phase quality are relevance, accuracy and timeliness.

**Methodology**

The research strategy for this study is mainly quantitative, with a qualitative pilot study. During the pilot study, semi-structured interviews were conducted with decision makers in colleges and universities in the United States of America order to explore the issue and to get feedback on the research question. The data collected from these interviews was used to refine the model and the hypotheses, which were developed from the literature review in conjunction with the first author’s experience as a director of the academic affairs department in a private college.

The pilot study included respondents from universities that implement data warehouse technology and respondents from universities that did not. The comparison provides insights into the possibility to confirm the proposed hypotheses.

From the model developed from the literature review and from the results of the pilot study, a questionnaire was designed to measure the effects of data warehouse characteristics on the decision-making process. The questionnaire was sent via e-mail to decision makers in universities that implement data warehouse technology in the United States. A deductive approach tests the hypotheses that were formulated. This phase is currently in progress.

**Pilot Study**

**Pilot Design**

Semi-structured interviews were used to collect qualitative data from senior decision makers and employees in institutional research (IR) in colleges and universities in the USA. In these interviews, the researcher had a list of questions on specific topics to be covered but the interviewee had a great deal of flexibility in answering. In addition, questions that were not included in the list may have been asked as the interviewer picked up on things said by the interviewees. The interview questions were adopted from Molloy and Schwenk with modifications to fit for the purpose of this study. The interviews were carried over the phone, which enabled the author to cover a wide geographical area from a central location.

Nine participants were interviewed, three participants from the Institutional Research Department of a large college and six decision makers, all based at colleges and universities in the United States. Five of the interviewees had access to data warehouse technology and four did not have access.

**Pilot Results**

The preliminary results of the pilot study showed that respondents with access to a data warehouse were more satisfied with the information quality than respondents who
used traditional information systems. The results also indicate that there is a significant improvement in the quality and speed of the decision- making process of those who had access to data warehouse technology. Further quantitative data is being collected to allow a more detailed analysis.

Participants from the IR department explained that they get (predominantly academic) questions from decision makers and they provide facts, figures, and reports to answer those questions, which the requestors use for decision-making. Findings from the interviews showed that the level of data analysis is more sophisticated in universities with a data warehouse than the data analysis done in universities without a data warehouse. In universities with a data warehouse, the data is extracted from one data source and the available historical data is used for trend analysis, for example for enrollment and retention.

These findings support hypothesis H2 that relates improved information quality due to the data warehouse characteristics of data integration and historical data with the level of data analysis in the design phase.

Some selected answers were: “The database has current data and DW has historical data. I do trends analysis like for enrollment and for the trends in the entrance scores of students in SAT scores or high school averages and how this related to retention and graduation.” (Participants A and B/ university with DW)

In universities without a data warehouse, data analysis is basic, such as a summary and a calculation of averages of data, and this is done manually. In addition, these IR departments need to extract data from different sources of information technology and to integrate this data manually. Although interviewees realise that they need to use and compare historical data to do trends analysis to address problems of retention or program design, their information technology does not provide the required historical data. Participant C who works in a college without a data warehouse and uses separate databases to prepare reports for the decision makers expressed the difficulty of historical data extraction and analysis:

“We use it to run basic reports and simple data analysis. To get the data I needed, I had to use different systems. I needed to use and compare historical data to indentify the problem but the current IT tools did not help in analysing the historical data to find trends.” (Participant C/ college without DW)

Interviews with decision makers in colleges and universities showed that they rely on data either to make decisions or to support their argument to convince other stakeholders or decision makers with more authority such as university provosts or presidents. Findings showed that they use data to solve problems such as enrollment projection, retention, projections used for planning, improving services provided to the students, curriculum development or to prepare reports for accreditation. In order to make decisions about those issues, these decision makers use and compare historical data to identify problems or to analyse the data to generate alternative solutions in order to support their final decisions or recommendations. Decision makers in universities without a data warehouse expressed their inability to acquire historical data and their inability to perform historical trending because of the manual analysis or the basic data analysis tools that only provide summary and average analysis. These findings support hypothesis H1.

“Yes, we need to use historical data but we can’t because the system does not provide us with...”
the required data to do historical trending.” (Participant I/ college without DW)

“I had to use historical data to identify a problem. It was difficult to get information to locate answers to questions raised.” (Participant H/ college without DW)

On the other hand, decision makers in universities with a data warehouse were able to extract and analyse historical data easily in order to identify the problem, suggest alternative solutions and convince the university president of the final decision. Participants D, E and F mentioned that they used historical data to support their argument and convince the decision makers of the selected solution.

“I used students’ login information for several semesters and compared it across campuses. The key point was using historical data to make the argument stronger. Once the Chancellor looked at the historical data and saw there is lower service delivery he finally approved hiring more staff.” (Participant D/ college with DW)

“Yes, we had to look at where we were today and compare it to historical average of the previous 5 years. So we were able to impose the external review board.” (Participant E/ college with DW)

“We needed multiple years’ worth of data to show trends that can help forecast enrollment in the college as a whole as well as in particular programmes and improve the quality of services to our students.” (Participant F/ college with DW).

Preliminary Quantitative Results

A preliminary analysis of the quantitative survey indicated significant and sizeable differences in essential quality factors in all three stages between the data warehouse and the non-data warehouse groups.

Practical Implications and Relevance to Non-Academic Settings

The author held several administrative positions at the admission, registration and academic affairs departments in a university before moving to a teaching position. While working in these departments, the author realised the extent of the problems to collect data from the disconnected information systems in the university to meet accreditation requirements. There was a growing demand on getting strategic information to make decisions concerning university policy, strategic plans and forecasting university expansion. In addition, being the system analyst in a team assigned to provide reports to the university council with data from the university information systems, the author found huge inconsistencies and inaccuracies in the data. Often historical data was needed that were not in the systems. Therefore, the author realised the need to have a centralised system that integrates data from multiple data sources. A data warehouse solution would improve data quality because it forces a cleansing process. Improving the data quality would improve the quality of all fact-based decision making.

The environment of colleges and universities became similar to business environments by the pressure of the need to increase revenue and decrease costs, increased competition from different (online) delivery models, increasing consumer power and choice, and greater pressure to demonstrate outcomes. Colleges and universities want to attract and retain high-quality students, maintain a relationship beyond graduation, and understand what students as customers are buying in terms of courses. Higher education must adopt new technologies that support fact-driven decision-making and enhance the tools and techniques
to analyse their data. The results of this study will provide an insight into the value of the benefits of implementing a data warehouse and enable the organisation to leverage its business intelligence.

This study will have several practical implications for decision makers in colleges and universities to help supporting decision-making processes and improve decision-making quality by providing strategic information. Expected results of this study, based on the pilot study, are that the implementation of a data warehouse allows decision makers to monitor better enrollment and registration, discover trends in students’ performance and graduation, and exploit trends in improving retention. It will enable intelligent decision support and data analysis without degrading the performance of operational systems. Improved information quality will lead to a reduction of costs caused by poor decisions based on defective data. All stakeholders benefit from this, including students, decision makers and external bodies.

Universities provide a fairly homogeneous environment for research. However, as the model in this work is not depending on a university setting, it is expected that results are generalisable to other large organisations that suffer in their decision making from heterogeneous, inconsistent and duplicate data sources.

**Conclusion**

Data warehouses deliver clean, consistent and reliable data, including historical data, for analytical and operational use. This consistent view enables a sound information foundation for analysis and decision-making.

Data warehouses turn business information into valuable enterprise strategic and operational intelligence. They provide information that drives business strategy, planning and analysis, and enables accurate detection of trends for better strategic planning. Data warehouses enable better decisions to achieve the goals of organisations, academic or otherwise, efficiently and effectively.
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Integration of IT based Business Model Innovation in IT services companies: potential challenges in integrating emerging technologies
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Abstract
The task of the chief information officers (CIO) or information technology (IT) manager is to steer the technology base of the company in the right direction with the right solution choices. The disruption introduced by the integration of emerging information technology (EIT) affects the stability of the IT services, and the ability of the IT organization to sustain the IT service continuity required by the business. Therefore, the IT organization is reluctant to act quickly to integrate EIT. The purpose of research is to gain familiarity of this phenomenon, and acquire an in depth insight into the mechanisms involved in the object to build a conceptual framework for the integration of EIT.

Grounded in extant literature and supported by empirical data, a framework for business model innovation based on IT is proposed, with strategy mechanisms, governance and organizational dynamic capabilities as constituents. The study draws together knowledge from the two cases to explore mechanisms that would reduce reluctance of the IT organization to integrate emerging technologies. These mechanisms are found to be rooted in the IT organization capabilities.

Finally, while proposing several directions for future research, this study offers an empirically supported conceptual framework of mechanisms that were stated to avoid the obstacles, prepare the organization to overcome its reluctance, and start leading the technology revolution in the company by embracing emerging technology and implementing solutions for business model innovation based on these technologies, thus furthering a direct business value to the company.

Introduction
“New technologies can cause great firms to fail” [1], and others to acquire a competitive advantage [2]. Businesses rely on Information Technology (IT) as a catalyst that enables components of new products, services, channels, processes, and business models, as well as a way to encourage innovators to collaborate [3]. Successful companies have placed innovation at the core of their business [4]. Business model innovation based on IT takes shape in the integration of IT/IS components and systems required for adapting to changing markets, emerging technologies and diverse modes of competition [5]. Challenges in operationalising innovation (i.e. advancing new technology from the lab operations) are sometimes insurmountable leaving the firm incapable to incorporate emerging Information Technologies into their business model. The organisational and technical challenges in introducing innovation into the IT strategy must be understood.

Challenges in practice
The IT organisation is commonly involved in the decision making [6] of the integration of EIT into the IT strategy. The predominant task requires leveraging strategic and sometimes radical technology innovation and must be effective in regulating the operational parameters in balance with innovation to yield IT value [7]. Historically, emerging technology is believed to play an integral role in supporting corporate innovation [8], however a very small number of
companies (18%) are found highly capable to adapt to emerging technological innovation. Chief Information Officers (CIO) are challenged to maintain the necessary alignment between technology innovation effectiveness and operational effectiveness [9]. The root of the tension in disruptive innovation [2] is a “conflict between the business model established for the existing technology, and that required to exploit the emerging, disruptive technology” [10]. The integration of such technologies into IT practices presents a disruptive complexity, introducing change into the IT organisational environment [11], and displacing existing technologies [12].

In practitioner circles, IT organisations are perceived as a hindrance rather than an enabler to innovation [13]. At the source of reluctance, practitioners and IT executives express that the integration of emerging technologies into the IT infrastructure threatens the stability of the infrastructure. This challenges the ability of the IT/IS organisation to deliver and support the IT infrastructure and maintain the desired service continuity.

In a preliminary study that included a small scale survey (Appendix) “IT Service continuity” prevailed as one of the most relevant and important metrics for IT Service Level Management in the context of the integration of EIT into the infrastructure. In a follow-on interview questionnaire, a theme pointing to a phenomenon in IT organisations emerged: “The reluctance of the IT organisation to integrate EIT”.

“Among the obstacles seen in operationalising innovation is the disruption introduced by emerging IT which affects the stability of the services, therefore, IT is reluctant to act quickly to integrate these technologies” (Director of IT in an IT services company” (Company A)).

Mechanisms are required for the IT organisation to manage the integration of EIT into the infrastructure sustaining the competitive advantage through IT service in the midst of a rapidly changing environment, while continuing to maintain the delivery and support of IT services at service levels that bolster the value of IT in the organisation.

**Theoretical background**

Scholars have presented conceptual models of organisational innovation [14], IT to business alignment maturity [15], and strategic fit of IS capabilities [16]. Models also exist for managing business model design in an open innovation context [17], debating technology introduction methods [18], and measuring technological innovation effectiveness. While other models examine organisational innovation capability [5], and evaluate uncertain IT investments [19], no reference models have been identified in the literature that aim at reducing the phenomenon of reluctance of integrating EIT to integrate innovation into the IT strategy.

Aside from the adoption and assimilation issues associated with the introduction of technology [20, 21], and the disruption introduced by the implementation of business model innovations based on emerging technologies, the literature reports on the disruptive impacts on IT processes [22], data privacy and security [23], and the ensuing risk on IT and the business is eminent [24].

Adjustments are required by the organisation to exploit the technology [25]. Elements of change and mechanisms for coping with change include the integration of multiple interfaces
to dissimilar systems, education training and solicitation of consultant support [26]. Theories of setting up roadmaps were presented for technology integration including stakeholder and change management issues [27]; however without tackling the potential effect of new entrant technologies on the IT organisational dynamic capabilities.

Researchers urge innovators to identify the critical barriers and issues and how to address them at different points in the execution of an innovation strategy “through approaches that can help accelerate innovation and foster the transition of innovative technologies from the lab to operational systems” [28].

Yet, the literature lacks potential adjustments the IT organization requires in order to reduce the potential risk to the delivery and support of IT services. Other research suggests that firms that aim to cope with rapid and uncertain changes in order to thrive in a competitive environment need to “develop superior firm-wide IT capability to successfully manage and leverage their IT resources” [29]. Yet, mechanisms by which IT organisations maintain the dynamic capabilities required to confidently integrate EIT, reduce the reluctance of the IT organisation to integrate EIT, and transform IT to a lever rather than a barrier to innovation integration have not been addressed.

Research question

An interesting research question in this context enquires about what mechanisms could be employed in the integration of EIT into the IT strategy in order to reduce the reluctance of the IT organisation and enable the IT organisation to maintain the continuity of IT services, thus:

*Can the IT organisation be a lever rather than a barrier to radical innovation based on emerging IT?*

Research methodology

*In-depth case study in two sites*

Aimed at further exploring this “IT reluctance” phenomenon in practice [37], in depth case study research is carried in two sites in line with similar work [38, 39, 40] in IS case study research using two cases for a comparative study. The two in-depth explorations were conducted on location with IT organisations in Telecom Company A,
and in Application Hosting Services Company B, selected purposefully [41] for this research. These IT businesses offer IT based services as their customer facing services in the MENA [42] region. In these firms, the innovation strategy which most often addresses business model innovation [43] through technology innovation must be tuned to the fast pace of technological change to react to the emerging technology landscape as well as of the ever-changing consumer preferences.

**Site similarities**

Both companies (Table 1) implemented new practices and processes in the business and IT organisations, adjusting the business model of sales, fulfillment and support to be able to leverage the application and support the newly offered services. Overcoming the reluctance to integrating EIT and allocating the required resources, funds and investment budgets required [44], both sites stated to have experienced IT organisational resistance to change, and to have successfully managed the disruptions introduced by EIT that affected the stability of the IT services. To note are other similarities of the industry [45] as IT service providers, where IT is the core business in providing customer facing services, and is a cornerstone for the internal business model. Analogous in the IT organisational setting with a centralised IT management [46] and a collective decision making [47], the IT organisations in both companies perform similar duties and share comparable responsibilities in managing and maintaining IT services supporting both...
internal and customer facing services.

**Site complementarities**

Company A and Company B differ in organisational size [48] and maturity [49]. Both companies were chosen to have similar characteristics in culture [50] and international presence. These sites were purposefully selected as, while implementing the new technology successfully, they vary by scope of integration, size of IT organisation and their implementation methodology. In a preliminary exploration, based on semi-structured interviews, these sites have presented variances into their approaches such as involving customers in the process of integrating EIT into Company B’s customer facing and internal operations [51]. In matter of scope of integration [52] of EIT, Company B upgraded their customer facing services cloud computing technologies to provide a turnkey IT solution, whereas Company A adapted the way of doing business and changed the operational systems to support a new service provisioned to the client.

**Data collection**

The data collection activity combined interviews and brainstorming sessions [53]. Focus group workshops [54] were conducted to gather collective knowledge on the topic and stimulate the organisational memory of the specific concepts involved, and then to develop, in detail, the surrounding thoughts with a distance from potential individual bias [55]. Supporting the descriptive validity [56] of the research through timely and detailed transcripts from the research activity, multiple data collection methods [57] such as company websites, documents, and organisational charts further reinforce the construct of validity. Case study transcripts are taken back to the participants in the study in a form of member checking [58], in order to assess the usefulness of the study, thus enriching the credibility [59] of the research.

**Data analysis**

The data analysis technique is designed a priori [60] in order to systematically consider all the data that would be collected in relevance to the research. Using the components of the conceptual framework as key codes (Appendix

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**Table 1: Summary for the two site case study**

<table>
<thead>
<tr>
<th></th>
<th>COMPANY A</th>
<th>COMPANY B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Background</strong></td>
<td>Leading internet services provider and hosting solutions, established in 1995 with 130+ employees</td>
<td>Hosting and cloud services, re-established in 2006 with 42 employees</td>
</tr>
<tr>
<td><strong>Business Model</strong></td>
<td>Extended 3G/4G services to subscribers.</td>
<td>Upgraded data center technologies and support paradigms to provide turnkey IT solutions based on software as a service (SAAS).</td>
</tr>
<tr>
<td><strong>Innovation Project</strong></td>
<td>15 members managing security credentials, moves and changes of the internal users; planning of new technology deployment; internal and external customers.</td>
<td>12 employees in charge of the planning, implementation and support of the internal infrastructure with a service desk attending to escalated customer calls.</td>
</tr>
</tbody>
</table>
A), a step by step ‘Key Point’ coding technique [61] with key codes grounded in theory, and seeded from the theoretical framework, was applied to the interview and case study transcripts [62].

The table below shows a summary of the key concepts as codes and their corresponding seed concept from conceptual framework and emerged concepts from empirical data.

<table>
<thead>
<tr>
<th>SEED CONCEPT</th>
<th>KEY CONCEPT (CODE) – SEPARATED BY “;”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic Planning</td>
<td>Awareness and communication [26]; commitment from management [7]; budgeting [57]; timing of introduction (decision) [63]; organizational awareness [34]</td>
</tr>
<tr>
<td>IT – Business Alignment</td>
<td>IT - Business Alignment [16]; IT and business leadership involvement [7, 16]</td>
</tr>
<tr>
<td>Architecture</td>
<td>Architectural review [54]; redundancy (resilience) by design [64]</td>
</tr>
<tr>
<td>Governance</td>
<td>Change reviews [65]; business and uptime requirement definition [66]; compatibility with current systems [79,89]; review of operational processes; create and maintain documentation; risk management</td>
</tr>
<tr>
<td>Key Activities</td>
<td>Change management [66]; continual maintenance [67, 68]; release management; compatibility and impact assessments [89,79,69]; project management</td>
</tr>
<tr>
<td>Key Partnerships</td>
<td>Supplier relationships [71]; joint R&amp;D with key partners [72]</td>
</tr>
<tr>
<td>Key Resources</td>
<td>Human resource allocation [35]; tools [32]</td>
</tr>
<tr>
<td>Collaboration with Customers</td>
<td>Customer involved in testing; involve employees in projects; include the customer in the assessment of risk; learning workshops at customers; customer involved in planning; customer involved in implementation</td>
</tr>
<tr>
<td>Knowledge Acquisition</td>
<td>Training [73]; seek external knowledge [73]; acquire knowledge internally [73]; knowledge sharing [72]; knowledge transfer [73, 90]; participation in decision-making [76, 74];</td>
</tr>
<tr>
<td>Testing and R&amp;D</td>
<td>Implementation roadmaps [28]; testing environment; testing; joint R&amp;D with suppliers; research activities and feasibility of technology [19]</td>
</tr>
<tr>
<td>IT Skills and Competence</td>
<td>Consultancy skills of engineers [8]; IT leads technology evolution; self-confidence of staff through training; IT leads business process innovation</td>
</tr>
<tr>
<td>Incentives and Rewards</td>
<td>Incentives and rewards programs [5, 91]</td>
</tr>
</tbody>
</table>

**Research findings and discussion**

Observations from empirical data

**Observation 1:** IT organisations were found to leverage knowledge acquisition practices to prepare for the integration of EIT in business model innovations and rely on testing and R&D activities to enrich this knowledge base.

Both companies suggested that the IT organisation could be better prepared for the
integration of emerging technologies primarily through knowledge acquisition (Figure 2).

Extensive training and knowledge building programmes, the attendance of technology conferences, in addition to research and development activities were used to develop awareness about alternative solutions. Individual skills of the employees, and their accumulated experience were confirmed to contribute to increasing organisational knowledge [75]. Job rotations enhanced the technical knowledge [76] of IT team members. In addition to the benefit of collaboration tools for flexible communication and collaboration [4], both companies implemented Knowledge Management Systems which provide a mechanism for knowledge sharing [77].

**Observation 2:** Governance is an important mechanism in avoiding obstacles and in preparing the IT organisation to integrate emerging IT, hence reducing the reluctance of IT organisations to integrate ‘risky’ emerging technologies.

Principally, Governance has appeared in this study as a critical component to avoid the obstacles related to the integration of emerging technologies in IT (Figure 3). Company A conducted assessments for minimum requirements of the business with a continuous review of the corresponding requirements of the emerging technology considering cost, resource, maturity of the technology, and the ability of the organisation to benefit from the technology.

**Figure 3:** Governance as a critical component to avoid the obstacles related to the integration of emerging technologies in IT

Governance was also expressed in the form of commitment from management to participate in a well-defined expectation of service level agreements and the risks involved at Company B. This finding gains scholarship backing as governance mechanisms keep the focus on
service continuity [78] while the IT organisation’s capabilities of exploration related to absorptive capacity [37] are enhanced by the acquisition of knowledge [77].

**Observation 3**: Companies transform the IT organisation into a lever for integrating radical innovation based on emerging IT primarily through mechanisms that foster IT-Business alignment, building the IT skills and competence of the IT organisation and reinforcing knowledge acquisition practices.

Both companies agreed on the concept of IT-Business alignment and the need to address the required IT Skills and competence as two predominant components to enable the IT organisation to become a lever for radical innovation in the firm (Figure 4).

Previously viewed as the most important skill set in affecting IS infrastructure flexibility and competitive advantage [79], IT Skills and Competence were highlighted in empirical statements to transform the IT organisation to a lever for innovation, including the consultancy
skills of engineers. Through this competence, the IT organisation leads the technology evolution and business process innovation of the company, raising the self-confidence of staff through training. The role of leadership was emphasised, and incentives and rewards are used to encourage the IT organisation to lead the technology revolution through EIT in Company B.

**Observation 4:** IT organisations leverage key resources and key activities to avoid obstacles and prepare to integrate emerging IT. The focus on human resources was indicated to help avoid obstacles to integration, and the focus on tools helped prepare the organisation. **Company A** provided the IT

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**Figure 5:** IT organisations leverage Key Resources in order to address the obstacles

**Figure 6:** Key resources and activities are important in the context of reducing the reluctance of the IT organization to integrate emerging technologies

The analysis of empirical data shows that in order to address the obstacles, the IT organisation will need to leverage its key resources in addition to knowledge acquisition and governance practices (Figure 5).

The focus on human resources was indicated to help avoid obstacles to integration, and the focus on tools helped prepare the organisation. **Company A** provided the IT
organisation with tools for monitoring and troubleshooting during the project in order to gain visibility into customer experience and measure service health. Key resources utilized include applications, information, infrastructure technology and facilities that enable the processing of the applications and the personnel required to plan, organise, acquire, implement, deliver, support, monitor and evaluate the information. In addition to testing and R&D activities, IT organisations engaged in other key activities of compatibility and impact assessments as they transitioned IT services based on EIT into operation [80]. Project management mechanisms divide the projects into phases, leveraging release and change management mechanisms trying alternative configurations to prepare the organisation for the task.

This observation brings forth the importance of these key resources and activities in the context of reducing the reluctance of the IT organisation (Figure 6), and encourages future research streams to uncover the required levels of maturity and focus on these key resources.

Figure 7: Strategic Planning is stated to empower the IT organisation

Figure 8: Importance of key partnerships in avoiding the obstacles facing the IT organisation in the integration of emerging technologies
and activities in the context of integration of emerging technologies.

Observation 5: Strategic Planning (SISP) is stated to reduce the reluctance of the IT organisation to integrate emerging technologies and a resilient IT architecture is indicated to reduce the obstacles to technology integration.

Strategic Planning is said to empower the IT organisation (Figure 7). Commitment from management to participate in a well-defined expectation of service level agreements and the risks involved, with costing and budget reallocation and management for timing of introduction were reported to contribute to reducing obstacles to integration. In reducing the obstacles to integrating emerging technologies, empirical input underlined redundancy (i.e. resilience) in system architecture aimed at maintaining the architectural linkages, and the readiness for the next stage of integration [4]. This practice was emphasised with architectural review sessions as mechanisms to reduce the risk of emerging technology integration, hence, empowering the IT organisation for the task.

Observation 6: IT organisations were found to rely on key partnerships and on customer collaboration in mechanisms to avoid obstacles and to motivate IT organisations to integrate EIT; however, in order to become a lever to innovation, IT organisations do not seem to prioritize these partnerships.

The study underlined the importance of collaboration with key partners, suppliers and customers in the reduction of obstacles, motivating the IT organisation to integrate emerging technologies (Figure 8).

IT organisations build connections with multiple suppliers in order to reduce risk and in some cases they reported that they had to assist suppliers in order to get them to complete their preparedness to support the impending integration efforts. Company B aims to establish R&D efforts with peer organisations, key partners and suppliers. With unique competencies, suppliers can assist the IT organisation as a source of staff augmentation, architectural development, and project coordination, and participate in lowering the knowledge barriers of adoption [84].

![Mechanisms to reduce the IT Organization's reluctance](image)

Figure 9: Company A relied less on customer collaboration than Company B in order to reduce the reluctance of the IT organisation.
IT organisations employ mechanisms in collaboration with their customers in order to avoid or reduce present obstacles, involving them in projects, in testing and in implementations (Figure 9). The collaboration was also described by **Company B** to include the customer in planning and the assessment of risk in the object to prepare the organisation for the integration of EIT.

It is worth noting that, in a cross case comparison, **Company A** relied less on customer collaboration than in the case of Company B to reduce the reluctance of the IT organisation. The literature reinforces the importance of users’ awareness of risks in the security context [85] and in customer-driven service management [86]. Hence, this notion of collaboration with the customer (internal and/or external) is a welcome addition to the initially proposed conceptual model.

**Observation 7:** In order to avoid the obstacles and prepare to be a lever to integrate innovation in the form of emerging technologies, IT organisations seem to vary the emphasis on key resources in relation to the varying scale of the size of the IT organisation vs. the host organisational size.

The IT organisations were found to vary their emphasis on key resources in relation to their varying scale of IT vs. host organisational size. A cross-case comparison detects Company A’s greater focus on resources supporting published material, linking the size of the IT organisation positively to IS success as defined by user satisfaction [87].

**Observation 8:** Testing and R&D reduces the reluctance of IT organisations to integrate emerging technologies; however the focus on R&D activities seems to depend on the scope of the integration of emerging technologies (external facing vs. internal facing, vs. both).

The scope of integration of EIT relates to innovation that applies products and services to the IS (technical or administrative) core of the business [52] and whether the emerging technology will be introduced for internal use or into customer-facing environments, centralised in a data centre, or distributed in the organisation [49]. This context of the scope seemed to have a correlation with level of testing and R&D activities. **Company B** reported a greater focus on testing and R&D as they upgraded their internal and customer-facing services’ cloud computing technologies to provide a turnkey IT solution. R&D efforts encompassed peer organisations, key partners and suppliers. **Company A** affirmed that in some customer-facing services, they invest more resources and efforts in R&D.

**Empirically supported framework**

On the leadership and strategic level of the framework (Figure: 10), **Strategic Planning (SISP)** concepts of IT – Business alignment [16], awareness and communication [7] were indicated by the empirical findings as mechanisms for EIT integration. **Architecture components** reinforced by concepts of

<table>
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<th>Table 3: Scale of IT organization size vs. size of the Firm</th>
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<tbody>
<tr>
<td>COMPANY A</td>
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<tr>
<td>Size of the Host Company</td>
</tr>
<tr>
<td>IT Organization Human Resources</td>
</tr>
<tr>
<td>IT/Host Company Scale (# employees)</td>
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</tbody>
</table>
resiliency by design and Governance through mechanisms of risk management [88] were highlighted. The IT dynamic capabilities at the organisational level, represented by concepts of Knowledge acquisition, including knowledge

Figure 10: Empirical Framework (Concepts in Red were added to refine the Framework)
management practices [89] for knowledge sharing and transfer were also underscored.

Supporting the innovation capabilities [5] of the organization, Incentives and rewards were included as high level concepts cited to encourage IT enabled innovations [90]. On another hand, the principle of Collaboration with Customers, a form of “IT–Customer Alignment”, added a previously unexplored component to the conceptual framework – especially the notions of involving employees (internal customers) in projects and involving customers in testing, planning, and implementation of the emerging technology, and the assessment of risk. In addition, the concept of IT Skills and Competence is supported by links to capabilities in innovation [5] and activities in implementation and operations [19], capabilities of leadership and value for a competitive advantage [80].

Conclusion

Implications for practice

The two case studies indicate that IT organisations were found to demonstrate dynamic capabilities in an ambidextrous approach to integrate emerging technologies. These capabilities are summarised into concepts and organised in a framework. This framework is intended as guideline for IT and business managers to use in structuring an IT strategy that leverages the capabilities of an empowered IT organisation to focus on maintaining service continuity in business model innovation based on emerging technologies.

The companies in the study outlined the transformation of their IT organisation into a lever to integrating radical innovation based on emerging IT primarily through mechanisms that foster IT – Business alignment, building the IT skills and competence of the IT organisation in order to lead the technology evolution of the company. In order to reduce the reluctance of IT organisations to integrate emerging technologies in business model innovation projects based on IT, knowledge acquisition mechanisms were suggested. These mechanisms and practices included training on business, technology, and standards which empowered the organisation with the required external knowledge to be disseminated internally through knowledge transfer tactics between teams. The teams are involved in the decisions keeping them engaged in realising the objectives.

The IT organisations in the study managed to capture the value of these innovations and maintain focus on ensuring IT service continuity. They leveraged their exploration capabilities for learning, communication and decision making to refine their exploitation capabilities for integrating emerging technologies; doing so with proper planning, assessment, and key resources, building key partnerships and engaging in key activities. With fundamental reliance on the IT organisational capabilities of exploration, exploitation and leadership competencies to leverage key human resources and tools, the IT organisation directed activities for change, release and project management, compatibility and impact assessments.

Academic contribution

This paper combines new knowledge acquired in a framework of mechanisms that empower IT organisations to be a lever to integrate emerging technologies in business model innovation based on IT. The mechanisms are consolidated in an empirically refined conceptual framework as a significant academic contribution. The framework adds to present knowledge by creating a new stream of academic material concerned with the integration of emerging technologies.
Another contribution is the potential emergence of a leadership typology as drivers suggesting business innovation initiatives using emerging information technology as a potential tool for innovation. Drivers would (1) foster IT – Business alignment with the IT team in a business leadership role; (2) build IT skills and competence, organisational learning and analytical capabilities; and (3) raise the confidence of business in IT organisational capabilities to integrate emerging technologies, with a keen focus on the continuity of the IT Services.

**Limitations and opportunities for future research**

Limitations of case study research related to the context of the research – such as culture and industry – can be recognised. The primarily identified limitations are related to the exploratory nature of this study into a phenomenon that has not yet been thoroughly studied. IT links to culture and cultural contexts have been prevalent in the literature [92]. Academics have linked organisational culture to the ability to manage innovation [93], presenting factors such as the organisation’s approach to collaboration, communication and risk. Feedback from the exploration has shown a level of contextual generalisation [94], though participants in the study have positioned culture as an important factor in the decision making process in the integration of technology from the customer’s viewpoint. The indicated limitations of this research could offer opportunities for further research, including additional field work - possibly in the form of wider focus groups, with CIOs, IS professionals and consultants [95] – which would deepen the findings introduced by this research.
Appendix – Small scale survey

The table below presents the results of the preliminary exploration survey that was compiled and averaged among the 5 participants with equal weighting. Row total averages represent the ranking of the antecedent and the column totals show the most relevant IT service metric expected to be affected by the integration of EIT. The scoring is an averaged sum of all participants’ input. All the scores are then averaged by metric and by determinant for investigation and analysis.

Reducing the survey results to focus on the determinants that were found most important (with an average scale above 4) converges the results among these determinants into a reduced set of data in the following table.

The results point out that IT service continuity and resilience were stated as the most important metrics (Average scale of 5) found by IT practitioners to be affected by the integration of EIT into their environment. Note that resilience as a measure of freedom from operational failure and a method of keeping services reliable [96] is a precursor to service continuity [97].

<table>
<thead>
<tr>
<th>Integration of Emerging IT into the Infrastructure Environment</th>
<th>Availability</th>
<th>Reliability</th>
<th>Maintainability</th>
<th>Serviceability</th>
<th>Resilience</th>
<th>Scalability</th>
<th>Service Continuity</th>
<th>Security (Physical)</th>
<th>Security (Systems)</th>
<th>Effectiveness</th>
<th>Efficiency</th>
<th>Data Confidentiality</th>
<th>Data Integrity</th>
<th>Data Availability</th>
<th>Data Compliance</th>
<th>Risk</th>
<th>Data Reliability</th>
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<tbody>
<tr>
<td>Average</td>
<td>4.42</td>
<td>4.42</td>
<td>4.42</td>
<td>4.67</td>
<td>5</td>
<td>4.33</td>
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<td>4</td>
<td>4.33</td>
<td>5</td>
<td>4</td>
<td>4.67</td>
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<tr>
<td>Dimension 1: “Emerging IT Characteristics”</td>
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<tr>
<td>Emerging IT Characteristics</td>
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<td>3.5</td>
<td>4.5</td>
<td>4</td>
<td>5</td>
<td>4</td>
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<td>3.5</td>
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<td>4</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Emerging IT Perception</td>
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<td>5</td>
<td>3</td>
<td>4.5</td>
<td>5</td>
<td>5</td>
<td>5</td>
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<tr>
<td>Dimension 1: “Emerging IT Characteristics”</td>
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</tr>
<tr>
<td>IT Organization Attributes</td>
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<td>4.76</td>
<td>4.3</td>
<td>5</td>
<td>5</td>
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<td>4</td>
<td>4</td>
<td>3.25</td>
<td>4</td>
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</tr>
</tbody>
</table>
Integration of Emerging IT into the Infrastructure Environment

<table>
<thead>
<tr>
<th></th>
<th>Average</th>
<th>Reliability</th>
<th>Maintainability</th>
<th>Serviceability</th>
<th>Resilience</th>
<th>Scalability</th>
<th>Service Continuity</th>
<th>Security (Physical)</th>
<th>Security (System)</th>
<th>Effectiveness</th>
<th>Efficiency</th>
<th>Data Confidentiality</th>
<th>Data Integrity</th>
<th>Data Availability</th>
<th>Data Assurance (Risk)</th>
<th>Data Reliability</th>
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<tr>
<td></td>
<td>2.99</td>
<td>2.61</td>
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<td>2.79</td>
<td>2.7</td>
<td>3.68</td>
<td>2.58</td>
</tr>
</tbody>
</table>

Dimension 1: "Emerging IT Characteristics":

| Emerging IT Characteristics | 3.23    | 3.25        | 2.75           | 4              | 3           | 3           | 3                 | 3                   | 1                | 5            | 2.75      | 3         | 5         | 3         | 3         | 2         |
| Emerging IT Perception     | 2.5     | 2.5         | 2              | 2.125          | 1.75        | 2.75        | 1.75              | 1                   | 2.75             | 3            | 2         | 4         | 2         | 2.5       | 5         | 3.75      |
| Type of Emerging Technology| 3.73    | 3           | 2.5            | 3.8            | 3.75        | 3.5         | 3.5               | 4                   | 1                | 5            | 3         | 3.75      | 5         | 5         | 5         | 4         | 4         |
| Maturity of Emerging Information Technology Perception (What) | 4.05 | 3.5 | 3.5 | 4.5 | 4 | 5 | 4 | 6 | 1 | 4.5 | 3.5 | 4.25 | 4 | 4 | 4 | 5 | 5 |
| Rate of Change Emerging Technology | 4.48 | 5 | 5 | 4.5 | 5 | 5 | 5 | 5 | 1.5 | 5 | 4.5 | 4.25 | 4 | 4 | 4 | 5 | 5 |

Dimension 2: "IT and Business Organization context":

| Type of Industry | 1.73 | 2 | 1 | 1 | 1.5 | 1.5 | 2 | 1.5 | 1 | 2 | 1 | 1 | 1.5 | 2.75 | 2 | 2 | 2.75 | 2.75 |
| IT as Core Business or as User | 2.13 | 2.5 | 1.75 | 1.8 | 3 | 2.5 | 2.5 | 2.5 | 1 | 2.75 | 2 | 2 | 2.25 | 1.5 | 1.5 | 2.25 | 2.25 |
| Scope of EIT Diffusion (Where) | 2.78 | 3.25 | 3 | 2 | 2.75 | 2.75 | 3.75 | 3.75 | 2 | 3.75 | 1.75 | 1.75 | 2.5 | 2.5 | 2.5 | 3.75 | 2.75 |
| IT Organization Attributes | 4.19 | 4.75 | 4.75 | 4.3 | 5 | 4 | 6 | 2 | 5 | 4.5 | 3.5 | 4 | 4 | 3.25 | 4 | 4 |
| Decision Factors | 2.08 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2.75 | 2.75 | 2.75 | 2.75 | 1.5 | 2 | 2.25 | 2.5 |
| Company Attributes | 1.94 | 1 | 1.25 | 1 | 1.75 | 1.5 | 2.25 | 2.25 | 2 | 2.75 | 1.75 | 1.75 | 2.75 | 1.75 | 2.5 | 2.25 | 2.5 |
| Acquisition Objective | 1.06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.5 | 1 | 1.5 | 1 |

Dimension 3: "Technology implementation, diffusion and assimilation context":

| Extent of Diffusion (To what degree) | 2.94 | 4 | 4 | 3 | 4 | 3 | 4 | 4.5 | 1 | 3 | 1 | 2 | 3.5 | 2.5 | 2 | 3.75 | 1.75 |
| Disruptiveness | 2.61 | 3 | 3 | 2 | 4 | 2.5 | 3 | 3 | 1 | 2 | 2.5 | 3 | 3 | 2.5 | 2.5 | 3 | 1.75 |
| Architecture Linkages (complexity and depth) | 2.53 | 3 | 2.5 | 2 | 4 | 2 | 3.5 | 2.5 | 1 | 3 | 2 | 2 | 2.5 | 2 | 2 | 4.5 | 2 |
| Rate of Innovation Diffusion | 2.84 | 3.5 | 3.5 | 2 | 3 | 2.75 | 2.75 | 4.5 | 1 | 3 | 2 | 2 | 3.25 | 2 | 4.25 | 4.25 | 1.75 |
| Level of Assimilation (How Much) | 1.95 | 2 | 1 | 1 | 2 | 1.5 | 1.5 | 2.5 | 1 | 2 | 2.75 | 3.75 | 2.5 | 1 | 2 | 3.5 | 1.25 |
| Method of Implementation (How) | 3.27 | 3.5 | 3.25 | 2.3 | 2.5 | 1.75 | 2.75 | 3.75 | 1 | 3 | 3 | 3 | 4.5 | 4.5 | 3.5 | 5 | 3 |
| Method of Implementation (using internal resources) | 2.5 | 3.5 | 2.5 | 1.8 | 1 | 1.75 | 1 | 2.75 | 1 | 5 | 2 | 2 | 4.5 | 4.5 | 2.5 | 3.75 | 1 |
| Method of Implementation (by contracted or outsourced firms) | 2.52 | 3.5 | 3 | 1.5 | 1.75 | 1.75 | 1 | 1.75 | 2.5 | 5 | 1 | 1 | 5 | 3.5 | 1.5 | 4.5 | 2 |
References


31. COBIT 4.1 – the “Work”, 2007 - DS4 Ensure Continuous Service


42. MENA is a designation for the region of Middle East, Central Asia, Europe, North Africa and Lebanon


65. COBIT 4.1 - the “Work”, 2007 – Al6 Manage Changes


67. COBIT 4.1- the “Work”, 2007 - Al3.3 Infrastructure Maintenance

68. COBIT 4.1- the “Work”, 2007 - Al2.10 Application Software Maintenance


70. COBIT 4.1 - the “Work”, 2007 – PO10 Manage Projects


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80. ITIL 3.1 – Service Transition


96. TIL 3.0 – Availability management

Introduction

Sustainability of hotels in prime tourist destinations is closely related to a well-preserved environment and local culture as they attract people to visit. As a consequence, hotels as a business should change to be more environmentally friendly to ensure financial stability and business sustainability [1]. Hotels that invest and create innovation in managing environments in their business will not only gain benefits from cost saving and create unique selling points to compete more effectively, but also possibilities to serve niche markets and maintain competitiveness [2].

The concept

Why do hotels adopt an environmental strategy? This could be the manifestation of social responsibilities [3] to manage relationships with stakeholders [4], to create competitive advantage [5], and to assure business sustainability [6]. A good relationship with stakeholders should create a positive impact for both parties although hotels may not be able to fulfil all the interests of its stakeholders simultaneously [7]. Thus, hotels should set priorities to appropriately address the business goals and stakeholders’ interests.

Stakeholders should be prioritised at different levels due to their possession of specific attributes in their interaction with hotels, namely legitimacy, power and urgency [8]. In a study about environmental protection [9], it was mentioned that legitimacy is related to the capacity of a stakeholder’s demand to be considered as morally and socially desirable or appropriate. Power refers to the ability or capacity to produce an effect and urgency refers to the degree to which the stakeholder demand calls for the hotel’s immediate attention or response. The combination of these attributes further determine stakeholder salience [10]. The salience of fulfilling stakeholder’s demands towards an environmentally friendly operation can explain why hotels adopt an environmental strategy.

The next question is how hotels adopt an environmental strategy? Ideally it is should be integrated in a hotel’s overall strategy from corporate, business, functional and operational strategies [11]. In terms of relationships with external stakeholders, managers that are more sensitive to environmental demands tends to act beyond the mandatory environmental regulations [12]. On the opposite, this adoption is driven by the compliance-based paradigm.
in which legal and regulatory considerations were the primary driving forces behind the corporate response [13]. These two opposite paradigms represent two different typologies of environmental strategy, labelled as proactive and reactive.

**Design of the investigation**

This case study [14] explored the hotel industry in Indonesia by conducting 65 semi-structured interviews with three-, four- and five-star hotel managers and seven groups of stakeholders. These interviews captured the perspective of hotel’s owners, high rank government officials, hotel associations, tour and travel agents and their associations, other hotels in the same industry and non-profit organisations in environmental protection. All of these interviews involved close contact with key informants to enable them to share and express their own views and voices [15]. Direct observation, analysis of historical documents by interpreting the records, papers and practices were used to generate multiple evidences and to enable data triangulation [16].

Two locations were represented by Bali as a tourist destination and Jakarta as capital city, the centre of business and central government activities in Indonesia. The hotel industry in Bali is one of the important sectors to support tourism as its main economic pillar. At the same time social and religious backgrounds of its population contribute significantly to the daily activities of this industry. Meanwhile the majority of big hotels in Jakarta are aimed at providing the standard services to business and official travellers. The reason to the selection of two different locations in this study aims to facilitate cross-case analysis.

**Table 1. Stakeholder salience based on manager’s perspectives**

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Location</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tourist Destination</td>
<td>Capital City</td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>P</td>
<td>L</td>
<td>U</td>
<td>P</td>
<td>L</td>
<td>U</td>
<td></td>
</tr>
<tr>
<td>Owner</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Government</td>
<td></td>
<td>+</td>
<td>+++</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Hotel Association</td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local Merchants</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural Communities</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Subak</td>
<td>+</td>
<td>+</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hotel Chain</td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>THK Foundation</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: P = Power, L = Legitimacy and U = Urgency. (+) = identified in interview. Blank space = no attribute identified. The Subak is the name of water management (irrigation) system for paddy fields on Bali Island.
Why do hotels adopt an environmental strategy?

Stakeholder salience has been mentioned as an explanation to the question above. Table 1 shows the summary of hotels manager’s perspective on how they prioritised stakeholders’ demands on environmentally operation based on the attributes of power, legitimacy and urgency.

As reflected by the hotel managers in both locations, owners and government were similarly identified as possessing all attributes of stakeholder’s salience. Although the hotel association was mentioned to have power in the capital city, it was subject to government support. Some uniqueness found in the tourist destination were the recognition of the local merchants, and cultural and religious communities as stakeholder groups with power, legitimacy and urgency attributes. The importance of local communities and their culture as one of aspect to consider in adopting environmentally friendly hotel management was mentioned by one of the five-star resort managers as follow:

“In Bali there is local hotel certification called Tri Hita Karana (THK), a prestigious voluntary certification with very high standards based on the teachings of Hindu philosophy where the environmental aspects is only one of them. So this certification emphasises a balance relationship between man and God, man and nature and man and man. Many hotels in Bali are following this certification, and we’ve already passed. It is outstanding, and if it is well-implemented, will be better than the European system, because they do not incorporate aspects of the relationship with God and other living things”.

As the hotel business in Bali should integrate with strong influence on local culture and religion, participating in this certification system shows one of the reasons why hotels adopt an environmentally friendly operation. Due to its standards that involves indicators of how well the hotel business fulfils relationships with God and relationships with human beings which are considered relatively high, only 120 hotels currently participate in this certification since its launch in 2000. This certification may gain more participants in the future since the Tri Hita Karana Tourism Award has been endorsed by the United Nations World Tourism Organization (UNWTO) since 2004 and by local government: Law number 10, 2009 on tourism and has been part of the Tourism Award to support implementation of Bali province’s Green and Clean Program since 2010.

Based on evidence from the manager’s perspective in Table 1 and stakeholder’s perspectives in Table 2, it is found that government and owners are the hotel’s most salient stakeholders in the adoption of an environmental strategy. Government is classified as a definitive stakeholder with the power attribute which is coercive that creates threat to hotel management, especially when they cannot comply with regulations. Government also has legitimacy as a formal organisation and urgency based on time sensitivity as each regulation was equipped with specific time frames for compliance.

As dominant stakeholders, owners based their power on utilitarian-material/incentive power. What they expect from their demand about environmentally friendly hotels is always related to return on investment and well-managed risk. Meanwhile, the owner’s legitimacy is based on a combination of individual and societal aspects. They would expect that an environmentally friendly strategy will ensure the sustainability of the hotel and tourism business through preservation of culture and natural environment.
Table 2. Stakeholder's Perspectives

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>Relevant stakeholders</th>
<th>Dormant</th>
<th>Discretionary</th>
<th>Demanding</th>
<th>Dominant</th>
<th>Definitive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>P</td>
<td>L</td>
<td>U</td>
<td>P + L</td>
<td>P + L + U</td>
</tr>
<tr>
<td>CAPITAL CITY</td>
<td>Employee</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Government</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tour and Travel Agent</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Competitors</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Environmentalist groups</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOURIST DESTINATION</td>
<td>Owner</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td></td>
<td>/</td>
</tr>
<tr>
<td></td>
<td>Employee</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Government</td>
<td>+</td>
<td>+</td>
<td>+</td>
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<tr>
<td></td>
<td>Tour and Travel Agent</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Competitors</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Environmentalist groups</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: (+) = present, (-) = absent

As dominant stakeholders, owners based their power on utilitarian-material/incentive power. What they expect from their demand about environmentally friendly hotels is always related to return on investment and well-managed risk. Meanwhile, the owner’s legitimacy is based on a combination of individual and societal aspects. They would expect that an environmentally friendly strategy will ensure the sustainability of the hotel and tourism business through preservation of culture and natural environment.

This study found that the majority of hotels stakeholders mentioned in theory is discretionary or only possessing the legitimacy attribute. As a consequence, there is absolutely no pressure for managers to engage in an active relationship with these stakeholders, although managers can choose to do so [17]. There is not so much attention paid by managers to these stakeholders in decision making about adopting an environmentally friendly operation. At the same time, these stakeholders also have little connection and dialogue with hotels to make their position become much important, especially with the mission to protect the natural environment. Thus, the salience of stakeholders to some extent explains why hotels adopt an environmental strategy; first, because it is to comply with governmental regulations [18], second it is motivated internally to meet the demand of owners in order to sustain their business, and third due to a strong influence of local culture and religion factors in influencing
a tourist destination [19].

How do hotels adopt an environmental strategy?

Table 3 provides a summary of how hotels adopt an environmental strategy. Hotels in tourist destinations overall are at a higher level than in the capital city. Environmental issues have been integrated in strategic management processes from the corporate level down to operational. These hotels can be described as proactive in the adoption of an environmental strategy when it is compared to other hotels in the capital city. In the capital city, low environmental strategy integration was indicated by limited integration of the environmental protection issue in strategic planning processes where written mission, policies and strategies in environmental protection were mentioned. This is in line with the hotel’s approach toward environmental protection which is described as defensive. This approach is indicated by piecemeal integration of environmental issue in strategic planning processes, low quality of environmental strategy implementation and practices in business and operational levels.

Hotels and stakeholders relationship in hotel Industry

Hotel managers in tourist destinations perceived owners, guests and local communities including cultural and religious organisations as primary stakeholders and important for the survival of the business. Subsequently, local communities are the most affected environmentally by a hotel’s operation. At the same time these communities also pay significant attention to environmental protection. Hotels recognised Subak as important stakeholders, as an irrigation system organisation that control the distribution of water for paddy plantations. Both hotels and local communities share an interest in the supply of water in their area because excessive use of ground water and sewage dumping could endanger natural attractions, agricultural activities and quality of services. As mentioned by the general manager of a five-tar resort hotel in Ubud area:

“Without support of religious leaders who manage the Hindu ceremony and Subak leaders of the paddy’s irrigation system, it is almost impossible to preserve these attractions”

This is considerably unique because cultural and religious organisations were not among the hotel stakeholders as previous studies mentioned explicitly [20]. This uniqueness appears based on the nature of the tourism industry in tourist destination like Bali, where the daily practices of Hinduism and natural environment are two main attractions. This situation requires the hotel industry to be involved in a relationship with local communities and place them as one of the important stakeholders for business survival. As emphasised by general manager of international chain resort in Ubud area,

“Local community is the most important one because this hotel is located in the middle of local communities whereby we need each other. Local communities with their cultural and natural environment are one of the important attractions for our guests”.

Hotels in this location received higher tension to adopt environmentally friendly operations than those in the capital city due to differences in guests’ backgrounds. The majority of hotels guests are holiday travellers and a well preserved culture and natural environment are their visit motivation. Although these guests were mentioned to have an interest in environment, they do not specifically ask the hotel management about it. This impacts on what the hotel has to do and what it offers since hotel guests were perceived as the primary stakeholder based on their background and
### Table 3. Summary and coding of environmental strategy adoption

<table>
<thead>
<tr>
<th>Coding criteria</th>
<th>Location</th>
<th>Tourist Destination</th>
<th>Capital City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmentally friendly operation as source of competitive advantage</td>
<td>N/A</td>
<td>++ ++</td>
<td>– – ++</td>
</tr>
<tr>
<td>Written mission, policies &amp; strategies in environmental protection</td>
<td>– –</td>
<td>++ ++</td>
<td>– – – +</td>
</tr>
<tr>
<td>Objectives on water, energy, waste, good image and competitive advantage</td>
<td>N/A</td>
<td>++ ++</td>
<td>– – ++</td>
</tr>
<tr>
<td>Written plan, special department, human resources assignment and financial support</td>
<td>– –</td>
<td>++ ++</td>
<td>– – – +</td>
</tr>
<tr>
<td>Employee training and dissemination to generate participation and support</td>
<td>– –</td>
<td>++ ++</td>
<td>– – ++</td>
</tr>
<tr>
<td>Environmentally friendly strategy in marketing communication</td>
<td>–</td>
<td>++ –</td>
<td>– – +</td>
</tr>
<tr>
<td>Priority for green purchasing</td>
<td>N/A</td>
<td>++ ++</td>
<td>– – ++</td>
</tr>
<tr>
<td>Facility for customer involvement in environmental practices</td>
<td>– –</td>
<td>++ ++</td>
<td>– – ++</td>
</tr>
<tr>
<td>Effort to reduce toxic and dangerous goods</td>
<td>– –</td>
<td>++ –</td>
<td>– – +</td>
</tr>
<tr>
<td>Water saving policies and practices in service process</td>
<td>N/A</td>
<td>++ ++</td>
<td>– – +</td>
</tr>
<tr>
<td>Energy saving policies and practices in service process</td>
<td>N/A</td>
<td>++ ++</td>
<td>– – +</td>
</tr>
<tr>
<td>Waste management policies and practices in service process</td>
<td>N/A</td>
<td>++ ++</td>
<td>– – ++</td>
</tr>
<tr>
<td>Budgeting policies and cost/benefit measurement</td>
<td>– –</td>
<td>++ –</td>
<td>– – – +</td>
</tr>
<tr>
<td>Environmental reporting practices to all stakeholders</td>
<td>–</td>
<td>++ ++</td>
<td>– – – +</td>
</tr>
</tbody>
</table>

Note: (–) Absent, (+) Present, N/A Indicate none of information from interviews suit with coding.
expectation. These motives bring implications. For example, resort hotels in tourist destinations should have a good cooperation with local cultural and religious leaders such as Subak and Banjar in order to be able to offer a package of hospitality services, culture and natural environment. In contrast, business travellers are dominant in the capital with expectations for a good night’s sleep and standards of hospitality services expected of city hotels.

This study highlights locality as one of important aspect in the relationship between hotels and stakeholders which reflects a pluralistic society point of view where hotels recognised stakeholders such as special interest groups and the surrounding community [21]. Local communities would expect corporate citizenship that enhances the quality of life and a hotel’s compliance to the rules of the game.

Implications and Recommendations

The study suggests several implications both to theory and business practices in the hotel industry regarding the adoption of environmental strategies. First, contextualisation of theory about business and stakeholder relationships might bring implications for any possible deviation due to differences in the types of organisations and their environment. As mentioned by Bryson, not all organisation apply similar levels of stakeholder management, and managers should proportionally apply what is necessarily and applicable depending on the business setting [22].

Second, in term of business practices this study highlights that localities play important roles in determining the nature of relationships between hotels and stakeholders. Managers should emphasise on the role of localities based on political and cultural characteristics of the relevant business environment. Hotel management should understand local differences in the culture, ethnics, economy and politics of any business-specific location. In this study context, it compared the tourist destination context that is strongly rooted in Hinduism culture, while the capital city represents more of an international metropolitan city.

When managers find a strong influence of local culture in daily life, hotels in tourist destination are suggested to collaborate and build social partnerships with multiple stakeholders in implementing an environmentally friendly strategy. This strategy should be implemented in social partnerships with several options in its implementation [23]. In practice, hotels could be involved in educating local communities in environmental protection. For example, hotels may involve local communities in recycling activities or organic farming in order to maximise the benefit from its environmentally friendly strategy.

Meanwhile, hotels in capital cities are suggested to adopt an involvement strategy in order to maximise cost saving and benefits of an environmentally friendly strategy. In organisational practice, involvement strategy is ensuring that the organisation is capable of establishing an ongoing and systematic interaction with their stakeholders. For example, hotels should manage a two-way communication, engage guests to participate and to suggest hotel actions in environmental protection [24]. In more detail, the partnership with guests should be directed to educate them in more actively contributing to the hotel’s environmentally friendly practices.

Analysis of why and how hotels adopt an environmental strategy in this study was limited to exploring hotels and stakeholder relationships, but not yet measuring the degree of stakeholder’s salience influence on a hotel’s decision. Thus, for managers who are looking for a measurable
influence in relationships between stakeholder salience and the adoption of an environmental strategy should conduct quantitative testing for further analysis. Theoretically, managers of hotel chain headquarters may have known relevant stakeholders in general, however each individual general manager in different locations should undertake analysis to reveal any unique influence that may exist in, and influence, the local context.
References


Retention and Sustainable Careers under Extreme Circumstances: the case of Private Universities in Saudi Arabia

Hayat Habhab – University of Business & Technology and Dr Mark Smith – Grenoble Ecole de Management

Abstract

Management frequently face difficulties in attracting and retaining talented employees. In the worldwide market for higher education these challenges are clearly evident and are particularly acute in countries such as Saudi Arabia, where there is an increased dependence on overseas professors yet where the institutional and cultural contexts create serious challenges. Here the influence of the ‘extreme’ context plays heavily on the options for managers wishing to recruit and retain talent and the day to day experiences of academic staff with mobile careers. This study examines the effects of gender and nationality on the experiences of employees and on the relationship between their job satisfaction and intention to quit. We explore the implications for recruitment and retention of foreign-born and national academic staff in an Islamic context.

Introduction

The higher education sector, particularly in business and management education, faces considerable challenges in recruiting and retaining talent that benefits from a global labour market [1]. The heavy reliance on rankings and reputation has created a demand for top professors able to boost the position of individual schools while an increasing demand for teaching in English language has meant suitably qualified academics adopt increasingly mobile careers. As for other globally mobile employees, the sustainability of positions is influenced by a range of organisational and contextual factors [2]. These contextual influences on the experience of employees are particularly strong in a country like the Kingdom of Saudi Arabia (KSA).

The institutional and cultural context raises particular challenges for overseas workers both in terms of rights at work and their wider integration into their organisations and society. For managers, high levels of turnover, and a limited national labour market for comparable talent, create challenges in fulfilling organisational goals. In KSA there is a heavy reliance on overseas professors and yet also idiosyncratic arrangements that make working in the Kingdom challenging for mobile talent and managers wishing to recruit them – for example, a strong divide between the terms and conditions of national and non-national employees [3]. Therefore, the recruitment and retention of foreign talent is a key issue for management in the sector. Knowledge workers in the higher education sector are globally mobile and seek working environments that provide both intrinsic and extrinsic rewards [4]. Thus their satisfaction at work is an important factor. Indeed job satisfaction has been shown to be one of the key factors in determining turnover of employees [5]. In a challenging environment variations in job satisfaction may exacerbate intention to quit and the tenure of employees recruited for key positions.

The Saudi environment for employees both inside and outside the organisation means that HRM practices can play a key role in promoting the sustainability of academics. However, organisational contexts where effective human
resource practices are not necessarily well developed may further hamper managers’ ability to develop retention strategies. In the service sector, a high turnover of employees presents a risk for the organization in terms of quality and continuity of service. For example, quality in higher education is dependent on the quality of employees that an organisation is able to enlist and retain among its faculty [6]. It is important to attract and retain talent in order to maintain quality and recover recruitment costs [7].

The culturally and institutionally defined rules for women and men create another layer of complexity. These gender differences also provide an important dimension to work in the KSA. On the one hand, institutional and cultural norms mean that female employees face certain challenges both in their daily and organisational lives whether they are nationals or non-nationals. On the other hand, the increasing popularity of higher education among the female nationals creates a demand for female academics that are culturally acceptable and thus able to teach female audiences in higher education.

This study aims to examine the effects of gender and nationality on the relationship between job satisfaction and intention to quit among academics in private universities in Saudi Arabia. Of particular interest are the sustainability of academic careers and the impact of the context on retention. The paper is divided into six sections. Following this introduction, the second section explores the evidence for a relationship between job satisfaction and intention to quit with a particular focus on gender and nationality influences and the challenges of the higher education sector. The third section outlines the key characteristics of the Saudi context while the fourth discusses the methodology adopted for the study. The fifth section presents the results of the interview data. In the final section we explore the implications for recruitment and retention of national and non-national employees in an ‘extreme’ context where there is heavy reliance on overseas talent.

**Literature Review**

The literature underlines that the consequences of turnover and turnover intentions can be more costly for an organisation than adapting and implementing policies and practices which may help retain qualified employees. Turnover has negative consequences on both the employee and the organisation in terms of direct and indirect costs [8]. Beyond the direct expenses, there are also hidden costs such as lost productivity, skill drain, poor morale and reduced job satisfaction among the remaining employees [9]. Although employee turnover is not necessarily negative, high levels of voluntary turnover can be disruptive and costly [10].

A combination of individual and organisational variables determines employees’ decision to stay or leave and job satisfaction is a key factor capturing the impact of these variables on turnover and intention to quit [11]. The literature shows that other factors with a strong correlation with job satisfaction include pay, supervision, co-workers, environment, the job itself, advancement and recognition [12]. Previous work on academic staff demonstrates that pay, promotion, working conditions and support of research all have positive and significant effect on job satisfaction while fringe benefits and support of teaching have negative effects [13]. Research also shows that job satisfaction is multifaceted and that satisfaction with one facet might lead to dissatisfaction with another. In addition teaching outcomes such as performance, commitment, productivity, and absenteeism depend to a great extent upon job satisfaction which in turn affects the turnover rate [14]. Extrinsic factors impacting
upon job satisfaction continue to have an important effect on employees’ turnover; yet for knowledge workers intrinsic factors also have a potentially greater effect and may play an even greater role in employees’ turnover behaviour [15].

As a sector employing many women, and in the particular context of Saudi Arabia, gender differences provide an important dimension to our study of retention. Women tend to report higher levels of job satisfaction than men [16] – this in spite of the fact that they frequently have poorer terms and conditions and lower levels of job quality. The results of some studies also indicate that females are more satisfied than their counterparts in a higher education setting, particularly with promotion and fringe benefits [17]. External performance measures such as publications, grant applications and teaching evaluations may promote a level of transparency not present in other occupations [18]. As such some women may benefit from fewer informal influences determining career success. Studies have also found that work scheduling is related to female faculty satisfaction and intention to quit and work-life integration were indicators to leave one’s job [19]. Furthermore, the relationship between gender, nationality, and job satisfaction suggests that women and non-nationals are sometimes less satisfied with their work than men and nationals [20]. Other research suggests that there may be differences between men and women regarding the interrelationship between role conflicts, role ambiguity, work family balance and job satisfaction since they may have different perceptions of their roles [21]. For women it is difficult to separate out the interaction of work and private life. Roles for both women and men are socially constructed and in Islamic countries defined gender roles create greater challenges for balancing the demands of work and family life [22]. In a feminised sector such as education, coupled with the research context of KSA, gender is an important dimension to take into account.

We might expect the relationship between job satisfaction and intention to quit to be moderated by gender and nationality in the Saudi Arabian context. As in other contexts we might expect a positive relationship between job satisfaction and intention to quit but the particular circumstances faced by employees may alter the relationship between intrinsic and extrinsic satisfaction for male and female academics and those of Saudi and non-Saudi origins. These propositions are addressed by our research.

The Saudi Arabian Context

The Saudi cultural and institutional context offers an influential set of factors on the working lives of women and men. In particular there are strong cultural and societal expectations on the married and unmarried and on mothers and non-mothers [23]. Women must divide their interests and time between the working world and their traditional and socially-defined roles [24]. Both Islamic culture and the stage of economic development influence the value systems of people in relation to democracy and gender equality [25]. This cultural dimension is highly relevant to the study of women’s positions as an exceptional situation created by the substantial oil-production in certain Middle Eastern countries [26]. Until 1960 in Saudi Arabia, both school education and higher education were offered exclusively to Saudi males and it was believed that females’ education would lead to immorality by corrupting their minds and turning their values and priorities away from their main roles as good wives and mothers. It was feared that the conflict of values brought about by such a significant transformation would lead to instability in society [27].
However, cultures and societies are not static and are subject to change. The rapid expansion in the number of women in the Saudi education sector in 1960s represented an attempt to meet the increasing demand; yet according to orthodox interpretation of Islam, girls after the age of nine must attend segregated classes [28]. Thus, separate buildings and teachers were required for boys and girls putting extra cost on both the public and private schools. Furthermore, despite the general mission of higher education having been historically to educate students to be future leaders there is still a shortage of Saudi academics and non-Saudi academics are still in demand [29]. Thus the number of non-Saudi academics employed in the private colleges and universities is larger than the number of Saudi academics [30].

Methodology

After a careful examination of the research area, we found that the most appropriate research design for the study was a mixed method of semi-structured interviews supplemented by a survey of respondents to assess their job satisfaction. Here we report the results of the first phase of the semi-structured interviews. These provided qualitative data in order to explore the impact of the context and obtain a clearer understanding of the processes involved in shaping intentions to quit and job satisfaction levels.

The sample focused on a limited number of private colleges. Ten semi-structured interviews were carried out with respondents in three private universities and colleges. The respondents came from various faculties and were a mixture of business and non-business academics as well as from different nationalities, gender, employment tenure and ages. The interviews focused on three main themes: firstly, the impact of the HR practices and the Saudi culture on their experiences; secondly, respondents were asked about their job satisfaction and their intention to quit; and thirdly, intrinsic and extrinsic factors affecting their job satisfaction were explored.

Although co-operation from respondents was generally high, the institutional and cultural context created certain challenges for conducting the research. For example, it was difficult to approach male academics, especially those working in colleges that did not have a female campus. The field researcher overcame these challenges with the cooperation of male colleagues.

Research Findings

Here we present the results structured firstly around the organisational and managerial challenges and secondly the individual challenges and impact upon satisfaction.

a) Organisational Level

Perhaps unsurprisingly one of the first key themes to emerge from our study was the strong influence of the Saudi culture and the particularities of the institutional environment on the turnover of academics.

The sponsorship practice known as the “kafalah” has an important impact upon all non-nationals since non-Saudi employees are required to have a “kafalah” of a Saudi citizen in order to live and work officially in the Kingdom. The sponsorship system creates managerial challenges for recruitment and retention. It is a complicated procedure that puts a burden on the Saudi citizen, the non-Saudi employee and the organisation. However, once awarded, employees may receive alternative job offers. Thus once sponsored there are new turnover risks for the organisation.
“...having the fact that we lack the needed number of Saudi faculties and that most of the non-Saudi female faculties are employed locally which give them the opportunity to often change their work place running after better offers; causes us high turnover rate among faculties”.

(College Dean, Saudi female)

The “kafalah” also had uneven effects for women and men.

“Actually, the turnover rate among females is higher than it is among males and this is basically because of the (kafalah) policy imposed by the Saudi labour law. Most of the private educational institutions employ local females who are accompanied by their husbands or fathers and are not legally allowed to work”.

(College Dean, Saudi Female)

At the organizational level, managerial respondents suggested that policies were not always in place to support effective retention of employees. Higher education institutions experience high turnover rates among faculty compared to other professions and seemed to be doing less well in managing turnover. Most organisations did not have retention strategies for either Saudi or non-Saudi faculties.

“Regarding retention strategies, we only offer flexibility in working hours and we are now working on offering opportunities to continue studies and write researches where we are almost done with establishing a research center... Most of the private institutions lack proper retention strategies which reflect high turnover rate among employees. Retention strategies are linked to the recruitment process which is mostly ineffective for many reasons such as recruiting faculties based on personal contacts”.

(College Dean, Saudi female)

We found limited evidence of a professionalised approach to human resources in response to the turnover challenges and they were often accepted as part of life in the sector. One of the medical schools did use expert help to address recruitment problems:

“We recruit professors through specialized agencies operating in different countries because we are a medical and pharmacology school. We also attract some Saudi academics employed at governmental universities to join us as part time faculties”

(College Dean, Saudi male)

This was an exception among managerial policies and strategies that tended to be more reactive to turnover challenges they faced.

b) Individual Level

The in-depth interviews indicated that most male faculty members had higher levels of overall job satisfaction than female faculty members, particularly in terms of benefits and salary received. The results also showed a generally low level of satisfaction with the lack of management awareness and human resource practices towards retention strategies:

“It is fine but I don’t find time for continuing my studies because of the teaching load which, sometimes, go up to 18 credit hours; and as a Saudi, I am also not satisfied with opportunities for advancement because I don’t hold PhD”.

(Faculty, Saudi female)

“I’m not satisfied with my pay and benefits and I intend to quit working in this institution if I find other opportunity somewhere else”.

(Faculty, non-Saudi female)

Nevertheless non-Saudi male faculty also
showed signs of low satisfaction and intention to quit based on limited recognition and lower than expected rewards.

“I am overall satisfied as I enjoy teaching and I am here for 8 years now; yet, we all lack motivation and though my qualifications are appreciated well where actually I was head hunted, sometimes we have difficulties in dealing with the management because they treat us as administrative employees in regards to working hours, administrative and paper work because we don’t have assistants. We are also not included in decision making”.

(Faculty, non-Saudi male)

“I came all the way from my country expecting better compensation and benefits but I found it is not worth that much where I have to save a huge amount of money every year to pay school fees for my children and I’m really thinking of quitting working in this institution because I found that some other institutions are giving such benefit”.

(Faculty, non-Saudi male)

The interviewees underlined the influence of the Saudi culture on individual experiences of non-Saudis in both in terms of benefits and their experiences of the “kafalah” and dealing with Saudi institutions.

The gender dimension also played a role at the individual level as women sought to balance completing demands on their time. As expected, for women work life balance pressures played an important role. The results indicated the influence of cultural and social pressures on parental responsibilities for women who felt obliged to adapt at the expense of their professional commitments:

“I have difficulties in balancing my family life with my work though we are offered flexible working hours; we don’t have a day care in our college and that causes problems for most of us where we are obliged to pay for external day care and arrange transportation by our own while we are paid low salaries”.

(Faculty, non-Saudi female)

“I’m having hard time in attempting to balance between my family responsibilities and my work where working hours are long (from 8:00 am to 5:00 pm) and teaching responsibilities are too much. I feel guilty leaving my children with the maid for more than 3 hours after they get back from school”.

(Faculty, Saudi female)

On the other hand, male respondents were less constrained by both gendered social processes and the institutional environment. For these reasons they tended to report a higher overall level of job satisfaction, particularly among the Saudi male faculty:

“I am fine with it and I was attracted by the owner, I am here now for 6 years heading an academic department and a member in many committees which were formed to work on the procedure of transferring the college into university”.

(Faculty, Saudi male)

“I’m satisfied with my job; I retired from [a public] university and start teaching again in this private university”.

(Faculty, Saudi male)
However, not all men were beneficiaries of the environment and a tightening up in the implementation of the law around the employment of non-nationals, after the initial period of fieldwork, had negative consequences on both male and female employees from overseas.

Discussion and Implications

This research provides a preliminary investigation of the impact of the Saudi context and job satisfaction on intention to quit among academics in private universities. Our study highlights those who are underprivileged in terms of gender, nationality and level of education: unsurprisingly women and non-nationals fair less well in this environment. Academics holding higher educational degrees are overall more satisfied than other academics. The findings show that both female and non-Saudi academics are less satisfied than their counterparts as a result of a combination of cultural and institutional influences, compounded by the absence of adequate HR practices. We find that pay and benefits, supervision, advancement and recognition have an important impact upon the job satisfaction of Saudi academics. On the other hand, pay and benefit and organisational practices are more important for the job satisfaction for non-Saudis, both males and females. Men and women, Saudi and non-Saudi, are satisfied with their co-worker relationship, and working environment. Our results confirm a negative relationship between academics’ satisfaction and intention to quit working in a specific institution.

The study highlights the challenges facing management when confronted with a limited supply of qualified labour and an ‘extreme’ institutional and cultural context. However, the absence of retention strategies in most private universities underlines a passive approach of the organisations themselves to their external environment. These problems are likely to become worse since the Saudi labour market lacks the required number of qualified academics demanded by the private educational institutions. The poorer terms and conditions for academics in the private sector exacerbate these problems. Furthermore attempts by the Saudi authorities to tighten up the implementation of the “kafalah” sponsorship system may further limit the options to recruit non-domestic labour.

The changing policy towards the “kafalah” is just one example of contradictory pressures in the external environment. The approach towards women as employees and consumers of education also underlines these contradictions. The cultural and institutional context dictate against the employment of women yet the market pressures also create a demand for women to work. Our findings for female academics suggest that they face similar challenges to women working in other contexts, that of balancing work and family life but compounded by the Saudi context.

Our research context is undoubtedly a challenging environment for HR managers. However, given the findings associating better working conditions with the positive aspects of employee retention, managerial practices that motivate employees, intrinsic and extrinsic, may help promote employees retention [31]. A better understanding of intrinsic and extrinsic factors affecting the level of satisfaction of academics could benefit local managers. Private higher educational institutions have an opportunity to create organisational values and norms that support employees’ satisfaction, including for women and non-nationals. In relation to the situation faced by women, organisations could attract and retain valued employees by
increasing their actions with regard to managing work-family integration [32]. More broadly, through the investigation of intentions to quit, local managers can better understand what best predicts employee behaviours in relation to turnover but they also need to adopt a more
proactive approach to the challenges created by both the external environment and their own internal organisational climate.

References


30. Ibid.


32. Ibid.
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