Chapter 6

Conclusions and Implications

6.1 Introduction
This chapter presents the conclusions, contributions and implications of this research. The chapter opens with a brief synopsis of the major conclusions derived from earlier chapters:

- literature review
- research question, research model, and propositions
- research methods
- findings

This is followed by an analysis of the contributions of the study for research and practice. The chapter ends with an assessment of the limitations of the thesis and its implications for future research.

6.2 Conclusions
The major conclusions of chapters 2-5 were as follows:

6.2.1 Conclusions from Chapter 2: Literature Review
Motivated by the importance of knowledge in the economy, and the lack of theory regarding the link between obtaining knowledge in the form of human resources and using that knowledge to improve firm performance, I reviewed several broad fields of literature in Chapter 2, including theories of knowledge and intellectual capital, theories of the firm, and theories of human sourcing and work arrangements.

My review of the literature identified several themes that would need to be addressed in any study of how firms obtain knowledge and use it to improve performance.
First, a key theme was the importance of distinguishing between knowledge embodied in people and its external representations (e.g., implemented in information technologies). Although information technologies are essential tools for supporting organizations, the position taken in much recent research and in this thesis was that knowledge only exists in people.

Second, many theorists and practitioners have drawn distinctions between workers and industries based on their knowledge characteristics (e.g., identifying ‘knowledge workers’ and ‘knowledge-based sectors’ of the economy). My review found that although many manual and blue collar occupations and industry sectors are labelled as ‘low knowledge intensive,’ the work involved in such occupations and sectors is, in fact, highly dependent on human knowledge. As a result, establishing the relevance of knowledge-based theories to organizations in an industry characterized as ‘low knowledge-intensive’ and using knowledge-based approaches to human sourcing for workers who were largely ‘blue collar’ were seen as desirable objectives for the thesis research.

Third, although knowledge-based theory of the firm has several strengths that enable it to serve as the theoretical foundation for this thesis (including a strong theoretical connection with other theories of the firm and a growing body of supporting empirical evidence), the theory has several weaknesses, including an over-reliance on the importance of knowledge possession versus knowledge use, and a failure to acknowledge the importance of opportunism in human behaviour. In addition, the application of KBT to studies of human knowledge sourcing has been very limited to this date. Consequently, this thesis presented an opportunity to advance past literature by showing how KBT could explain how firms obtain knowledge in the form of human resources and use that knowledge to improve firm performance. The thesis achieved this by:

- identifying knowledge-based determinants of firms’ human sourcing decisions including the role of flexibility
- identifying the causes and consequences of workers’ willingness to contribute their knowledge and organizations’ ability to appropriate its benefits
explaining how firms’ acquisition and use of internal and external human resources influences organizational effectiveness.

6.2.2 Conclusions from Chapter 3: Research Question, Research Model and Propositions

Drawing on the motivations for the study and the themes that I identified in the literature above, the following research question was formed: Can knowledge-based theory of the firm be used to explain the relationship between organizations’ mix of internal and external human resources and organizational effectiveness?

To address this research question I developed a research model that used KBT in two ways: (1) to determine what factors influenced an organization’s ability to obtain the mix of human resources it needs to accomplish its objectives and (2) to determine what factors influenced an organization’s ability to achieve its objectives given its particular mix of human resources. In both respects the model was seen as representing an advance on previous relevant theories, e.g. Lepak and Snell (1999), Tsui et al (1995, 1997).

Overall the approach taken to the research question, model and propositions was seen as complementing and extending prior research by helping to explain and predict:

1) the influence of key factors, including flexibility, on fit of internal and external human resources with firms’ needs,
2) how fit influences organizations’ ability to maximize the value of their suppliers’ knowledge, and...
3) the mechanisms by which maximizing value leads to organizational effectiveness.

6.2.3 Conclusions from Chapter 4: Research Methodology

A case study methodology was chosen to test the proposed model. Key rationales for choosing a case study-based methodology were:

- the proposed theory was new and case studies are beneficial for building and refining new theory.
- Knowledge-based theories are often considered to be best studied through qualitative means due to the tacit nature of much human knowledge.
- The case study approach enables evidence to be obtained of how changes to contracts or different degrees of fit/non-fit influence OE, rather than merely providing correlations (as in prior studies).

Two hotels were selected as cases to study due to:
- Their dependency on 'blue collar' or low knowledge intensive resources. As noted earlier, this offered an opportunity to show that the relevance of KBT-based approaches to determining fit in a sector that is not typically considered to be 'knowledge intensive' or involve a high proportion of 'knowledge workers'
- The highly standardized nature of hotel operations, thus ensuring meaningful and relevant comparisons could reliably be drawn between the organizations selected
- The ability to compare and contrast results across the two hotels.

Case study design was guided by the principles of construct validity, internal validity, external validity and reliability. Questionnaires and interviews were the primary means of data collection. Where possible, questionnaires used in the thesis were adopted from validated scales in prior studies. Where validated scales were not available (in approximately 50% of cases) the questionnaires were designed by reference to the relevant literatures and data was obtained via several sources to ensure its reliability and validity.

6.2.4 Conclusions from Chapter 5: Research Findings
To test the research model and propositions, I analysed quantitative and qualitative data to test each limb of Mill's framework of causality (Cook and Campbell, 1979), i.e., covariation, temporal precedence and no other causal factors.

The major conclusions from my analysis of Propositions 1-3 of covariation, temporal precedence and presence of other causal factors and also from the additional exploratory investigation of organizational effectiveness are summarized below. Note that, consistent
with this section’s focus on major conclusions, a number of associated inferences and minor conclusions noted in Chapter 5 are not repeated here. Where considered relevant inferences and minor conclusions are referred to in succeeding sections of this chapter.

(1) Conclusions: Proposition 1
Proposition 1 proposed that four factors (knowledge of knowledge demand, knowledge availability, knowledge of knowledge supply processes and knowledge supply flexibility) would positively influence fit.

Results for covariation provided partial support for Proposition 1; but they were not conclusive because of the negative relationship between knowledge of knowledge demand and fit. The data for temporal precedence indicated strong support for Proposition 1, the evidence being strongest, in contrast to the evidence for covariation, for knowledge of knowledge demand. The evidence for a strong positive effect of knowledge of knowledge demand on fit revealed by the qualitative data was based on much richer data than the quantitative findings, suggesting that the relationship was in fact positive, as proposed, and the negative correlation found in the quantitative data for knowledge of knowledge demand may have been purely a method artefact. No evidence was found of reverse causality or of direct effects from other causal factors.

In overall terms, despite the initially inconclusive results for the tests of covariation, the weight of evidence based on covariation, temporal precedence and other causal factors supported Proposition 1.

(2) Conclusions: Proposition 2
Proposition 2 proposed that each dimension of fit would positively influence maximizing value from fit.

Results for covariation were not statistically significant, thus did not provide conclusive evidence for Proposition 2, however because they were in the proposed direction and the power of the tests was low (due to the small sample size) neither did they provide
conclusive evidence against the proposition. From the qualitative evidence significant support was found for the temporal precedence and influence of all three antecedents to fit on value contribution and value appropriation. No evidence was found of reverse causality. While several other possible causal factors were tentatively identified, the evidence of causality in relation to them was weak.

In overall terms the weight of evidence based on covariation, temporal precedence and other causal factors supported Proposition 2.

(3) Conclusions: Proposition 3
Proposition 3 proposed that the two dimensions of maximizing value from fit (value contribution and appropriation) would positively influence organizational effectiveness.

Results for covariation provided partial support for Proposition 3, since the correlations between each dimension of value maximization and OE were positive, as proposed. However, because the results were not statistically significant they did not provide conclusive evidence for the proposition. Significant support was found for temporal precedence and influence of both value contribution and appropriation on organizational effectiveness. No evidence was found of reverse causality. Two other potential causal factors were identified but their influence was indirect and involved antecedents in the research model.

In overall terms the weight of evidence based on covariation, temporal precedence and other causal factors supported Proposition 3.

(4) Conclusions: Additional Exploratory Investigation of Organizational Effectiveness
Having concluded the investigations in relation to the research model, an additional exploratory investigation of organizational effectiveness using causal mapping techniques was conducted to show the extent to which human knowledge of suppliers influenced OE relative to other factors. The lack of such explanatory power in the theoretical model was
not a weakness, since it was outside its scope, however to add such power was considered desirable if it could be achieved. The major conclusions drawn from the findings of this exploratory investigation were that while human knowledge was shown to have a significant influence on OE, its influence was heavily dependent on its interaction with two other intellectual resource elements, namely hotel systems and processes and the hotel brand standard.

6.2.5 Summary: Conclusions from Research Findings
The overall weight of evidence supported all three propositions. The additional exploratory investigation revealed that human knowledge had a significant measurable influence on OE, but that its influence was heavily dependent on its interaction with two other intellectual resource elements (hotel systems and processes and the hotel brand standard). The contributions to research and practice and implications for future research of these conclusions and related subsidiary conclusions noted in earlier chapters are discussed next.

6.3 Contributions
Several contributions to research and practice were noted in earlier chapters and are implicit in the conclusions detailed in Section 6.2 above. These contributions are summarized in Table 6.1 and are described briefly in the following sections.

Table 6.1: Research contributions to theory and practice

<table>
<thead>
<tr>
<th>Target of Contribution</th>
<th>Contribution</th>
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<tbody>
<tr>
<td>Contributions to research</td>
<td>Advances knowledge-based theory of the firm by showing how it can explain the relationship between organizations’ mix of internal and external human resources and organizational effectiveness.</td>
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<tr>
<td></td>
<td>Provides quantitative and qualitative evidence to validate the proposed model of knowledge sourcing and effectiveness.</td>
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<td></td>
<td>Provides data collection methods (e.g., new questionnaire scales) that can support future researchers who wish to</td>
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6.3.1 Contributions to Research

The thesis made several contributions to research, outlined in Table 6.1:

<table>
<thead>
<tr>
<th>Contributions to practice</th>
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<tr>
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<tr>
<td>extend this research.</td>
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<tr>
<td>Extends and complements prior research related to firms’ human sourcing practices and organizational effectiveness</td>
</tr>
<tr>
<td>Provides an approach that practitioners can use to optimize the selection and use of internal and external human resources to maximize organizational effectiveness</td>
</tr>
<tr>
<td>Provides a practical mechanism for identifying and measuring interdependence of human knowledge and other resources in their influence on OE</td>
</tr>
<tr>
<td>Demonstrates the relevance and usefulness of the overall approach to low knowledge-intensive industries and occupations</td>
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(1) Use of knowledge-based theory of the firm

The central contribution of the thesis is that it uses knowledge-based theory of the firm to explain the relationship between organizations’ mix of internal and external human resources and organizational effectiveness. This approach offers several advantages over previous theorizing. First, despite research directed towards understanding how knowledge influences firm structures and work organization, there has been little development of knowledge-based perspectives on firms’ sourcing of human knowledge. The knowledge-based approach proposed in this thesis thus fills a gap in current research.

Second, the most relevant research that to the writer’s knowledge has been conducted in this area (i.e. by Lepak and Snell, 1999, 2002) while tending towards a knowledge-based view (e.g. refer Wright Dunford and Snell, 2001) has predominantly been shaped by human capital theory and the resource-based view of the firm. This thesis extends and complements this prior research, by both explaining the relevance of human capital, the RBV and other theories to the development of knowledge-based theory, and demonstrating an approach which is wholly grounded in KBT. Third, few explanations
of firms' human sourcing decisions including both knowledge-related and other explanations have established a clear causal link between choice of internal or external human resources and organizational effectiveness. This thesis contributes to theory development by using KBT to demonstrate such a causal link and by identifying, explaining, and measuring the effects of different factors in the causal chain.

(2) Use of qualitative and quantitative measures to validate the theory
In what is viewed by the writer as the most relevant prior study of the link between choice of internal and external human resources and firm performance, Lepak and Snell (2002) found empirical support for their “HR architecture” concept, but because their study was cross-sectional it could provide no evidence of causality, i.e. the process by which changes in the HR architecture led to changes in performance. The use of both quantitative and qualitative measures in this thesis, enabled evidence to be obtained to show both how changes in contracts or different degrees of fit/non-fit lead to increases or decreases in organizational effectiveness, as well as providing quantitative evidence based on correlations, thereby strengthening both validity and reliability (Yin, 2003). Wright et al. (2001) state that the field has very little knowledge of the actual processes by which resource configurations lead to performance outcomes and that the single-informant cross-sectional surveys inherent in much research in the area raises the possibility that research purporting to demonstrate a relationship between HR and performance could result from spurious relationships or even reverse causation. In this thesis, the involvement of 15 departments plus management in two hotels over a period of 17 months, the use of structured and unstructured questionnaires, and the triangulation of evidence based on verbal reports and questionnaire responses with hotel documentation, provided detailed quantitative and qualitative evidence for the purported relationships between human resources and organizational effectiveness and enabled the possibility of reverse causation to be thoroughly assessed and in this case discounted.

(3) New data collection methods that other researchers can use
The principles adopted for design and implementation of the research are documented in Chapter 4. Over the 7 month period of data collection, 20 separate questionnaires were
used containing over 300 separate questions, including closed and open ended questions. Copies of the questionnaires used are shown in Appendix A, together with details of methods used to assess responses. This provides a rich source of data collection methods that future researchers can use in quantitative, qualitative, or multi-method extensions of this study.

(4) Extensions and complements to prior research

The model proposed and validated in this thesis advances previous relevant theories (e.g. Lepak and Snell, 1999; Tsui et al 1995, 1997) not only through its use of KBT as noted earlier in this section, but also by identifying and explaining key factors determining fit of human resources with firms needs and how fit leads to organizational effectiveness.

Consistent with past theorists investigating similar phenomena, including Lepak and Snell (1999) and Tsui et al (1995, 1997), the model adopted a fit approach. Fit approaches vary dependent upon the researcher’s assumptions. Researchers for example may assume static fit (i.e. at a point in time) rather than dynamic fit (i.e. over time) (Milliman et al, 1991; Wright and Snell, 1998). Fit models also frequently assume perfect rationality / presence of perfect information about the future. In practice organizational decision-making, as noted in Chapters 2 and 3 typically reflects bounded rationality (Simon, 1976) and uncertainty (Knight, 1921; Nelson and Winter, 1982; Spender, 1989; Masters and Miles, 2002).

The weaknesses associated with notions of fit based on static fit and presence of perfect information were addressed in this study by including knowledge supply flexibility as a key antecedent to fit. Past studies suggest that flexibility enables organizations to respond to unanticipated changes in their environments (Atkinson, 1984; Volberda, 1998; Teece et al, 1994; Teece, Pisano and Shuen, 1997; Teece, 2000).

The methods used in the study overcame a weakness in Lepak and Snell’s approach (1999, 2002) by replacing the value and uniqueness constructs with utility and rarity constructs, thus removing the inherent duplication of uniqueness/rarity caused by use of
the value construct. The methods used also improved the precision of measurements of fit between suppliers’ knowledge and optimal contract types and between HR practices and contract types over those used by Lepak and Snell (1999, 2002).

In determining what factors influenced organizations’ ability to achieve their objectives given their particular mix of human resources, the proposed model focused on two elements: individuals’ willingness to contribute their knowledge and organizations’ ability to appropriate the benefits of individuals’ knowledge. In both respects, the model was seen as representing an advance over previous research. For example, although studies have noted the discretionary element in individuals’ knowledge contributions (e.g. Nonaka and Takeuchi, 1995; Scarbrough 1999) there has been little exploration of the relationship between fit of human resources with organizations’ needs, and willingness of those resources to contribute to organizational performance through applying their knowledge. Similarly, although studies have noted the difficulty of appropriating the benefits of individuals’ knowledge (e.g. Grant, 1991; Liebeskind, 1996; Spender, 1996) and have identified the ability of contracts and procedures to help in this process (e.g. Alchian and Demsetz, 1973; Coff, 1999, 2003), there has been little exploration of the relationship between fit of human resources with organizations’ needs and organizations’ ability to appropriate the benefits of their knowledge.

As noted in Chapter 3, individuals’ willingness to contribute may be viewed as a negative proxy for individuals’ opportunistic behaviour, since the latter construct (Williamson, 1975) is essentially the converse of the former, which requires self interest to be subordinated to the broader interests of the collective. Incorporating the willingness to contribute construct in a knowledge-based approach to theorizing about firms’ mix of resources thus helps address one of the major criticisms of KBT noted in Chapter 2 (Foss and Klein, 1995; Dosi and Marengo, 1999), that KBT has tended to ignore opportunism.

As noted in Chapter 3, the research model posited that individuals’ willingness to contribute their knowledge to organizational value creation was indicated by individuals’ behaviour rather than mere affect or attitude. From a job performance perspective,
willingness to contribute was thus indicated by behavioural ‘inputs’: continuance, attendance and organizational citizenship behaviour, and behavioural ‘outputs’ i.e. task performance. The use of behavioural rather than affective measures of suppliers’ knowledge contribution helps to address the criticism noted in Chapter 2 and referred to in the conclusions section above of an over emphasis in KBT on an epistemology of possession rather than use.

Having identified the key antecedents to fit and explained how fit influences an organization’s ability to maximize the value of individuals’ knowledge, the model described the final link in the causal chain between maximizing value and organizational effectiveness. This final stage of the model was again seen as advancing beyond previous research (Lepak and Snell, 1999, 2002), which while implying that fit of human resources with organizations’ needs, contracts and HR practices should improve performance, had not shown how this was achieved, whereas the research model in this thesis posited specific mechanisms to account for performance variations. Similarly the theoretical model advanced research into the performance effects of differing employee–organization relationships (Tsui et al, 1995, 1997) by extending the study of cause–effect relationships from employee performance to organizational effectiveness.

Having established the link between maximizing value and organizational effectiveness, a further exploratory investigation was conducted, revealing a significant pattern of interdependencies between human resources and other intellectual resources (hotel brand standards and hotel systems and processes) in their effects on OE. This investigation yielded fresh insights into the complexity of the causal relationships involving human capital/knowledge and firm performance, and also on the links between human knowledge as an intellectual resource and other intellectual resources. The findings of this investigation provide an opportunity for the research community to move beyond delineating knowledge/human cognition from other intellectual resources, to an examination of how organizations should source both human knowledge and other intellectual resources and use them in combination to achieve greater organizational effectiveness. These findings suggest that the findings of prior studies that have focused
solely on the influence of human capital on firm performance may need to be reviewed and highlights the need for interdisciplinary research that focuses on human cognition, information systems, and organizational strategy in combination.

6.3.2 Contributions to Practice

The thesis made several contributions to practice, outlined in Table 6.1:

1. Assistance to practitioners in how to select and use human resources to improve organizational effectiveness

As noted in Chapter 2, across the developed world, the value of firms' intellectual assets, largely driven by investments in skilled human resources, is fast outstripping the value of their financial and physical assets. As a result, a critical challenge facing managers in contemporary firms is the need to improve their methods of obtaining the human resources they need, contracting with and managing these resources, maximizing their value to the organization, and monitoring and measuring their contribution to organizational effectiveness. The approach taken in this thesis provides the foundation for a practical methodology that managers can utilize to assess and improve their organizations' performance in each of these four key areas. For example, the research model suggests that firms should undertake the following activities:

1. **Obtain fit:** To obtain the human resources it needs 'in the right place' and 'at the right time,' an organization should focus on the following factors:
   - Improving knowledge of knowledge demand
   - Understanding the availability of required knowledge
   - Improving knowledge of knowledge supply processes
   - Improving knowledge supply flexibility

Although the thesis did not explicitly investigate the antecedents to each of these factors, the research identified several of these antecedents (as noted above) in addition to finding a strong relationship between these factors and downstream benefits as proposed in the research model. Following the precepts of evidence-based management (Pfeffer and
Sutton, 2006), this suggests the following four additional activities that firms should undertake:

2. **Measure the drivers of fit**: Firms should track their progress in obtaining fit. The questionnaires used in this research give firms a means by which they can rate their progress on each of the four key factors (knowledge of knowledge demand, knowledge availability, knowledge of knowledge supply, and knowledge supply flexibility).

3. **Measure the components of fit**: To track their success in achieving fit, firms should institute initiatives to monitor and track the three key components of fit (knowledge supply fit, knowledge – contract fit, and HR practice – contract fit). The questionnaires used in this research give firms a means by which they can measure each of these components.

4. **Measuring value generation and appropriation**: To track the process by which fit leads to organizational effectiveness, firms should institute initiatives to measure and track knowledge suppliers’ willingness to contribute their knowledge and the firm’s capacity to appropriate value from suppliers’ knowledge. The questionnaires used in this research give firms a means by which they can measure both of these elements.

5. **Measure performance**: To measure the ultimate effectiveness of knowledge sourcing initiatives, firms must measure organizational performance and assess the influence of human knowledge on performance through the value generation and appropriation processes. Firms can use a combination of quantitative and qualitative evidence gathering techniques, as used in the thesis, to conduct such assessments.

Although the research model and data collection methods developed in the research could provide the foundation for a practical methodology, firms would certainly need to build upon the five elements noted above to create a complete methodology. Given that the results of the thesis supported the research model, it is likely that such a methodology
could be very useful in practice. An action research study would be one way for practitioners and researchers to work together to pursue such an opportunity.

(2) Provision of a mechanism to identify and measure the interdependence of human knowledge and other resources in their influence on organizational effectiveness
The additional exploratory investigation of organizational effectiveness revealed significant interdependencies between human resources and other intellectual resources, especially organizational information systems and brand standards. These findings contribute to practice by highlighting the importance of managing human knowledge workers and other intellectual resources in a coordinated manner. Moreover, the research provided an explicit set of procedures that organizations can use to identify and exploit potential synergies between intellectual resources. Mechanisms of particular use to practitioners included the application of qualitative and quantitative cognitive causal mapping techniques (e.g. Clarkson and Hodgkinson, 2005). The findings also highlight the need for different functional areas of the firm (such as human resources, information technology, and brand standards) to work together, rather than independently, to improve organizational performance.

(3) Demonstration of the relevance and usefulness of the approach to organizations in low knowledge-intensive industries
The increasing strategic value of organizations' human resources referred to in Chapter 2 is not limited to high tech/ high knowledge intensive industries. According to a recent survey for example by Cornell University's Center for Hospitality Research, involving 170 hotel GMs from 25 countries, over half the informants identified “leveraging human capital” as their number one concern (Enz, 2001). Using knowledge-based theory in an industry generally regarded as labour intensive rather than knowledge intensive offered a revelatory opportunity (per Yin, 2003) to show that KBT is not limited to industries characterized as 'white collar', 'knowledge intensive' or employing 'knowledge-workers'. The fact that significant support was found for a model based on KBT in such an environment suggests that such an approach should prove relevant in similar business environments and even more relevant in high knowledge intensive environments where
workforce knowledge has comparatively greater strategic value. Thus, the theoretical insights and methodological techniques offered in this study could prove valuable to a wide range of firms in practice.

6.4 Limitations and Future Research

Like all research, this thesis could be improved and extended. Table 6.2 summarizes perceived limitations and describes avenues for future research that could address them.

Table 6.2: Limitations and future research opportunities

<table>
<thead>
<tr>
<th>Component of Thesis</th>
<th>Limitations</th>
<th>Future Research Opportunities</th>
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<tbody>
<tr>
<td>Entire approach</td>
<td>(a) Constrained assumptions</td>
<td>Could conduct investigations of the relationship between firms' mix of internal and external human resources and organizational effectiveness using different meta-theoretical assumptions e.g. different ontological or epistemological positions or multiple such positions, (Lewis and Keleman, 2002).</td>
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<td>(b) Constrained theories</td>
<td>Could construct alternative or competing theories to explain the link between knowledge sourcing and organizational effectiveness rather than relying on a knowledge-based perspective alone. For example, transaction cost economics (TCE) or resource-based theory (RBT) could be used as alternative theoretical bases.</td>
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<tr>
<td>Research Model:</td>
<td>(a) Relative importance of groups of constructs in the model assumed to be equal</td>
<td>Could investigate the extent to which the importance of groups of constructs to the organization might vary dependent on factors in its environment e.g. in tight labour markets obtaining fit could be more important than maximizing value from fit (see also (b) below).</td>
</tr>
<tr>
<td>General limitations</td>
<td>(b) Relative importance of individual constructs in the model assumed to be equal</td>
<td>Could investigate the extent to which weighting constructs in the model according to their differing relative importance at an organizational and /or industry level might improve the explanatory power of the model. For example suppliers’ willingness to contribute their knowledge or an organizations’ ability to appropriate value from it might be expected to vary dependent on the strategic value of suppliers’</td>
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knowledge to that organization. Knowledge rarity might be expected to be valued less than knowledge utility and knowledge supply flexibility to be less important in rules-based organizations such as franchises – as indicated in both hotels in this study.

<p>| Research Model: General limitations (continued) | (c) Limited exploration of temporal factors | The latency of temporal factors was investigated to some extent by gathering evidence over a 17 month period, however future research could conduct a deeper investigation of the implications of temporal factors. For example, as noted in Chapter 5, the time interval between knowledge demand and supply may have allowed informants to refine their knowledge of knowledge demand such that it typically tended to be ‘ahead’ of current knowledge supply fit. Similarly, the speed with which organizations are able to appropriate the benefits of suppliers’ knowledge might be expected to influence the success of their appropriation efforts. |
| --- | (d) Limited consideration of strategic factors | Could investigate the influence of organizations’ strategies in constraining or supporting the influence of fit on organizational effectiveness. For example, in both hotels knowledge-contract fit with some suppliers was suboptimal due to hotel retention or succession planning strategies causing the hotels to adopt contractual relationships appropriate to suppliers with higher levels of knowledge utility and/or rarity (see also recommendations above regarding future investigation of temporal effects). |
|  | (e) Scope limited to contingency-based approach | Could compare the contingency-based approach as used in this thesis which views fit of components in the model (e.g. contracts and HR practices with suppliers’ knowledge characteristics) as optimal for organizational effectiveness, with the effects on organizational effectiveness of the best practices approach, which suggests that some practices are always better than others (Delery and Doty, 1996). |
|  | (f) Scope limited to single level of analysis | Could extend the scope to include not only knowledge in relation to individuals but also in relation to groups e.g. workgroups and departments. This would offer the opportunity to examine the issues raised in this thesis on multiple levels thereby increasing its revelatory power. |</p>
<table>
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<tr>
<th>Research Model: Specific Limitations</th>
<th>(a) Limited scope of knowledge rarity</th>
<th>Consistent with the knowledge-based theoretic and resource-based view literatures (Lepak and Snell, 1999; Barney, 1991) knowledge rarity was treated in this thesis as a unidimensional construct. There was however, evidence from both hotels that rarity of generic forms of knowledge (e.g. knowledge of accountancy) was rated differently from firm-specific or group-specific knowledge (e.g. knowledge of group brand standards). It would be useful for future research to identify the extent to which perceptions of these two forms of rarity differ among organizations (see also next point below)</th>
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<tr>
<td>(b) Limited scope of knowledge – contract fit and HR practice – contract fit measures</td>
<td>Could increase granularity of fit measures by investigating the effects of aligning contract types to a greater extent with the unique knowledge characteristics of individual suppliers. Such research should also help identify and measure constraints on realizing optimal fit at the individual level, e.g. conflicts with policies regarding job parity, conflicts with strategies for retention, development or succession planning involving particular individuals (see earlier comments on strategic factors), other constraints e.g. workplace legislation</td>
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<tr>
<td>(c) Limited scope of exploratory investigation of interdependencies between human resources and other resources.</td>
<td>Could extend the research to include an investigation of interdependencies between human resources and other elements identified in the exploratory investigation, in addition to other intellectual resources</td>
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<tr>
<td>(d) Limited scope of measures of willingness to contribute</td>
<td>Could compare the influence on organizational effectiveness of behavioural measures of willingness to contribute (as used in this thesis), with commonly used affective measures.</td>
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<tr>
<td>(e) Limited scope of cognitive causal mapping techniques</td>
<td>Could include reciprocal as well as one way relationships in performance causal maps</td>
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6.5 Conclusion

Motivated by the increasing importance of knowledge in the economy and the lack of theory linking organizations' sourcing of human knowledge to its use to improve firm performance, this thesis used knowledge-based theory of the firm to explain the relationship between organizations' mix of internal and external human resources and organizational effectiveness.

The approach taken addressed several critical issues identified in the literature by (a) adopting a clear-cut epistemology based solely on human knowledge, (b) establishing the relevance of a knowledge-based approach in an industry typically considered as low knowledge intensive, (c) addressing current weaknesses in KBT viz: an emphasis on knowledge possession rather than use and a failure to acknowledge the importance of opportunism in human behaviour, and (d) addressing the lack of application of KBT to explain how firms obtain knowledge through human sourcing and use that knowledge to improve their performance.

A case study methodology was used to test the approach, using both qualitative and quantitative methods. The study findings demonstrated that the approach taken was feasible and can help researchers better understand the links between (a) organizations'
approaches to sourcing and using internal and external human resources and (b) organizational effectiveness.

Overall this thesis contributes to research by (1) filling a gap in current research into the use of knowledge-based perspectives on firms sourcing of human knowledge, (2) empirically validating the approach taken, using qualitative and quantitative measures, (3) establishing a clear causal link between decisions regarding human sourcing and management and organizational effectiveness, (4) demonstrating critical interdependencies between human knowledge and other intellectual resources in their influence on organizational effectiveness, (5) providing an explicit set of measures and methods for future researchers to further test or develop this research, and (6) illuminating many new directions for research into firms' sourcing and use of human knowledge and the need to improve organizational effectiveness. Key contributions to practice comprise: (1) providing an approach that practitioners can use to optimize selection and use of human resources to improve OE, (2) providing mechanisms for identifying critical interdependencies between human knowledge and other intellectual resources in their influence on OE, and (3) demonstrating the relevance of the approach in an industry traditionally regarded as labour intensive rather than knowledge intensive.
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APPENDICES TO:

A COMPARATIVE CASE STUDY OF KNOWLEDGE SUPPLY AND ORGANIZATIONAL EFFECTIVENESS
Appendix A: Additional Notes Regarding Research Methods
A1. Introduction

This Appendix contains samples of all questionnaires used to collect data during the course of the study. As discussed in Chapter 4 Methodology, questionnaires were used in this study in two general ways (1) to obtain quantitative data that could be used to conduct tests of covariation and (2) to obtain qualitative data based on a discussion about informant’s answers, to allow it to be tested for evidence of temporal precedence of factors in the model and any other causal factors.

Questionnaires marked “(Hotels)” were used to collect data relating to each hotel as a whole, those marked “(Departments)” were used to collect data relating to jobs within informants’ own departments. Those marked “(Hotels and Departments)” were used to collect data from the hotel GMs relating to their direct reportees and from department heads relating to jobs within their own departments. The titles of the principal informants are shown on each questionnaire. As explained in chapter 4 consistent with the focus on departments and job functions quantitative data based on responses were only subsequently used for covariation analysis where they were obtained from department heads, except in a small number of cases where the questionnaire topics were so strategic or specialist in nature that information could only be reliably supplied by the hotel GMs and/or a specific department head. Qualitative comments gathered from all informants during the semi structured and unstructured portions of interviews conducted to obtain their responses to the questionnaires were used for subsequent analysis of temporal precedence and other causal factors.

Each sample questionnaire that follows is accompanied by an explanation of the processes used to collect and analyze responses. A description of the methods used to design questionnaires, conduct interviews and analyze informants’ quantitative and qualitative responses is contained in Chapter 4. A summary of the findings resultant from the questionnaires and the interviews is contained in Chapter 5 and examples and analyses of transcripts of conversations with informants are contained in Appendix B.
A2. Questionnaire 1: Knowledge of Knowledge Demand (Hotels)

Questionnaire completed by:
Hotel A: Hotel GM
Hotel B: Hotel GM

Knowledge of Knowledge Demand (Hotels)

The following questions ask about the extent to which key decision makers in your organization know what types of human knowledge e.g. abilities, expertise, experience and skills that your hotel needs to operate successfully. For the purpose of your response please divide "key decision makers" into:
- Your Group Head Office and Regional Management (Group Managers)
- Yourself (Hotel GM)
- Your Departmental Managers (Hotel Department Managers)

Please note that your hotel can obtain such knowledge from two sources:
- Internal sources: people currently on employment contracts with your hotel or other Hotels within your group
- External sources: temporary staff, consultants, contractors, staffing agencies, outsourcing services and other suppliers that your hotel may hire or contract with from outside the hotel or the group

When answering the following questions, please consider both internal and external sources of knowledge.

Answer each question by placing an X in the appropriate box.

1. Domains of Knowledge

Knowledge domains include:
- generic human abilities, skills and expertise e.g. numeracy and literacy, knowledge of accounting or engineering, communications skills, interpersonal skills etc.
- hotel/hospitality industry expertise and experience e.g. knowledge of Front Office or Back Office operations, knowledge of Food Service operations etc.
- hotel-specific knowledge e.g. knowledge of policies and procedures specific to your hotel/group

<table>
<thead>
<tr>
<th>Knowledge domains</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) To what extent do your Group Managers know the domains of knowledge that your hotel requires in order to operate successfully?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) To what extent do you know the domains of knowledge that your hotel requires in order to operate successfully?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) To what extent do your Hotel Department Managers know the domains of knowledge that your hotel requires in order to operate successfully?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2. Levels of Knowledge

The following questions ask to what extent key decision makers know the levels of knowledge that your hotel needs to operate successfully. The term "level" includes both the quality and quantity of knowledge. Quality refers to the depth of knowledge required whereas quantity refers to the amount or scale of knowledge required.

<table>
<thead>
<tr>
<th>Quality of knowledge</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To a some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Considering all the domains of knowledge that your hotel needs to what extent do your Group Managers know the quality of knowledge of these domains that your hotel requires in order to operate successfully?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) Considering all the domains of knowledge that your hotel needs to what extent do you know the quality of knowledge of these domains that your hotel requires in order to operate successfully?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) Considering all the domains of knowledge that your hotel needs to what extent do your Department Managers know the quality of knowledge of these domains that your hotel requires in order to operate successfully?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quantity of Knowledge</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To a some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(d) Considering all the domains of knowledge that your hotel needs to what extent do your Group Managers know the quantity of knowledge of these domains that your hotel requires in order to operate successfully?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e) Considering all the domains of knowledge that your hotel needs to what extent do your Group Managers know the quantity of knowledge of these domains that your hotel requires in order to operate successfully?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(f) Considering all the domains of knowledge that your hotel needs to what extent do your Group Managers know the quantity of knowledge of these domains that your hotel requires in order to operate successfully?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2. Levels of Knowledge (continued)

<table>
<thead>
<tr>
<th>Combined Quality and Quantity of Knowledge</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(g) Considering all the domains of knowledge that your hotel needs to what extent do your Group Managers know the combined quality and quantity of knowledge of these domains that your hotel requires in order to operate successfully?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(h) Considering all the domains of knowledge that your hotel needs to what extent do you know the combined quality and quantity of knowledge of these domains that your hotel requires in order to operate successfully?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) Considering all the domains of knowledge that your hotel needs to what extent do your Department Managers know the combined quality and quantity of knowledge of these domains that your hotel requires in order to operate successfully?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Method used for assessing responses

A two stage process was used:

(1) Responses were scored based on a 5 point scale as follows:

- Not at all: 1
- To a small extent: 2
- To some extent: 3
- To a large extent: 4
- To a great extent: 5

(2) The mean average score for the responses received for question 1 and question 2 in the questionnaire were calculated and combined to produce the mean average score, which was taken as the overall response score for this questionnaire. Taking the mean average is justified in this instance because there is no existing literature to suggest that some of these dimensions (i.e. domains or levels) or sub dimensions (i.e. quality or quantity) are more important than others.

Consistent with the logic described in A1 above only the qualitative data obtained from the hotel GMs’ comments made during the interviews held to obtain responses to the questionnaire was later used for analysis purposes.
A3. Questionnaire 2: Knowledge of Knowledge Demand (Departments)

Questionnaire completed by:
Hotel A: Hotel Department Heads
Hotel B: Hotel Department Heads

Knowledge of Knowledge Demand (Departments)

The following questions ask about the extent to which you know what types of human knowledge e.g. abilities, expertise, experience and skills, your department needs in order to operate successfully.

Please note that the hotel can obtain such knowledge from two sources of supply:
- Internal sources: people currently on employment contracts with your hotel or other Hotels within your group
- External sources: temporary staff, consultants, contractors, staffing agencies, outsourcing services and other suppliers that your hotel may contract with or hire from outside the hotel or the group

When answering the following questions, please consider both internal and external sources of knowledge supply.

Answer each question by placing an X in the appropriate box.

1. Domains of Knowledge

Knowledge domains include:
- generic human abilities, skills and expertise e.g. numeracy and literacy, knowledge of accounting or engineering, communications skills, interpersonal skills etc.
- hotel/hospitality industry expertise and experience e.g. knowledge of Front Office or Back Office operations, knowledge of Food Service operations etc.
- hotel-specific knowledge e.g. knowledge of policies and procedures specific to your hotel/hotel group

<table>
<thead>
<tr>
<th>Knowledge domains</th>
<th>To a</th>
<th>To a</th>
<th>To a</th>
<th>To a</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>large extent</td>
<td>extent</td>
<td>small extent</td>
<td>not at all</td>
</tr>
</tbody>
</table>

To what extent do you know the domains of knowledge that your department requires in order to operate successfully?
2. Levels of Knowledge

The following questions ask to what extent you know the levels of knowledge your department needs to operate successfully. The term "level" includes both quality and quantity of knowledge. Quality refers to the depth of knowledge required whereas quantity refers to the amount or scale of knowledge required.

<table>
<thead>
<tr>
<th>Knowledge levels</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Considering all the domains of knowledge that your department needs, to what extent do you know the quality of knowledge of these domains that your department requires in order to operate successfully?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) Considering all the domains of knowledge that your department needs, to what extent do you know the quantity of knowledge of these domains that your department requires in order to operate successfully?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) Considering all the domains of knowledge that your department needs, to what extent do you know the combined quality and quantity of knowledge of these domains that your department requires in order to operate successfully?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Method used for assessing responses

A two stage process was used:

(1) Responses were scored based on a 5 point scale as follows:

Not at all: 1  
To a small extent: 2  
To some extent: 3  
To a large extent: 4  
To a great extent: 5

(2) The mean average score for the responses received for question 1 and question 2 were calculated and combined to produce the mean average score, which was taken as the overall response score for this questionnaire and subsequently used for covariation analysis. Taking the mean average is justified in this instance because there is no existing literature to suggest that some of these dimensions (i.e. domains or levels) or sub dimensions (i.e. quality or quantity) are more important than others.

Informants' responses obtained in relation to the dimensions and sub dimensions were not used for covariation analysis but rather as the basis for discussion to facilitate the collection of qualitative data. This data along with other qualitative comments made by informants was subsequently used for analysis of temporal precedence and other causal factors.
A4. Questionnaire 3: Knowledge Availability (Hotels and Departments)

Questionnaire completed by:
Hotel A: Hotel GM and Department Heads
Hotel B: Hotel GM and Department Heads

Knowledge Availability (Hotels and Departments)

The following questions ask about the extent to which the knowledge the hotel [Hotel GM] your department [department heads] needs to operate successfully is available from people in the market. Market availability of knowledge represents knowledge e.g. human abilities, expertise, experience and skills that the hotel could potentially access and use through employing, hiring or contracting with the relevant suppliers.

Availability is measured by the extent to which the knowledge required by the hotel [Hotel GM] your department [department heads] could be obtained from:
- Internal sources: people currently on employment contracts with your hotel or other Hotels within your group
- External sources: temporary staff, consultants, contractors, staffing agencies, outsourcing services and other suppliers that your hotel may hire or contract with from outside the hotel or the group

Please consider both internal and external sources when answering the following questions:

Answer each question by placing an X in the appropriate box.

1. Market availability of suppliers with required domain knowledge

This question asks the extent to which the types, or domains of knowledge the hotel [Hotel GM] your department [department heads] requires in order to operate successfully are available from the above internal and external sources of supply in the market.

Knowledge domains include:
- generic human abilities, skills and expertise e.g. numeracy and literacy, knowledge of accounting or engineering, communications skills, interpersonal skills etc.
- hotel/hospitality industry expertise and experience e.g. knowledge of Front Office or Back Office operations, knowledge of Food Service operations etc.
- hotel-specific knowledge e.g. knowledge of policies and procedures specific to your hotel/hotel group

<table>
<thead>
<tr>
<th>Market availability of suppliers with required domain knowledge</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Availability from Internal Sources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) Availability from External Sources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) Availability from Internal and External Sources combined</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2. Market availability of suppliers with required levels of knowledge

The following questions ask to what extent the levels of knowledge the hotel [Hotel GM] your department [department heads] needs to operate successfully are available from internal and external markets. The term "level" includes both quality and quantity of knowledge in the required knowledge domains. Quality refers to the depth of knowledge required whereas quantity refers to the amount or scale of knowledge required.

<table>
<thead>
<tr>
<th>Market availability of suppliers with required levels of knowledge</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Considering all the domains of knowledge that the hotel [Hotel GM] your department [department heads] needs, to what extent is the quantity of knowledge required available from internal and external markets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) Considering all the domains of knowledge that the hotel [Hotel GM] your department [department heads] needs, to what extent is the quality of knowledge required available from internal and external markets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) Considering all the domains of knowledge that the hotel [Hotel GM] your department [department heads] needs, to what extent is the quantity and quality of knowledge required available from internal and external markets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Method used for assessing responses**

A two stage process was used:

(1) Responses were scored based on a 5 point scale as follows:

Not at all: 1
To a small extent: 2
To some extent: 3
To a large extent: 4
To a great extent: 5

(2) The mean average scores for the responses received for question 1(a) (b) and (c) and question 2 (a) (b) and (c) were aggregated and the combined mean average score used as the overall response score for this questionnaire.

Consistent with the logic described in section A1 above the department heads' responses and resultant scores obtained from this process were used both for covariation analyses and as a basis for discussion to facilitate the collection of qualitative data and the hotel GMs' response scores for the latter purpose only.
A5. Questionnaire 4: Knowledge Supply Processes (Hotels) Part A

Questionnaire completed by:
Hotel A: Hotel GM
Hotel B: Hotel GM

Knowledge Supply Processes (Hotels)
Part A

The following questions relate to the awareness and understanding of key decision makers in your organization regarding important factors involved in the supply of knowledge e.g. human abilities, expertise, experience and skills, by suppliers working for your hotel.

Key decision makers are defined as:
- Your Group Head Office, Regional and Area Management (Group Managers)
- Yourself (hotel GM)
- Your Departmental Managers (Hotel Department Managers)

Knowledge supply processes involve evaluating and contracting with suppliers from two sources:
- Internal sources: people currently on employment contracts with your hotel or other Hotels within your group
- External sources: temporary staff, consultants, contractors, staffing agencies, outsourcing services and other suppliers that your hotel may contract with or hire externally

Research has shown that being able to evaluate suppliers' knowledge, in terms of its utility to an organization and its rarity or scarcity in market terms is critical for supplier selection and provides a basis for determining the optimal contractual mode (e.g. employment or market hire contract) and shaping contractual relationships (e.g. close or arms length relationships).

The following examples show how the utility and rarity of suppliers' knowledge might be evaluated from a hotel standpoint:

- **Knowledge utility** e.g. suppliers may be evaluated in terms of the extent to which they have knowledge which can:
  - help minimize department costs
  - help improve department productivity or efficiency
  - enable the department to provide exceptional service to guests
  - contribute to the development of new market or service opportunities
  - enable the department to respond to new or changing customer demands
  - allow the department to offer reduced prices
  - enable maintenance or improvement in the quality of department services
  - improve guest satisfaction
  - enable improvements in departmental systems or processes
  - help the department to provide the hotel with a competitive edge

- **Knowledge rarity** e.g. suppliers may be evaluated in terms of the extent to which they have knowledge which:
  - is unique or scarce in the external market
  - is highly regarded in the industry
  - is specific to the way the department operates
  - is difficult for competitors to duplicate or imitate
  - can be customized to the department's specific needs
  - enables the department to help the hotel differentiate itself from its competitors
  - is largely developed through on the job experience
  - would be very difficult for competitors to attract away
  - would be very difficult to replace
  - is not available to the hotel's competitors
NB. Resources which are both useful and rare are generally considered valuable.

When answering the questions below please take the above examples into consideration and ask yourself to what extent do key decision makers in your organization consider such factors when evaluating or contracting with potential suppliers?

Answer each question by placing an X in the appropriate box.

<table>
<thead>
<tr>
<th>Group Managers</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To a some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) To what extent do your Group Managers have an awareness and understanding of the utility of suppliers' knowledge?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) To what extent do your Group Managers have an awareness and understanding of the rarity of suppliers' knowledge?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hotel GM</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To a some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(c) To what extent do you have an awareness and understanding of the utility of suppliers' knowledge?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(d) To what extent do you have an awareness and understanding of the rarity of suppliers' knowledge?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hotel Department Managers</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To a some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(e) To what extent do your Hotel Department Managers have an awareness and understanding of the utility of suppliers' knowledge?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(f) To what extent do your Hotel Department Managers have an awareness and understanding of the rarity of suppliers' knowledge?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Method used for assessing responses

A two stage process was used:

(1) Responses were scored based on a 5 point scale as follows:

Not at all: 1
To a small extent: 2
To some extent: 3
To a large extent: 4
To a great extent: 5

(2) The mean average scores for the responses received for question 1(a) to 1(f) inclusive were aggregated and the combined mean average score used as the overall response score for this questionnaire.

Utility and rarity were equally weighted in this and succeeding questionnaires as shown in this Appendix as there is no strong existing literature to suggest that either construct is more important than the other.

Consistent with the logic described above informants’ response scores were used solely as a basis for discussion to facilitate the collection of qualitative data.
A6. Questionnaire 5: Knowledge Supply Processes (Hotels) Part B

Questionnaire completed by:
Hotel A: Hotel GM
Hotel B: Hotel GM

Knowledge Supply Processes (Hotels)
Part B

Research suggests that organizations need to use a range of internalized and externalized contractual modes to satisfy their knowledge supply requirements. Each contractual mode carries with it an inherently different form of relationship between the organization and the supplier as shown in the table below. Different contractual modes and relationships with suppliers enables an organization to achieve different goals e.g. to develop its long term capability, to improve short term productivity and efficiency, to maximize flexibility or to collaborate with suppliers who have complementary abilities, skills, expertise and experience.

<table>
<thead>
<tr>
<th>Contract Type</th>
<th>Contractual Mode</th>
<th>Contractual Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developmental</td>
<td>Internal development</td>
<td>Organization focused</td>
</tr>
<tr>
<td>Acquisitional</td>
<td>Internal acquisition</td>
<td>Symbiotic</td>
</tr>
<tr>
<td>Flexible</td>
<td>Flexible contracting</td>
<td>Transactional</td>
</tr>
<tr>
<td>Collaborative</td>
<td>Alliance</td>
<td>Interdependent</td>
</tr>
</tbody>
</table>

Please read the following descriptions of the four generic contractual modes and associated relationships and then answer the questions that follow:

Type 1: Developmental

Contractual Mode: Internal Development

These arrangements are typically based on full time and long term employment. They are structured around developing the skills and competencies of employees not merely utilizing their current abilities to provide an immediate contribution to the organization. Those employed under such contracts typically include managers, functional specialists and other staff considered to have high potential to progress within the organization (e.g. in this hotel or other Hotels in the group).

Contractual Relationship: Organization focused

The contractual relationship or psychological contract implied in internal development focused contracts is characterized by long term mutual investment by employer and employee in learning and skill development in areas critical to the organization. There is a mutual expectation that the employee will either ‘move up’ in a reasonable period of time or failing that ‘move out’ of the organization to advance his or her career elsewhere, probably in the same industry.
Type 2: Acquisitional

Contractual Mode: Internal Acquisition

Acquisitional work arrangements are typically based on full time or mainly full time, but not necessarily long term employment. They are designed to enable the organization to acquire needed skills and competencies from individuals rather than develop them in-house. Those employed under such contracts are typically taken on to perform standardized and routine operational tasks and are generally not considered to have high potential to progress within the organization.

Contractual Relationship: Symbiotic

The contractual relationship implied in internal acquisition focused contracts is based on the mutual expectation that the parties will continue with the arrangement as long as both continue to benefit. In contrast to Type 1 neither party is committed to a long term relationship and suppliers are evaluated largely on their productivity rather than their long term potential.

Type 3: Flexible

Contractual Mode: Flexible contracting

These arrangements involve external sourcing of staff on a casual part time employment, temporary, or contract basis. Most outsourcing arrangements also fit into this category. The focus of such arrangements is to provide flexible access to skills and competencies the organization needs, but cannot justify retaining internally on a full time basis. Those employed under such contracts temporary staff, consultants, contractors, staffing agencies, outsourcing services and other suppliers that your hotel may hire or contract with externally.

Contractual Relationship: Transactional

The nature of the relationship between the parties involved in flexible contracting arrangements is based on short term economic exchanges. The relationship is typically arms length and focused on the work to be done and the results required. The attitudes of the parties are similarly geared to monitoring and working within the terms of the contract and little is expected on either side in terms of additional effort or commitment. In this sense it is similar to the symbiotic relationship described in Type 2 above, but with even less commitment on either side.

Type 4: Collaborative

Contractual Mode: Alliance

Collaborative arrangements involve externalized contracts of a longer term nature than Type 3 above, and in which there is a greater alliance of interests between firm and supplier. Such arrangements tend to involve significant pooling of information, learning and knowledge transfer between the parties. Examples include franchise arrangements, preferred supplier arrangements and strategic alliances. Some outsourcing and staffing arrangements of a long term and strategic nature may also fall into this category.

Contractual Relationship: Interdependent

The nature of collaborative work arrangements implies a degree of interdependency between the parties. The balance of dependency typically varies according to the balance of power in the relationship; however they all demand an element of trust and reciprocity to enable the pooling of information and the transfer of needed skills. Such arrangements may lead to the development of
more formal alliances e.g. joint ventures, or to one of the parties being acquired by the other. In other cases e.g. successful preferred supplier or franchise arrangements, the nature of the relationship is likely to remain much the same over time.

When answering the questions below please take the above examples into consideration e.g. ask yourself to what extent are factors such as these considered by your group managers, you and your department managers when evaluating or contracting with suppliers and if so to what extent?

<table>
<thead>
<tr>
<th>Contractual modes and relationships with suppliers: Group Managers</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) To what extent do the Group Managers in your organization have an awareness and understanding of how to choose contractual modes that optimally align with hotel objectives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) To what extent do the Group Managers in your organization have an awareness and understanding of how to choose contractual relationships that optimally align with hotel objectives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) To what extent do the Group Managers in your organization have an awareness and understanding of how to choose contractual modes that optimally align with contractual relationships</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contractual modes and relationships with suppliers: Hotel GM</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(d) To what extent do you have an awareness and understanding of how to choose contractual modes that optimally align with hotel objectives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e) To what extent do you have an awareness and understanding of how to choose contractual relationships that optimally align with hotel objectives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(f) To what extent do you have an awareness and understanding of how to choose contractual modes that optimally align with contractual relationships</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
### Contractual modes and relationships with suppliers: Hotel Department Heads

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(g) To what extent do the Hotel department heads have an awareness and understanding of how to choose contractual modes that optimally align with hotel objectives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(h) To what extent do the Hotel department heads have an awareness and understanding of how to choose contractual relationships that optimally align with hotel objectives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) To what extent do the Hotel department heads have an awareness and understanding of how to choose contractual modes that optimally align with contractual relationships</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Method used for assessing responses**

A two stage process was used:

1. Responses were scored based on a 5 point scale as follows:
   - Not at all: 1
   - To a small extent: 2
   - To some extent: 3
   - To a large extent: 4
   - To a great extent: 5

2. The mean average scores for the responses received for question 1(a) to 1(i) inclusive were aggregated and the combined mean average score used as the overall response score for this questionnaire.

For the reasons noted earlier informants' response scores obtained from this process were used solely as a basis for discussion to facilitate the collection of qualitative data.
A7. Questionnaire 6: Knowledge Supply Processes (Hotels) Part C

*Questionnaire completed by:*
Hotel A: Hotel GM
Hotel B: Hotel GM

**Knowledge Supply Processes (Hotels)**
Part C

Following on from Part A and Part B this set of questions seeks to identify the extent to which decision makers in your organization have an awareness and understanding of how to choose the most appropriate contractual modes and relationships for suppliers based on the differing utility and rarity characteristics of their knowledge.

Answer each question by placing an X in the appropriate box.

<table>
<thead>
<tr>
<th>Aligning Knowledge and Contracts: Group Managers</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) To what extent do Group Managers have an awareness and understanding of how to choose contractual modes and relationships that optimally align with suppliers’ knowledge depending on its utility to the hotel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) To what extent do Group Managers have an awareness and understanding of how to choose contractual modes and relationships that optimally align with suppliers’ knowledge depending on its rarity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aligning Knowledge and Contracts: Hotel GM</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(c) To what extent do you have an awareness and understanding of how to choose contractual modes and relationships that optimally align with suppliers’ knowledge depending on its utility to the hotel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(d) To what extent do you have an awareness and understanding of how to choose contractual modes and relationships that optimally align with suppliers’ knowledge depending on its rarity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Aligning Knowledge and Contracts: Hotel Department Heads

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(e)</td>
<td>To what extent do Hotel department heads have an awareness and understanding of how to choose contractual modes and relationships that optimally align with suppliers' knowledge depending on its utility to the hotel</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(f)</td>
<td>To what extent do Hotel department heads have an awareness and understanding of how to choose contractual modes and relationships that optimally align with suppliers' knowledge depending on its rarity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Method used for assessing responses**

A two stage process was used:

1. Responses were scored based on a 5 point scale as follows:
   - Not at all: 1
   - To a small extent: 2
   - To some extent: 3
   - To a large extent: 4
   - To a great extent: 5

2. The mean average scores for the responses received for question 1(a) to 1(f) inclusive were aggregated and the combined mean average score used as the overall response score for this questionnaire.

As with the two preceding questionnaires informants' response scores obtained from this process were used solely as a basis for discussion to facilitate the collection of qualitative data.
A8: Questionnaire 7: Knowledge Supply Processes (Departments) Part A

Questionnaire completed by:
Hotel A: Hotel Department Heads
Hotel B: Hotel Department Heads

Knowledge Supply Processes (Departments)
Part A

The following questions relate to the processes involved in the supply of knowledge e.g. human abilities, expertise, experience and skills by individuals to your department.

Knowledge supply processes involve evaluating and contracting with suppliers from two sources:
- Internal sources: people currently on employment contracts with your hotel or other Hotels within your group
- External sources: temporary staff, consultants, contractors, staffing agencies, outsourcing services and other suppliers that your hotel may contract with or hire externally

Research has shown that being able to evaluate suppliers' knowledge, in terms of its utility to an organization and its rarity or scarcity in market terms is critical for supplier selection and provides a basis for determining the optimal contractual mode (e.g. employment or market hire contract) and shaping contractual relationships (e.g. close or arms length relationships). The following examples show how the utility and rarity of suppliers' knowledge might be evaluated from a hotel department standpoint:

- **Knowledge utility** e.g. suppliers may be evaluated in terms of the extent to which they have knowledge which can:
  - help minimize department costs
  - help improve department productivity or efficiency
  - enable the department to provide exceptional service to guests
  - contribute to the development of new market or service opportunities
  - enable the department to respond to new or changing customer demands
  - allow the department to offer reduced prices
  - enable maintenance or improvement in the quality of department services
  - improve guest satisfaction
  - enable improvements in departmental systems or processes
  - help the department to provide the hotel with a competitive edge

- **Knowledge rarity** e.g. suppliers may be evaluated in terms of the extent to which they have knowledge which …
  - is unique or scarce in the external market
  - is highly regarded in the industry
  - is specific to the way the department operates
  - is difficult for competitors to duplicate or imitate
  - can be customized to the department's specific needs
  - enables the department to help the hotel differentiate itself from its competitors
  - is largely developed through on the job experience
  - would be very difficult for competitors to attract away
  - would be very difficult to replace
  - is not available to the hotel's competitors

NB. Resources which are both useful and rare are generally considered valuable.
When answering the questions below please take the above examples into consideration e.g. ask
yourself do you consider factors such as these when evaluating or contracting with suppliers to
your department and if so to what extent?

Answer each question by placing an X in the appropriate box.

<table>
<thead>
<tr>
<th>Understanding Knowledge Supply Processes</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To a some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) To what extent do you have an awareness and understanding of the utility of suppliers' knowledge?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) To what extent do you have an awareness and understanding of the rarity of suppliers' knowledge?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Method used for assessing responses**

A two stage process was used:

1. Responses were scored based on a 5 point scale as follows:

   Not at all: 1
   To a small extent: 2
   To some extent: 3
   To a large extent: 4
   To a great extent: 5

2. The mean average scores for the responses received for question 1(a) and (b) were
   aggregated and the combined mean average score used as the overall response score for this
   questionnaire.

Consistent with the logic described above informants' response scores were used both for
covariation analyses and as a basis for discussion to facilitate the collection of qualitative data.
Research suggests that organizations need to use a range of internalized and externalized contractual modes to satisfy their knowledge supply requirements. Each contractual mode carries with it an inherently different form of relationship between the organization and the supplier as shown in the table below. Different contractual modes and relationships with suppliers enables an organization to achieve different goals e.g. to develop its long term capability, to improve short term productivity and efficiency, to maximize flexibility or to collaborate with suppliers who have complementary knowledge e.g. abilities, skills, expertise and experience.

<table>
<thead>
<tr>
<th>Contract Type</th>
<th>Contractual Mode</th>
<th>Contractual Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developmental</td>
<td>Internal development</td>
<td>Organization focused</td>
</tr>
<tr>
<td>Acquisitional</td>
<td>Internal acquisition</td>
<td>Symbiotic</td>
</tr>
<tr>
<td>Flexible</td>
<td>Flexible contracting</td>
<td>Transactional</td>
</tr>
<tr>
<td>Collaborative</td>
<td>Alliance</td>
<td>Interdependent</td>
</tr>
</tbody>
</table>

Please read the following descriptions of the four generic contractual modes and associated relationships and then answer the questions that follow:

**Type 1: Developmental**

**Contractual Mode : Internal Development**

These arrangements are typically based on full time and long term employment. They are structured around developing the skills and competencies of employees not merely utilizing their current abilities to provide an immediate contribution to the organization. Those employed under such contracts typically include managers, functional specialists and other staff considered to have high potential to progress within the organization (e.g. in this hotel or other Hotels in the group).

**Contractual Relationship: Organization focused**

The contractual relationship or psychological contract implied in internal development focused contracts is characterized by long term mutual investment by employer and employee in learning and skill development in areas critical to the organization. There is a mutual expectation that the employee will either 'move up' in a reasonable period of time or failing that 'move out' of the organization to advance his or her career elsewhere, probably in the same industry.
Type 2: Acquisitional

Contractual Mode: Internal Acquisition

Acquisitional work arrangements are typically based on full time or mainly full time, but not necessarily long term employment. They are designed to enable the organization to acquire needed skills and competencies from individuals rather than develop them in-house. Those employed under such contracts are typically taken on to perform standardized and routine operational tasks and are generally not considered to have high potential to progress within the organization.

Contractual Relationship: Symbiotic

The contractual relationship implied in internal acquisition focused contracts is based on the mutual expectation that the parties will continue with the arrangement as long as both continue to benefit. In contrast to Type 1 neither party is committed to a long term relationship and suppliers are evaluated largely on their productivity rather than their long term potential.

Type 3: Flexible

Contractual Mode: Flexible contracting

These arrangements involve external sourcing of staff on a casual part time employment, temporary, or contract basis. Most outsourcing arrangements also fit into this category. The focus of such arrangements is to provide flexible access to skills and competencies the organization needs, but cannot justify retaining internally on a full time basis. Those employed under such contracts temporary staff, consultants, contractors, staffing agencies, outsourcing services and other suppliers that your hotel may hire or contract with externally.

Contractual Relationship: Transactional

The nature of the relationship between the parties involved in flexible contracting arrangements is based on short term economic exchanges. The relationship is typically arms length and focused on the work to be done and the results required. The attitudes of the parties are similarly geared to monitoring and working within the terms of the contract and little is expected on either side in terms of additional effort or commitment. In this sense it is similar to the symbiotic relationship described in Type 2 above, but with even less commitment on either side.

Type 4: Collaborative

Contractual Mode: Alliance

Collaborative arrangements involve externalized contracts of a longer term nature than Type 3 above, and in which there is a greater alliance of interests between firm and supplier. Such arrangements tend to involve significant pooling of information, learning and knowledge transfer between the parties. Examples include franchise arrangements, preferred supplier arrangements and strategic alliances. Some outsourcing and staffing arrangements of a long term and strategic nature may also fall into this category.

Contractual Relationship: Interdependent

The nature of collaborative work arrangements implies a degree of interdependency between the parties. The balance of dependency typically varies according to the balance of power in the relationship; however they all demand an element of trust and reciprocity to enable the pooling of information and the transfer of needed skills. Such arrangements may lead to the development of
more formal alliances e.g. joint ventures, or to one of the parties being acquired by the other. In other cases e.g. successful preferred supplier or franchise arrangements, the nature of the relationship is likely to remain much the same over time.

When answering the questions below please take the above examples into consideration e.g. ask yourself do you consider factors such as these when evaluating or contracting with suppliers and if so to what extent?

Answer each question by placing an X in the appropriate box.

<table>
<thead>
<tr>
<th>Contractual modes and relationships with suppliers</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) To what extent do you have an awareness and understanding of how to choose contractual modes that optimally align with hotel objectives</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>(b) To what extent do you have an awareness and understanding of how to choose contractual relationships that optimally align with hotel objectives</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>(c) To what extent do you have an awareness and understanding of how to choose contractual modes that optimally align with contractual relationships</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

**Method used for assessing responses**

A two stage process was used:

(1) Responses were scored based on a 5 point scale as follows:

Not at all: 1  
To a small extent: 2  
To some extent: 3  
To a large extent: 4  
To a great extent: 5

(2) The mean average scores for the responses received for question 1(a) (b) and (c) were aggregated and the combined mean average score used as the overall response score for this questionnaire.

Consistent with the logic described above informants' response scores were used both for covariation analyses and as a basis for discussion to facilitate the collection of qualitative data.
A10. Questionnaire 9: Knowledge Supply Processes (Departments) Part C

Questionnaire completed by:
Hotel A: Hotel Department Heads
Hotel B: Hotel Department Heads

Knowledge Supply Processes (Departments) Part C

Following on from Part A and Part B this set of questions seeks to identify the extent to which you have awareness and understanding of how to choose the most appropriate contractual modes and relationships for suppliers based on the differing utility and rarity characteristics of their knowledge.

Answer each question by placing an X in the appropriate box.

<table>
<thead>
<tr>
<th>Aligning Knowledge and Contracts</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) To what extent do you have an awareness and understanding of how to choose contractual modes and relationships that optimally align with suppliers' knowledge depending on its utility to the hotel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) To what extent do you have an awareness and understanding of how to choose contractual modes and relationships that optimally align with suppliers' knowledge depending on its rarity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Method used for assessing responses**

A two stage process was used:

(1) Responses were scored based on a 5 point scale as follows:

Not at all: 1
To a small extent: 2
To some extent: 3
To a large extent: 4
To a great extent: 5

(2) The mean average scores for the responses received for question 1(a) and (b) were aggregated and the combined mean average score used as the overall response score for this questionnaire.

As with questionnaire B above informants' response scores were used both for covariation analyses and as a basis for discussion to facilitate the collection of qualitative data.
A11. Questionnaire 10: Knowledge Supply Flexibility (Hotels)

**Questionnaire completed by:**
Hotel A: Hotel GM  
Hotel B: Hotel GM

## Knowledge Supply Flexibility (Hotels)

The following questions seek to measure your hotel's knowledge supply flexibility. Knowledge supply flexibility refers to your hotel's ability to quickly reconfigure resources and activities in response to environmental demands.

Knowledge supply flexibility can be analyzed on two dimensions: locus and type, as follows:

- **Locus of flexibility:**
  - Practices: The degree to which practices are adaptable and/or can be varied
  - Knowledge: The degree to which suppliers' knowledge e.g. human abilities, expertise, experience and skills, is adaptable and/or can be varied

- **Type of flexibility:**
  - Resources: The degree to which practices and knowledge are adaptable and/or can be varied
  - Coordination: The degree to which practices and knowledge can be re-coordinated/reconfigured

This characterization of flexibility allows four different types of flexibility:

- Resource flexibility of practices
- Resource flexibility of knowledge
- Coordination flexibility of practices
- Coordination flexibility of knowledge

Answer each question by placing an X in the appropriate box.

### 1. Resource flexibility of practices

<table>
<thead>
<tr>
<th>Not at all</th>
<th>To a small extent</th>
<th>To some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

(a) To what extent are the HR and contract management practices that your hotel uses flexible (i.e., applicable across job functions and Departments)?

(b) To what extent do your individual Departments have flexibility/autonomy to choose what HR and contract management practices that they use?

### 2. Resource flexibility of knowledge

<table>
<thead>
<tr>
<th>Not at all</th>
<th>To a small extent</th>
<th>To some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

(a) To what extent do workers contracted to your hotel (i.e., internal and external suppliers) possess a sufficient breadth of knowledge to enable them to perform flexibly (i.e., a wide variety of tasks)?

(b) To what extent do workers contracted to your hotel (i.e., internal and external suppliers) possess the ability to acquire new knowledge to cater for changing hotel requirements?
3. Coordination flexibility of practices

<table>
<thead>
<tr>
<th>Item</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) To what extent are the HR and contract management practices that your hotel uses flexible (i.e., easily adapted to changes in your business environment such as market availability of people/services)?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) To what extent does your hotel have practices that enable it to obtain accurate and timely feedback on the efficacy of various HR and contract management practices (e.g., job design, recruitment, training, compensation, performance appraisal)?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Coordination flexibility of knowledge

<table>
<thead>
<tr>
<th>Item</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) To what extent does your hotel's workforce (incl. Internal and external suppliers) possess sufficient breadth of knowledge to enable it to perform a wide variety of tasks?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) To what extent does your hotel have the ability to acquire knowledge it requires on demand from a pool of available external workers?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Method used for assessing responses**

A two stage process was used:

(1) Responses were scored based on a 5 point scale as follows:

Not at all: 1  
To a small extent: 2  
To some extent: 3  
To a large extent: 4  
To a great extent: 5

(2) The mean average scores for the responses received for questions 1, 2, 3 and 4 were aggregated and the combined mean average score used as the overall response score for this questionnaire. Taking the mean average is justified in this instance because there is no existing literature to suggest that some of these dimensions (i.e. resource or coordination flexibility or knowledge or practices) are more important than others.

Given the strategic nature of the questions responses to this questionnaire were only sought from the Hotel GMs. The resultant scores obtained from this process were therefore used both for covariation analyses and as a basis for discussion to facilitate the collection of qualitative data.
A12. Questionnaire 11: Knowledge Supply Fit (Hotels and Departments)

**Questionnaire completed by:**
Hotel A: Hotel GM and Department Heads
Hotel B: Hotel GM and Department Heads

**Knowledge Supply Fit (Hotels and Departments)**

A previous questionnaire* asked about the extent to which people with the knowledge e.g. human abilities, expertise, experience and skills the hotel [Hotel GM] your department [department heads] requires are potentially available in the external market, or from within your hotel group. This questionnaire in contrast asks about the extent to which those people who are actually employed, contracted with, or hired to work for your hotel typically possess the knowledge your hotel [Hotel GM] your department [department heads] requires to operate successfully.

As noted previously suppliers of knowledge to your hotel can come from two sources:
- Internal sources: people currently on employment contracts with your hotel or other hotels within your group
- External sources: temporary staff, consultants, contractors, staffing agencies, outsourcing services and other suppliers that your hotel may contract with or hire from outside your hotel

Please consider both internal and external sources when answering the following questions:

* (Questionnaire 3 in this Appendix)

**1. Your Suppliers’ Possession of Domains of Knowledge Required by Your Hotel**

In the following questions knowledge domains include:
- **generic human abilities, skills and expertise** e.g. numeracy and literacy, knowledge of accounting or engineering, communications skills, interpersonal skills etc.
- hotel/hospitality industry expertise and experience e.g. knowledge of Front Office or Back Office operations, knowledge of Food Service operations etc.
- hotel-specific knowledge e.g. knowledge of policies and procedures specific to your hotel/hotel group

Please indicate below the extent to which on average your suppliers from internal and external sources typically possess the domains, or types of knowledge that your hotel [Hotel GM] your department [department heads] requires to operate successfully.

Answer each question by placing an X in the appropriate box.

<table>
<thead>
<tr>
<th>Your Suppliers’ Possession of Domains of Knowledge Required by Your Hotel</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Your suppliers from internal sources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) Your suppliers from external sources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) Your suppliers from internal and external sources combined</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2. Your Suppliers' Possession of Levels of Knowledge Required by Your Department:

In the following questions, "level" refers to the quantity and quality of knowledge typically possessed by your suppliers where quantity refers to the amount or scale of knowledge they possess in each domain and quality refers to their depth of knowledge or degree of expertise in the relevant domains.

<table>
<thead>
<tr>
<th>Your Suppliers' Possession of Levels of Knowledge Required by Your Department</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Considering all the domains of knowledge that your hotel [Hotel GM] your department [department heads] needs, to what extent do your suppliers from internal and external markets possess the <strong>quantity</strong> of knowledge required?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) Considering all the domains of knowledge that your hotel [Hotel GM] your department [department heads] needs, to what extent do your suppliers from internal and external markets possess the <strong>quality</strong> of knowledge required?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) Considering all the domains of knowledge that your hotel [Hotel GM] your department [department heads] needs, to what extent do your suppliers from internal and external markets possess the <strong>quantity and quality</strong> of knowledge required?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Method used for assessing responses**

A two stage process was used:

(1) Responses were scored based on a 5 point scale as follows:

- Not at all: 1
- To a small extent: 2
- To some extent: 3
- To a large extent: 4
- To a great extent: 5

(2) The mean average score for the responses received for question 1 and question 2 were calculated and combined to produce the mean average score used as the overall response score for this questionnaire. As noted in relation to Questionnaire 1 earlier in this Appendix, taking the mean average is justified in this instance because there is no existing literature to suggest that some of these dimensions (i.e. domains or levels or sub dimensions i.e. quality or quantity) are more important than others.

The department heads' responses and resultant scores obtained from this process were used both for covariation analyses and as a basis for discussion to facilitate the collection of qualitative data and the hotel GMs' responses and resultant scores for the latter purpose only.
A13. Questionnaire 12: Knowledge Supplier Characteristics (Hotels and Departments)

*Questionnaire completed by:*
*Hotel A: Hotel GM and Department Heads*
*Hotel B: Hotel GM and Department Heads*

**Knowledge Supplier Characteristics (Hotels and Departments)**

The following questions seek to profile the utility and rarity of the knowledge of suppliers who are typically employed, hired or contracted to perform job functions that report directly to you [Hotel GM] for your department [department heads].

Please note that these questions are seeking to draw on your experience to create a typical profile of the knowledge e.g. abilities, expertise, experience and skills, actually possessed by suppliers, as distinct from what you or others might consider to be preferable or ideal.

As noted previously knowledge may be supplied from two sources:
- Internal sources: people currently on employment contracts with your hotel or other Hotels within your group
- External sources: temporary staff, consultants, contractors, staffing agencies, outsourcing services and other suppliers that your hotel may contract with or hire externally

Please consider both internal and external sources when answering the questions below.

Answer each question by placing an X in the appropriate box.

**Department:**
**Job Title:**

**Utility of suppliers' knowledge to the hotel**

Based on my experience individuals who perform this job typically possess knowledge that can:

<table>
<thead>
<tr>
<th>Utility measures</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>...help minimize hotel costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...help improve hotel productivity or efficiency</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>...enable the hotel to provide exceptional service to guests</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...contribute to the development of new market or service opportunities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...enable the hotel to respond to new or changing customer demands</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...allow the hotel to offer reduced prices</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...enable maintenance or improvement in the quality of hotel services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
(Continued):

<table>
<thead>
<tr>
<th>Rarity measures</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>...help improve guest satisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...enable improvements in hotel systems or processes</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Rarity of suppliers’ knowledge

Based on my experience individuals who perform this job typically possess knowledge that:

<table>
<thead>
<tr>
<th>Rarity measures</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>...is unique or scarce in the external market</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...is specific to the hotel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...would be difficult for competitors to duplicate or imitate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...can be customized to the hotel’s specific needs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...can distinguish the hotel from its competitors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...is largely developed through on the job experience</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...would be very difficult for competitors’ to attract away from the hotel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...would be very difficult to replace</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...is not available to the hotel’s competitors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Job title 2 etc: *(Repeat as for job title 1)*
Method used for assessing responses

A two stage process was used:

(1) Responses were scored based on a 5 point scale as follows:

Strongly disagree: 1
Disagree: 2
Neither agree nor disagree: 3
Agree: 4
Strongly agree: 5

(2) For each job function within each department the responses received were aggregated and the combined mean average scores used as the overall response scores respectively for utility and rarity of suppliers' knowledge.

Quantitative data obtained from this questionnaire from all informants was not used for later covariation analysis directly but combined with data obtained from the next questionnaire (see Appendix 1A). Questionnaire 13 below) to help determine knowledge – contract fit. The procedure used to determine fit is described at the end of Questionnaire 13. As with all questionnaires qualitative data obtained from informants’ comments obtained in the course of interviews associated with collecting responses to this questionnaire were later used for analyzing temporal precedence and the presence of other causal factors.

For further information regarding the design and administration of the questionnaire see Chapter 4 section 4.5.2.2. For a description of the findings relating to knowledge – contract fit see Chapter 5 and for analyses of informants’ comments see Appendix B.
A14. Questionnaire 13: Knowledge-Contract Fit (Hotels and Departments)

Questionnaire completed by:
Hotel A: Hotel GM for all jobs in the hotel plus Group GM for Hotel overall
Hotel B: Hotel GM for his direct reportees and Financial Controller for all other jobs in the hotel

Knowledge – Contract Fit (Hotels and Departments)

The following questions seek to match the contractual arrangements currently used by the hotel with all its internal and external suppliers, to the four generic types of contract discussed in an earlier questionnaire. For your reference I note again below a description of the four generic types of contract and their associated contractual modes and relationships. Please read the descriptions below and then answer the questions which follow in relation to the contract types that apply to each job function.

Types of Contracts

Research suggests that organizations need to use a range of internalized and externalized contractual modes to satisfy their knowledge supply requirements. Each contractual mode carries with it an inherently different form of relationship between the organization and the supplier as shown in the table below. Different contractual modes and relationships with suppliers enables an organization to achieve different goals e.g. to develop its long term capability, to improve short term productivity and efficiency, to maximize flexibility or to collaborate with suppliers who have complementary knowledge e.g. abilities, skills, expertise and experience.

<table>
<thead>
<tr>
<th>Contract Type</th>
<th>Contractual Mode</th>
<th>Contractual Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developmental</td>
<td>Internal development</td>
<td>Organization focused</td>
</tr>
<tr>
<td>Acquisitional</td>
<td>Internal acquisition</td>
<td>Symbiotic</td>
</tr>
<tr>
<td>Flexible</td>
<td>Flexible contracting</td>
<td>Transactional</td>
</tr>
<tr>
<td>Collaborative</td>
<td>Alliance</td>
<td>Interdependent</td>
</tr>
</tbody>
</table>

Please read the following descriptions of the four generic contractual modes and associated relationships and then answer the questions that follow:

Type 1: Developmental

Contractual Mode : Internal Development

These arrangements are typically based on full time and long term employment. They are structured around developing the skills and competencies of employees not merely utilizing their current abilities to provide an immediate contribution to the organization. Those employed under such contracts typically include managers, functional specialists and other staff considered to have high potential to progress within the organization (e.g. in this hotel or other Hotels in the group)

Contractual Relationship: Organization focused

The contractual relationship or psychological contract implied in internal development focused contracts is characterized by long term mutual investment by employer and employee in learning and skill development in areas critical to the organization. There is a mutual expectation that the employee will either ‘move up’ in a reasonable period of time or failing that ‘move out’ of the organization to advance his or her career elsewhere, probably in the same industry.
Type 2: Acquisitional

Contractual Mode: Internal Acquisition

Acquisitional work arrangements are typically based on full time or mainly full time, but not necessarily long term employment. They are designed to enable the organization to acquire needed skills and competencies from individuals rather than develop them in-house. Those employed under such contracts are typically taken on to perform standardized and routine operational tasks and are generally not considered to have high potential to progress within the organization.

Contractual Relationship: Symbiotic

The contractual relationship implied in internal acquisition focused contracts is based on the mutual expectation that the parties will continue with the arrangement as long as both continue to benefit. In contrast to Type 1 neither party is committed to a long term relationship and suppliers are evaluated largely on their productivity rather than their long term potential.

Type 3: Flexible

Contractual Mode: Flexible contracting

These arrangements involve external sourcing of staff on a casual part time employment, temporary, or contract basis. Most outsourcing arrangements also fit into this category. The focus of such arrangements is to provide flexible access to skills and competencies the organization needs, but cannot justify retaining internally on a full time basis. Those employed under such contracts temporary staff, consultants, contractors, staffing agencies, outsourcing services and other suppliers that your hotel may hire or contract with externally.

Contractual Relationship: Transactional

The nature of the relationship between the parties involved in flexible contracting arrangements is based on short term economic exchanges. The relationship is typically arms length and focused on the work to be done and the results required. The attitudes of the parties are similarly geared to monitoring and working within the terms of the contract and little is expected on either side in terms of additional effort or commitment. In this sense it is similar to the symbiotic relationship described in Type 2 above, but with even less commitment on either side.

Type 4: Collaborative

Contractual Mode: Alliance

Collaborative arrangements involve externalized contracts of a longer term nature than Type 3 above, and in which there is a greater alliance of interests between firm and supplier. Such arrangements tend to involve significant pooling of information, learning and knowledge transfer between the parties. Examples include franchise arrangements, preferred supplier arrangements and strategic alliances. Some outsourcing and staffing arrangements of a long term and strategic nature may also fall into this category.

Contractual Relationship: Interdependent

The nature of collaborative work arrangements implies a degree of interdependency between the parties. The balance of dependency typically varies according to the balance of power in the relationship; however they all demand an element of trust and reciprocity to enable the pooling of information and the transfer of needed skills. Such arrangements may lead to the development of
more formal alliances e.g. joint ventures, or to one of the parties being acquired by the other. In other cases e.g. successful preferred supplier or franchise arrangements, the nature of the relationship is likely to remain much the same over time.

Guidance for completing this Questionnaire

When completing this questionnaire please indicate for each job function the Contractual Mode and Contractual Relationship (based on the above contract typology) that you consider most accurately reflects the contractual arrangement currently in place.

Note that these questions are seeking to draw on your experience to create a profile of actual Contract Types, as distinct from what you or others might consider to be preferable or ideal for the job in question.

The job titles are based on the descriptions I have obtained from department heads in response to previous questionnaires. If any of my job titles are incorrect, or there are additional job functions please let me know.

If individuals share the same job title, but in your view are actually working under different Contract Types then divide them by Contract Type. Where managers have already indicated to me that they have people with the same job title working under different Contract Types I have reflected this.

There may be instances where you consider that the Contractual Mode seems to fit one Contract Type and the Contractual Relationship another Contract Type, or vice versa. If so mark accordingly.

Please note the following abbreviations are used for the four pairs of contractual modes and contractual relationships described in the above contract typology:

<table>
<thead>
<tr>
<th>Type 1</th>
<th>Contractual Mode: Internal Development</th>
<th>CM=ID</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Contractual Relationship: Organization Focused</td>
<td>CR=OF</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type 2</th>
<th>Contractual Mode: Internal Acquisition</th>
<th>CM=IA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Contractual Relationship: Symbiotic</td>
<td>CR=S</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type 3</th>
<th>Contractual Mode: Flexible Contracting</th>
<th>CM=FC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Contractual Relationship: Transactional</td>
<td>CR=T</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type 4</th>
<th>Contractual Mode: Alliance</th>
<th>CM=A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Contractual Relationship: Interdependent</td>
<td>CR=I</td>
</tr>
</tbody>
</table>
Process used to determine Knowledge – Contract fit

The process used to determine Knowledge- Contract fit was as follows:

(1) The results of this questionnaire revealed the contract type (based on the contract typology described in the introduction to the questionnaire) that the informants considered most accurately reflected the contractual arrangements currently used by the hotel for suppliers performing each job.

(2) The fit between the actual contract type used for each job and the configuration of knowledge utility and rarity typical of suppliers performing that job (based on the results of questionnaire 12 listed earlier in this Appendix) was then measured and the result expressed on a 5 point scale.

(3) As a part of the process steps described in (1) and (2) above the contract type that would have been optimal for the job in question, based on the configuration of knowledge utility and rarity typical of suppliers performing that job, was also identified and retained for later use (see Questionnaire 14: HR practice – contract fit, discussed next in this Appendix).

As noted above quantitative data obtained from this questionnaire from all informants was combined with that obtained from the previous questionnaire (see A13 .Questionnaire 12 above) to help determine knowledge – contract fit.

Methods used to determine the match between suppliers’ job knowledge utility and rarity and between actual and optimal contract types in order to determine fit involved a two stage process as described overleaf.

General note
The levels of knowledge-contract fit for each department in each hotel derived from the above process were later analyzed for evidence of covariation analysis. Qualitative data obtained from informants’ comments obtained in the course of interviews associated with collecting responses to Questionnaire 13 were later used for analyzing temporal precedence and the presence of other causal factors.

For further information regarding the design and administration of the questionnaire see Chapter 4 section 4.5.2.2. For a description of the findings relating to knowledge – contract fit see Chapter 5 and for analyses of informants’ comments made in the course of interviews associated with the questionnaire, see Appendix B.
Stage 1

A 2x2 matrix was designed (see below) based on a modified version of Lepak and Snell’s (1999) HR Architecture (see Chapter 4) which enabled the extent to which contract types matched suppliers’ knowledge utility and rarity to be identified and measured. Consistent with the concept of the HR architecture (see Lepak and Snell 1999 p37, Figure 2) knowledge utility increases from left to right along the horizontal axis and knowledge rarity increases from bottom to top along the vertical axis. Each job function in the hotel is allotted a position in one of the 4 quadrants in the matrix based on the knowledge utility and rarity profile typical of suppliers performing that job. Similarly each generic contract type: Developmental, Acquisitional, Flexible and Collaborative is mapped to one of the four quadrants based on its fit with the knowledge utility and rarity characteristics of job functions in that quadrant (per Lepak and Snell 1999).

![2x2 Matrix](image)

Stage 2

A limitation of the Lepak and Snell (1999) model which is reflected in the 2*2 matrix above is its lack of granularity, in that an equal level of fit is implied between each contract type and the (widely varying) knowledge configurations occupying its quadrant of the matrix. To enable a more precise measurement of the fit between contract types and knowledge characteristics the above 2x2 matrix was therefore extended to a 5x5 grid. This enabled supplier knowledge utility and rarity configurations to be mapped to one of 25 cells in the grid rather than merely one of four cells.

The following four hypothetical examples illustrate the formula applied to measure knowledge-contract fit. In each case the relative position of a supplier’s knowledge utility and rarity is plotted by reference to the coordinates shown on the X and Y axes. Thus a supplier with a score of more than 4.3 for both knowledge utility and rarity would be positioned in the top right hand cell in each of the examples below whereas a supplier with a score of more than 4.3 knowledge utility and less than 1.9 for knowledge rarity would appear in the bottom right hand cell. Please note the position of the supplier knowledge configuration relative to the boundaries of the cell (denoted by an asterisk) is intended to be illustrative rather than definitive.

The extent of fit between knowledge characteristics and each of the four generic contract types was measured on a 5 point scale with 5 representing the highest fit between knowledge characteristics and contract type and 1 the lowest fit. Consistent with the implications of Lepak and Snell’s (1999) model and the theoretical model, contract fit is envisaged as a continuum with the highest fit between knowledge characteristics and contract types occurring at the extremities of the grid and progressively reducing.
Thus for example a Developmental contract type is assumed to optimally fit those suppliers with the highest levels of knowledge utility and rarity i.e. those positioned in the top right hand cell in Example 1 below and to progressively reduce in terms of fit with suppliers' knowledge configurations as they reduce in terms of both utility and rarity. Similarly an Acquisitional contract type is assumed to optimally fit those suppliers with the highest levels of knowledge utility but lowest levels of rarity i.e. those positioned in the bottom right hand cell in Example 1 below and to progressively reduce in terms of fit with knowledge configurations as they reduce in terms of utility and increase in rarity. The same principles for measuring knowledge-contract fit apply for Flexible and Collaborative contracts as can be seen from Examples 3 and 4 below. Consistent with the logic of the model, any one of the four contract types is equally (and only moderately) applicable to knowledge configurations occupying the cell in the middle of the grid, as can be seen in all the examples.

**Example 1: Developmental contract**

In this example according to the results of questionnaire 12 the supplier’s knowledge utility is 4.3 and knowledge rarity 3.2. The actual contract type has been identified according to the results of this questionnaire as Developmental. The resultant score for knowledge contract fit is 3. As can be seen from its position on the grid while the optimal contract type is also Developmental this supplier’s knowledge configuration puts him/her close to the borderline in terms of fit between Developmental and Acquisitional contract types.
Example 2: Acquisitional contract

In this example the supplier’s knowledge utility and rarity according to the results of questionnaire 12 are both 2.9. The actual contract type has been identified according to the results of this questionnaire as Acquisitional. The resultant score is 3. In this case as can be seen the supplier’s knowledge configuration means that the optimal contract type would be marginally better suited to Flexible rather than Acquisitional.

Example 3: Flexible contract

In this example the supplier’s knowledge utility and rarity according to the results of questionnaire 12 are both 1.9. The actual contract type has been identified according to the results of this questionnaire as Flexible. The resultant score is 5 since the contract type is ideally suited to this knowledge configuration. Actual and optimal contract types are also the same in this instance.
**Example 4: Collaborative contract**

In this example according to the results of questionnaire 12 the supplier's knowledge utility is 2.4 and rarity 3.7. The actual contract type has been identified according to the results of this questionnaire as Collaborative. The resultant score is 4. Actual and optimal contract types are the same in this instance.

**Example 5: Hybrid contract**

A limitation of Lepak and Snell's (1999, 2002) framework is that it does not clearly allow for hybrid contracts. It is not uncommon however in practice to find contracts where the contractual mode is appropriate to one contract type and the relationship to another contract type. In this example, according to the results of questionnaire 12 the supplier's knowledge utility is 3.3 and rarity 3.2; the contractual mode is thus Flexible and the contractual relationship Acquisitional i.e. the contract is a hybrid of contract type 3 and type 2. The resultant score is calculated by matching the knowledge configuration to the grids shown in both examples 2 and 3 above (reproduced below). If the contract type is assumed to be type 2 the score is 3. The same score results if it is assumed to be a type 3. The overall score is therefore 3. Actual and optimal contract types are the same in this instance.
A15. Questionnaire 14: HR Practice – Contract fit (Hotels and Departments)

**Questionnaire completed by:**
Hotel A: Hotel GM for direct reportees, Group GM for hotel overall and Department Heads for all other jobs in the hotel
Hotel B: Hotel GM for direct reportees and HR Manager for all other jobs in the hotel

**HR practice – contract fit (Hotels and Departments)**

Please indicate for each job function the HR practices from the list below that you consider most closely approximate to the HR practices currently used by the hotel and applied to suppliers performing the job.

Answer each question by placing an X in the appropriate box.

*NB. The scoring method and example entries for CT1-CT4 are included here solely for the benefit of the reader. The methods used for calculating scores are explained below:*

**Department:**
**Job Title:**

<table>
<thead>
<tr>
<th>The design of this job ...</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>CT1</th>
<th>CT2</th>
<th>CT3</th>
<th>CT4</th>
</tr>
</thead>
<tbody>
<tr>
<td>...allows individuals performing the job to routinely make changes in the way they perform it</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...is designed around the individual skills of those performing it</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>...is extremely simple</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>...is standardized throughout the hotel industry</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>RC</td>
</tr>
<tr>
<td>Description</td>
<td>Strongly disagree</td>
<td>Disagree</td>
<td>Neither agree nor disagree</td>
<td>Agree</td>
<td>Strongly agree</td>
<td>CT1</td>
<td>CT2</td>
<td>CT3</td>
<td>CT4</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------</td>
<td>-------------------</td>
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<td>----------------</td>
<td>-----</td>
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<td>-----</td>
</tr>
<tr>
<td>...is well-defined</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...empowers those performing it to make decisions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...has a high degree of job security</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>...includes a wide variety of tasks</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>RC</td>
</tr>
<tr>
<td>...enables job rotation i.e. individuals performing it can do other jobs while other individuals do this job</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>...requires those performing it to participate in cross-functional teams and networks</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The recruitment &amp; selection process for individuals performing this job...</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...assesses their industry knowledge and experience</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

289
<p>| ...emphasizes promotion from within the Hotel/ the Group |   |   | X |
| ...emphasizes their ability to collaborate and work in teams |   | X |   |
| ...focuses on selecting the best all around candidate regardless of the specific job |   |   | X |
| ...focuses on their ability to contribute to the Hotel's strategic objectives |   |   | X |
| ...involves screening many job candidates |   |   | X |
| ...is comprehensive (uses interviews, tests, etc.) |   |   | X |
| ...places priority on individuals' potential to learn (e.g. aptitude) |   |   | X |
| ...uses many different recruiting sources (direct advertising, staffing agencies, etc.) |   |   | X |</p>
<table>
<thead>
<tr>
<th>Training activities for individuals performing this job...</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>CT1</th>
<th>CT2</th>
<th>CT3</th>
<th>CT4</th>
</tr>
</thead>
<tbody>
<tr>
<td>...are comprehensive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>...are continuous</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>...emphasize improving current job performance</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
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</tr>
<tr>
<td>...emphasize on the job experiences</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>...focus on compliance with Hotel rules, regulations, and procedures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>...focus on team building and interpersonal relations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
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<tr>
<td>...require extensive investments of time/money</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>...seek to increase short-term productivity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>RC</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
...strive to develop firm-specific skills/knowledge

<table>
<thead>
<tr>
<th>Performance appraisals for individuals performing this job...</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>CT 1</th>
<th>CT 2</th>
<th>CT 3</th>
<th>CT 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>...are based on input from multiple sources (peers, subordinates, etc.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...are based on objective, quantifiable results</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...are based on team performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>...assess compliance with preset behaviors, procedures, and standards</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...assess quality of output</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...assess quantity of output</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...emphasize their individual learning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...focus on their ability to work with others</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
...focus on their contribution to the Hotel's strategic objectives

...include developmental feedback

...measure productivity and efficiency

<table>
<thead>
<tr>
<th>Compensation &amp; rewards for individuals performing this job...</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>CT1</th>
<th>CT2</th>
<th>CT3</th>
<th>CT4</th>
</tr>
</thead>
<tbody>
<tr>
<td>...are based on hourly pay</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...are based on straight salary</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>...are based on the market wage (going rate)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>...are designed to ensure equity with others performing similar jobs for the Hotel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>...focus primarily on their short-term performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>RC</td>
<td>X</td>
</tr>
</tbody>
</table>
The process used to determine HR Practice - Contract fit involved a two stage process:

**Stage (1): Fit of HR practice with contract types**

Informants' responses to each of the questions in the above questionnaire in respect of each job were mapped to the four generic contract types: Developmental; Acquisitional; Flexible; Collaborative described in earlier questionnaires in this Appendix (see for example questionnaire 13 above). The questions and scoring method were based on the survey instrument used in a cross industry survey of 148 US based firms, as described by Lepak and Snell (2002 pp 527-528) with minor modifications. The modifications were suggested in part by the results of the Lepak and Snell cross industry survey and in part by discussions with hotel management, which suggested scope for improving the mapping of HR practices to contract types so as to align better with the hotels' business operations.

Responses were scored based on a 5 point scale as follows:

- Strongly disagree: 1
- Disagree: 2

| ...have a group-based incentive component e.g. reward for team performance | | | X | X | X |
| ...have an individual incentive/bonus component | | | | | X |
| ...include an extensive benefits package | | | X | | |
| ...place a premium on their hotel/hospitality industry experience | | | | | X |
| ...provide incentives for new ideas | | | | | X |
| ...value seniority | | | | | | X |
Neither agree nor disagree: 3
Agree: 4
Strongly agree: 5

Some questions were reverse coded (indicated by "RC"). In these instances the reverse coded response was assigned the opposite value to that given e.g. the question "Training activities for individuals performing this job...seek to increase short term productivity" is reverse coded. In this instance a response of "to a large extent" would result in a score of 4 for contract type 2 and a score of 2 for contract type 1.

The scores obtained for the five sets of HR practices: Job Design, Recruitment & Selection, Training, Performance Appraisal, and Compensation and Rewards were aggregated for each job and the mean average scores calculated in relation to each of the four contract types.

**Stage (2): Fit of HR practices with optimal contract types**

While it would have been possible to take a simpler approach to calculating HR practice – contract fit the method described below was chosen as it allowed a more rigorous determination of fit:

1. The first step was to identify the optimal contract type (CT) for each job. This was based on the typical configuration of suppliers' knowledge utility and rarity obtained from responses to questionnaire 12.

2. Fit of HR practices with optimal contract types was next measured on a 5 point scale with 5 representing the highest fit between HR practices and optimal contract types and 1 the lowest fit. To avoid unnecessary complexity measures focused on 3 points in the five point scale, reflecting highest, median and lowest fit:
   - **Highest fit**
     Of the four contract types where the contract type with the highest mean average score for any given set of HR practices was the same as the optimal contract type then the level of fit was judged to be highest generating a fit score of 5
   - **Median fit**
     Where the contract type with the second highest mean average score for any given set of HR practices was the same as the optimal contract type then the level of fit was judged to be second highest generating a fit score of 3
   - **Lowest fit**
     Where the contract type with the third or fourth highest mean average score for any given set of HR practices was the same as the optimal contract type then the level of fit was judged to be lowest generating a fit score of 1

   Where two or more contract types achieved the same mean average score for any given set of HR practices, the CT ranking score was decremented by 1 for each duplicate, thus for example if the mean average scores for a set of HR Practices such as Training were the same for all four contract types, each contract type received a CT ranking score of 2.

   This process was repeated for each set of HR practices for each job resulting in a comprehensive profile of the level of fit of HR practices with optimal contract types. As noted earlier in relation to questionnaire 13, the extent to which contract types were optimal was based on their fit with suppliers' knowledge utility and rarity, thus HR practice – contract fit also represented a proxy for HR Practice – Knowledge Fit.

Hypothetical examples illustrating the method used to calculate fit of HR practices with optimal contract types is provided below in relation to job design.
**HR Practices Examples: Job Design**

<table>
<thead>
<tr>
<th>Job function:</th>
<th>Optimal CT</th>
<th>Mean average score for CT 1</th>
<th>Mean average score for CT 2</th>
<th>Mean average score for CT 3</th>
<th>Mean average score for CT 4</th>
<th>Fit of Job Design with Optimal CT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job A</td>
<td>1.5</td>
<td>3.7</td>
<td>4.0</td>
<td>3.3</td>
<td>2.7</td>
<td>4</td>
</tr>
<tr>
<td>Job B</td>
<td>1</td>
<td>3.2</td>
<td>4.0</td>
<td>4.0</td>
<td>4.0</td>
<td>2</td>
</tr>
</tbody>
</table>

CT1= Developmental; CT2= Acquisitional; CT3= Flexible; CT4= Collaborative

**Job A**

In this example the optimal CT for suppliers performing Job A, based on their knowledge utility and rarity profiles, was 1.5 i.e. a combination of type 1 and type 2 contracts. The mean average scores recorded for Job Design for each contract type for Job A were highest for CT 2 (scoring 5) second highest for CT 1 (scoring 3) and third and fourth highest for CT 3 and CT 4 (each scoring 1). The overall level of fit was thus determined as between 3 and 5 i.e. 4.

Note that if the optimal CT for suppliers performing Job A, based on their knowledge utility and rarity profiles had been a type 1 the score for fit with HR practices would been 3 (i.e. the second highest score). If the optimal CT had been a type 2 the mean average score for Job Design would have been 5 i.e. the highest score.

**Job B**

In this example the optimal CT for suppliers performing Job A, based on their knowledge utility and rarity profiles was 1. Mean average scores for Job Design for Contract types 2, 3 and 4 were all higher than for CT1, each CT achieving the same mean average score of 4. While 4 was the highest score for HR practices, thus warranting a corresponding fit score of 5, according to the scoring formula as noted above scores for fit were decremented by 1 for each duplicate, thus the level of fit between the optimal contract type and HR practices was 2.

**General note**

The levels of HR practice-contract fit for each department in each hotel derived from the above process were later analyzed for evidence of covariation analysis. Qualitative data obtained from informants’ comments obtained in the course of interviews associated with collecting responses to Questionnaire 14 were later used for analyzing temporal precedence and the presence of other causal factors.

For further information regarding the design and administration of the questionnaire, see Chapter 4 section 4.5.2.3. For a description of the findings relating to HR practice-contract fit, see Chapter 5 and for analyses of informants’ comments made in the course of interviews associated with the questionnaire see Appendix B.
A16. Questionnaire 15: Suppliers’ Willingness to Contribute (Hotels and Departments)

*Questionnaire completed by:*
*Hotel A: Hotel GM and Department Heads*
*Hotel B: Hotel GM and Department Heads*

**Suppliers’ Willingness to Contribute (Hotels and Departments)**

All organizations require those working for them to possess certain experience, expertise, skills and abilities and to apply what they know in performing their jobs. Assuming these basic requirements are met considerable scope still exists for suppliers at all levels (and whether internal or external to the hotel) to exercise discretion over how and to what extent they apply their knowledge for the benefit of the hotel.

The following questions seek to identify the extent to which on average, those responsible for job functions reporting to you [Hotel GM] in your department [department heads] display a willingness to contribute to the hotel's [Hotel GM] your department's [department heads] performance, both in performing their own duties and in their all round job behavior.

Answer each question by placing an X in the appropriate box.

**Department name:**
**Job Title:**

**(a) Continuance and Attendance**

Based on my experience individuals who perform this job …

<table>
<thead>
<tr>
<th>Continuance and Attendance Measures</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>…would leave and work for another organization if offered a bit more money (RC)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>…would prefer to continue to work for this hotel if they had the option</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>…are not likely to continue to work for this hotel for more than 12 months (RC)</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>…are likely to continue to work for this hotel for the next three years</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>…always arrive at work at the time agreed</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>......are often absent from work without a valid excuse (RC)</td>
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</tr>
</tbody>
</table>
(b) Organizational Citizenship Behavior

Based on my experience individuals who perform this job ...

<table>
<thead>
<tr>
<th>Organizational Citizenship Behavior Measures</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>... do not pass on experience and advice to co workers unless requested to do so (RC)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>... express opinions honestly even when others think differently</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>... alert management promptly to operational issues or problems</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>... have difficulty cooperating with their colleagues in the hotel (RC)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>... share ideas for operational improvements widely</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>... only attend work meetings if required by the job (RC)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>... keep informed about hotel plans and new services and tell others</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>... are willing to speak up when they believe hotel or department policy does not contribute to goal achievement of the department</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>... suggest revisions in work to achieve department or hotel objectives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>... make helpful suggestions to co workers to improve individual or team performance</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>... make suggestions to management to improve team or job performance</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
...do not seek to learn more to improve own performance or career prospects in the hotel (RC)

...volunteer to do things without being asked

...strive to uphold the Hotels' image and reputation to guests

(c) Task Performance

Based on my experience individuals who perform this job ...  

<table>
<thead>
<tr>
<th>Task Performance Measures</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>...produce a higher quantity of work than required</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>...demonstrate a higher quality of work than required</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...are not as efficient as required in task performance (RC)</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>...achieve above average performance in the work they do</td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>...uphold hotel policies and standards in the work they do</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>...demonstrate high levels of skill and judgment in performing tasks</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...display high levels of creativity in performing tasks</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...are less accurate than required in performing tasks (RC)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>...show sound judgment in assessing what is the best course of action in any circumstance</td>
<td></td>
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<tr>
<td>...help guests whenever they need assistance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...demonstrate a willingness to learn</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Method used for assessing responses

A two stage process was used:

(1) Responses were scored on a 5 point scale as follows:

Strongly disagree = 1
Disagree = 2
Neither agree nor disagree = 3
Agree = 4
Strongly agree = 5

Questions marked (RC) were reverse coded e.g. a response of “to a large extent” to such a question would be scored as 2 not 4.

(2) The mean average scores for the responses received for questions under (a), (b) and (c) above were aggregated and the combined mean average score used as the overall response score for this questionnaire. Taking the mean average is justified in this instance because there is no strong literature exists that suggests that any one of these dimensions (i.e. continuance, attendance, organizational citizenship behaviour, or task performance) is more important than another.

The department heads’ responses and resultant scores obtained from this process were used both for covariation analyses and as a basis for discussion to facilitate the collection of qualitative data and the hotel GMs’ responses and resultant scores for the latter purpose only.

NB. Questions regarding Continuance and Attendance were included in one questionnaire since questions regarding Continuance were concerned with expectations of future behaviour whereas those relating to Attendance were (in common with questions regarding other factors) based on evidence from past behaviour. It was considered therefore that combining the questions regarding each factor in one questionnaire and combining the responses to each in arriving at an average score would enable a more balanced perspective to be gained.
A17. Questionnaire 16: Hotel’s Ability to Appropriate the Value of its Suppliers’ Knowledge (Hotels and Departments)

Questionnaire completed by:
Hotel A: Hotel GM and Department Heads
Hotel B: Hotel GM and Department Heads

Hotel’s Ability to Appropriate the Value of its Suppliers' Knowledge (Hotels and Departments)

The last questionnaire asked about the extent to which on average, those responsible for job functions reporting to you [Hotel GM] in your department [department heads] display a willingness to contribute to the hotel’s performance by applying their experience, expertise, skills and abilities in performing their jobs.

This set of questions seeks to identify the extent to which the hotel has the type of policies and procedures in place that assist it to appropriate/capture the benefits of its suppliers’ knowledge in terms of its value to the hotel.

Answer each question by placing an X in the appropriate box.

Department name:
Job Title:

Hotel policies and procedures are designed to ensure that individuals who perform this job...

<table>
<thead>
<tr>
<th>Hotel’s Ability to Appropriate the Value of its Suppliers’ Knowledge</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>… exchange ideas and information with others in the department/hotel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>… work according to defined hotel policies and procedures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>… share their experience and expertise with those reporting to them</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>… learn hotel-specific policies and processes</td>
<td></td>
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<tr>
<td>… seek to enhance their knowledge-base with new knowledge of use to the hotel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>… volunteer ideas and suggestions for improving departmental/hotel performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>… record what they learn on the job and regularly communicate it to others in the department/hotel</td>
<td></td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>
...become increasingly motivated and committed to the hotel

...identify one or more potential successors for their position

...provide value for money

Method used for assessing responses

A two stage process was used:

(1) Responses were scored on a 5 point scale as follows:

Strongly disagree = 1
Disagree = 2
Neither agree nor disagree = 3
Agree = 4
Strongly agree = 5

(2) The mean average scores for the responses received for all questions were used as the overall response score for this questionnaire.

The department heads' responses and resultant scores obtained from this process were used both for covariation analyses and as a basis for discussion to facilitate the collection of qualitative data and the hotel GMs' responses and resultant scores for the latter purpose only.
A18. Questionnaire 17: Supplementary Value Appropriation Questions (Hotels)

Questionnaire completed by:
Hotel A: Hotel GM
Hotel B: Hotel GM

Supplementary Value Appropriation Questions (Hotels)

Previous questionnaires asked about the extent to which on average, those responsible for job functions reporting to you typically demonstrate a willingness to contribute value to the hotel by applying their experience, expertise, skills and abilities in performing their jobs, and the extent to which the hotel has the type of policies and procedures in place that assist it to appropriate the value they contribute.

This set of questions seeks to further analyze the extent to which value is actually contributed and appropriated at the individual, departmental and hotel level.

Answer each question by placing an X in the appropriate box.

<table>
<thead>
<tr>
<th>Contribution and Appropriation: Individual Job Level</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consider what value each individual supplier in your hotel could contribute to his or her department if he/she worked in an optimal way. On average across the hotel, to what extent is this level of value contributed?</td>
<td></td>
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</tr>
<tr>
<td>On average, to what extent do each of your Departments appropriate (i.e. capture, absorb, and leverage) the value contributed by their suppliers' individual efforts?</td>
<td></td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contribution and Appropriation: Department Level</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consider what value the suppliers in each department could contribute to their department if they worked together in an optimal way. On average across Departments, to what extent is this level of value contributed?</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>On average, to what extent do each of your Departments appropriate (i.e. capture, absorb, and leverage) the value contributed by their suppliers' collective efforts?</td>
<td></td>
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</tr>
</tbody>
</table>
Methods used for evaluating responses

Responses were scored on a 5 point scale as follows:

Strongly disagree = 1
Disagree = 2
Neither agree nor disagree = 3
Agree = 4
Strongly agree = 5

As noted in Chapter 4 the aim of this questionnaire was to provide an additional level of validation of individuals' willingness to contribute and the Hotels' abilities to appropriate the value they contributed. The results of the questionnaire were consistent with the findings of the previous two questionnaires (see Chapter 5 Findings).

Informants' responses and resultant scores obtained from this process were not used for covariation analysis but rather as the basis for discussion to facilitate the collection of qualitative data.
A19. Questionnaire 18: Hotel Performance (Hotels)

Questionnaire completed by:
Hotel A: Outgoing and incoming Hotel GMs and Group GM
Hotel B: Hotel GM

Hotel Performance (Hotels)

The following questions are intended to help clarify and complete the picture of hotel and Departmental performance obtained from the financial reports and reviews of key performance objectives (KPOs) provided to date. The data is requested on two levels:

Hotel Performance
Data on the performance of the hotel against each of its KPOs

Departmental Performance
Data on the contribution of each Department to Hotel performance

The periods over which these data are sought are:
1st July 2003 to 30th June 2004
1st July 2004 to December 30th 2004

1. Hotel Performance
How would you rate the Hotel’s actual levels of achievement against its key performance objectives for the periods shown above? Please use the following scoring method:
1= well below target
2= near to target
3= on target
4= above target
5= well above target

<table>
<thead>
<tr>
<th>Hotel</th>
<th>(a) 1st July 2003 to 30th June 2004</th>
<th>(b) 1st July 2004 to December 30th 2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>KPO 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KPO 2</td>
<td></td>
<td></td>
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<tr>
<td>etc</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Departmental Performance
Using the same scoring method as above please rate the performance of each Department against its KPOs:

<table>
<thead>
<tr>
<th>Departments</th>
<th>(a) 1st July 2003 to 30th June 2004</th>
<th>(b) 1st July 2004 to December 30th 2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KPO 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KPO 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>etc</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Method used for assessing responses**

A two stage process was used:

1. **Hotel performance.**
   The performance scores for each KPO for periods (a) and (b) were aggregated and the mean average score obtained for each period. The mean average scores for both periods were then combined and averaged to produce an overall performance score for the hotel for the total 18 months. Any outlying months or general trends in values in performance over time were discussed with informants.

2. **Departmental performance.**
   The performance scores for each KPO for periods (a) and (b) were aggregated and the mean average score obtained for each department for each period. The mean average scores for both periods were then combined and averaged to produce an overall performance score for each department for the total 18 months. As noted for (1) above any outlying months or general trends in values in performance over time were discussed with informants.

Quantitative data obtained in relation to departmental performance was later used for covariation analyses. Informants’ responses also facilitated the collection of qualitative data which was later used to inform the design of the additional exploratory investigation of organizational effectiveness (see Chapter 4 section 4.5.5 and A21. Questionnaire 20 below)
A20. Questionnaire 19: Supplier Performance Factors (Hotels & Departments)

**Questionnaire completed by:**
Hotel A: Hotel GM and Department Heads
Hotel B: Hotel GM and Department Heads

**Supplier Performance Factors (Hotels and Departments)**

This questionnaire is designed to identify what factors in your opinion cause individuals to perform well or badly in meeting their own performance objectives and targets and in supporting the hotel's [Hotel GM] your department's [department heads] achievement of its performance objectives and targets.

The causes of people performing well or badly at work are commonly attributed to two major factors: their competencies (i.e. their all round ability to perform their work) and their behaviours. Competencies and behaviours are in turn caused by other factors, some inherent in the individual e.g. personal factors such as skill or ambition, some caused by the hotel e.g. hotel policies, hotel systems and processes and others caused by external factors e.g. availability and relative attraction of other jobs outside the hotel.

The following questions are designed to:
- identify what you see as the major factors underpinning or driving individuals' competencies and behaviours
- obtain some examples drawn from your experience of how individuals' competencies and behaviours influence their performance and through their performance the performance of their Departments and the hotel
- identify any other factors (unrelated to individuals' competencies or behaviours) that you believe may cause people to perform well or badly in the work they do

### 1. INDIVIDUALS’ COMPETENCIES

Considering all the jobs in your department [department heads] all your direct reportees [Hotel GM] to what extent do you believe the following factors determine their competencies and thus the extent to which they meet their own performance objectives and support the achievement of the department's [department heads] the hotel's [Hotel GM] performance objectives

<table>
<thead>
<tr>
<th>(a) Personal factors</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>General intelligence and skills</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Ability to adapt and learn</td>
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<tr>
<td>Generic functional knowledge e.g. HR, Accounting, Marketing, Engineering, etc</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Hotel/hospitality industry functional knowledge e.g. Front Office, F&amp;B operations, etc</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Leadership abilities or potential</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other – please specify</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Examples
Please provide one or more examples from your experience of how the competencies of particular individuals working for your department [Department Heads] your direct reportees [Hotel GM] have been determined by the above Personal Factors. Show in turn how this has influenced their performance in terms of meeting their objectives and supporting the achievement of the department's [Department Heads] hotel's [Hotel GM] objectives

1. INDIVIDUALS' COMPETENCIES (continued)

<table>
<thead>
<tr>
<th>(b) Hotel factors</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job design e.g. task variety, empowerment to make</td>
<td></td>
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<tr>
<td>decisions etc</td>
<td></td>
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<tr>
<td>Job match (to individuals' skills)</td>
<td></td>
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</tbody>
</table>

Hotel provided training

<table>
<thead>
<tr>
<th>Level of management assessment and guidance</th>
<th></th>
<th></th>
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<th></th>
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</thead>
</table>

Level of support and advice from co workers

<table>
<thead>
<tr>
<th>Hotel systems and processes</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>

Other – please specify

Examples
Please provide one or more examples from your experience of how the competencies of particular individuals working for your department [Department Heads] your direct reportees [Hotel GM] have been determined by the above Hotel Factors. Show in turn how this has influenced their performance in terms of meeting their objectives and supporting the achievement of the department's [Department Heads] hotel's [Hotel GM] objectives

1. INDIVIDUALS' COMPETENCIES (continued)

<table>
<thead>
<tr>
<th>(c) External factors</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>General education</td>
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<tr>
<td>Generic functional training e.g. HR, Accounting,</td>
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<tr>
<td>Marketing, etc</td>
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<tr>
<td>Hotel/hospitality industry functional training e.g.</td>
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<tr>
<td>Front Office, F&amp;B operations, etc</td>
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<td></td>
</tr>
<tr>
<td>Other - please specify</td>
<td></td>
<td></td>
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<td></td>
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</tbody>
</table>
Examples
Please provide one or more examples from your experience of how the competencies of particular individuals working for your department [Department Heads] your direct reportees [Hotel GM] have been determined by the above External Factors. Show in turn how this has influenced their performance in terms of meeting their objectives and supporting the achievement of the department's [Department Heads] hotel's [Hotel GM] objectives.

2. INDIVIDUALS' BEHAVIOURS

Considering all the jobs in your department [department heads] all your direct reportees [Hotel GM] to what extent do you believe the following factors determine individuals' behaviours and thus the extent to which they meet their own performance targets and support the achievement of the department's [department heads] the hotel's [Hotel GM performance targets

(a) Personal factors

<table>
<thead>
<tr>
<th>Factor</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall satisfaction with working for the hotel</td>
<td></td>
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<tr>
<td>Job interest</td>
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<tr>
<td>Loyalty and commitment to the hotel and co workers</td>
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<tr>
<td>Commitment to high work performance standards</td>
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<td></td>
</tr>
<tr>
<td>Other - please specify</td>
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</tr>
</tbody>
</table>

Examples
Please provide one or more examples from your experience of how the behaviours of particular individuals working for your department [Department Heads] your direct reportees [Hotel GM] have been determined by the above Personal Factors. Show in turn how this has influenced their performance in terms of meeting their objectives and supporting the achievement of the department's [Department Heads] hotel's [Hotel GM] objectives.

2. INDIVIDUALS' BEHAVIOURS (continued)

(b) Hotel factors

<table>
<thead>
<tr>
<th>Factor</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To some extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explicit contract: job specification, terms and conditions, compensation and rewards etc</td>
<td></td>
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<tr>
<td>Implicit contract: understandings and expectations regarding the current job and future potential in the hotel/group</td>
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<tr>
<td>Management behaviours</td>
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<td></td>
</tr>
<tr>
<td>Colleagues' and co worker's behaviours</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Hotel/Departmental policies and practices</td>
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<tr>
<td>Hotel/Departmental culture</td>
<td></td>
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</tbody>
</table>
Examples
Please provide one or more examples from your experience of how the behaviours of particular individuals working for your department [Department Heads] your direct reportees [Hotel GM] have been determined by the above Hotel Factors. Show in turn how this has influenced their performance in terms of meeting their objectives and supporting the achievement of the department’s [Department Heads] hotel’s [Hotel GM] objectives

2. INDIVIDUALS’ BEHAVIOURS (continued)

<table>
<thead>
<tr>
<th>(c) External factors</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hotel guest/client traffic e.g. occupancy levels</td>
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<tr>
<td>Hotel guest/client service expectations e.g. service quality</td>
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<tr>
<td>Availability of attractive alternative jobs outside the hotel</td>
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<tr>
<td>Workplace legislation</td>
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<tr>
<td>General economic climate</td>
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</tr>
<tr>
<td>Other - please specify</td>
<td></td>
<td></td>
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</tbody>
</table>

Examples
Please provide one or more examples from your experience of how the behaviours of particular individuals working for your department [Department Heads] your direct reportees [Hotel GM] have been determined by the above External Factors. Show in turn how this has influenced their performance in terms of meeting their objectives and supporting the achievement of the department’s [Department Heads] hotel’s [Hotel GM] objectives

3. OTHER FACTORS
Considering all the jobs in your department [department heads] the functions managed by your direct reportees [Hotel GM] to what extent do you believe factors other than competencies and behaviours influence how individuals meet their own performance targets and support the achievement of the department’s [department heads] the hotel’s [Hotel GM] performance objectives

<table>
<thead>
<tr>
<th>Other factors</th>
<th>Not at all</th>
<th>To a small extent</th>
<th>To a large extent</th>
<th>To a great extent</th>
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</tbody>
</table>
Examples
Please provide one or more examples from your experience of how the behaviours of particular individuals working for your department [Department Heads] your direct reportees [Hotel GM] have been determined by the above Other Factors. Show in turn how this has influenced their performance in terms of meeting their objectives and supporting the achievement of the department’s [Department Heads] hotel’s [Hotel GM] objectives.

Methods used for evaluating responses
As noted in Chapter 4 the aim of this questionnaire was to provide an additional level of validation of the causal influence of knowledge related factors on individual and thus departmental performance in terms of temporal precedence and to identify any additional potential confounds in terms of other causal factors.

The main objective of the questionnaire being to obtain qualitative information by way of examples the responses to structured questions were used solely for that purpose rather than as a basis for determining covariation, prior questionnaires having already measured this aspect of causation.
A21. Questionnaire 20: Additional Exploratory Investigation of Organizational Effectiveness

**Questionnaire completed by:**
Hotel A: Hotel GM; Group GM; Group HR Manager; Group Financial Controller
Hotel B: Hotel GM; Financial Controller; Head of HR; Head of Business Development

**Additional Exploratory Investigation of Organizational Effectiveness**

**Hotel Performance: Causal Model**

(Hotels)

The attached qualitative causal model depicts what are seen as the key elements influencing hotel performance and the perceived relationships between the elements based on our earlier discussions. The purpose of the following questions is first to quantify the influence of all the key elements and second to identify the extent to which the workforce works in unison with other key intellectual resources viz: hotel systems and processes and the hotel brand standard in influencing hotel performance.

**This questionnaire**

The questions below relate to the chain of causation as depicted on the attached model working from the right hand side of the model to the left. So for example you will see the first question asks you to estimate the relative percentage influence of [for hotel B] Hotel Costs and Revenues on GOP (i.e. the boxes with arrows linking directly to GOP).

**Measuring causative influences**

The key elements previously identified as influencing hotel performance are highlighted (in blue) on the questionnaire and each of these elements is accompanied by a brief definition. When answering the questions please express your opinion in percentage terms, so that the total adds to 100%. If on reflection you consider there may be other key elements, in addition to those listed in the questionnaire, which influence hotel performance then please specify what they are and their percentage influence on other elements in the model.

**Measuring interactions between elements: hotel workforce, hotel systems and processes and the hotel brand standard**

Questions about “Interactions between Elements” are designed to identify the extent to which the key elements can be distinguished from each other in their effects on hotel performance as distinct from the extent to which they work in unison. For example the hotel workforce’s influence on operations management may partly depend upon its use of hotel systems and processes and partly occur through individual actions or routines which do not involve use of hotel systems and processes. Hotel systems and processes likewise may have an influence on operations management independent of the workforce, for example through guests using automated booking and checkout systems, automated gaming systems or automated in room entertainment etc. The workforce’s adherence to hotel brand standards may inform their behaviour towards guests thus affecting guest satisfaction. The hotel brand standard may also have an independent influence on guests through guests associating the hotel with certain standards of accommodation and service.

**Definitions** (see also definitions shown below)
- **Guest Yield** = actual guest accommodation revenue as a percentage of total potential accommodation revenue
- Hotel Workforce = the collective resources and capabilities of the hotel's management, internal staff and external suppliers
- Hotel Systems and Processes = the systems and processes used to manage the Hotels operations, infrastructure, supply chain and guest services.
- Hotel Brand Standard= the Group standards including principles, policies and procedures to which the hotel must conform in managing its operations, infrastructure, supply chain and guest services

Please refer to the attached model when responding to the questions below:

<table>
<thead>
<tr>
<th>GOP (Gross Operating Profit)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Causative elements</strong></td>
</tr>
<tr>
<td>Costs</td>
</tr>
<tr>
<td>Revenues</td>
</tr>
<tr>
<td>Other - please specify</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Costs (Operating Expenses)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Causative elements</strong></td>
</tr>
<tr>
<td>Hotel Operations Management</td>
</tr>
<tr>
<td>Hotel Infrastructure Management</td>
</tr>
<tr>
<td>Hotel Supply Chain Management</td>
</tr>
<tr>
<td>Other - please specify</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Revenues (Total hotel revenues including accommodation and non accommodation related revenues)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Causative elements</strong></td>
</tr>
<tr>
<td>PCR (Guest Loyalty Program)</td>
</tr>
<tr>
<td>Guest Satisfaction</td>
</tr>
<tr>
<td>Guest Volume</td>
</tr>
<tr>
<td>Guest Yield</td>
</tr>
</tbody>
</table>
Other- please specify

**RGI (Revenue Generation Index)** - compares hotel accommodation revenue to accommodation revenue achieved by local Hotels of similar standard

<table>
<thead>
<tr>
<th>Causative elements</th>
<th>% influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hotel Pricing</td>
<td></td>
</tr>
<tr>
<td>Hotel Revenues</td>
<td></td>
</tr>
<tr>
<td>Brisbane Hotel Supply</td>
<td></td>
</tr>
<tr>
<td>Other- please specify</td>
<td></td>
</tr>
</tbody>
</table>

**PCR (Guest Loyalty Program)**

<table>
<thead>
<tr>
<th>Causative elements</th>
<th>% influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guest Satisfaction</td>
<td></td>
</tr>
<tr>
<td>Hotel Pricing</td>
<td></td>
</tr>
<tr>
<td>Other- please specify</td>
<td></td>
</tr>
</tbody>
</table>

**Hotel Operations Management** (Control and coordination of the hotel workforce, hotel systems and processes, hotel services and relationships with guests and suppliers)

<table>
<thead>
<tr>
<th>Causative elements</th>
<th>% influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hotel Workforce</td>
<td></td>
</tr>
<tr>
<td>Hotel Systems and Processes</td>
<td></td>
</tr>
<tr>
<td>Hotel Brand Standard</td>
<td></td>
</tr>
<tr>
<td>Other- please specify</td>
<td></td>
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</tbody>
</table>
Hotel Operations Management: Interactions between elements  Please note each of these Interaction questions is independent of the others and the results are not additive i.e. the total in the right hand column is not intended to add to 100%.

With reference to the table above please indicate the extent to which each element’s contribution to Hotel Operations Management is distinct from (i.e. does not interrelate to or work with) the other elements as shown below...

<table>
<thead>
<tr>
<th>% Distinction</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
</tr>
</tbody>
</table>

...Hotel Workforce from Hotel Systems and Processes *(see example below)*

...Hotel Workforce from hotel Brand Standard

...Hotel Systems and Processes from Hotel Workforce

...Hotel Systems and Processes from hotel Brand Standard

...hotel Brand Standard from Hotel Workforce

...Hotel Brand Standard from Hotel Systems and Processes

Are there any other elements that interrelate with any of the above 3 elements to influence Hotel Operations Management? If so please specify below:

* For example if you consider that 50% of the Hotel Workforce’s influence on Hotel Operations Management involves its use of Hotel Systems and Processes and that the other half of its influence is independent of them then its distinction percentage would be 50%. On the other hand if you consider that the Hotel Workforce always has to use hotel systems and processes to influence hotel operations management then its distinction level would be 0%.
Hotel Infrastructure Management (Management of the hotel's physical infrastructure from the building to equipment and supplies)

<table>
<thead>
<tr>
<th>Causative elements</th>
<th>% influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hotel Workforce</td>
<td></td>
</tr>
<tr>
<td>Hotel Systems and Processes</td>
<td></td>
</tr>
<tr>
<td>Hotel Brand Standard</td>
<td></td>
</tr>
<tr>
<td>Other- please specify</td>
<td></td>
</tr>
</tbody>
</table>

Hotel Infrastructure Management: Interactions between elements

Please note each of these interaction questions is independent of the others and the results are not additive i.e. the total in the right hand column is not intended to add to 100%

With reference to the table above please indicate the extent to which each element’s contribution to Hotel Infrastructure Management is distinct from (i.e. does not interrelate to or work with) the other elements as shown below...

- Hotel Workforce from Hotel Systems and Processes
- Hotel Workforce from hotel Brand Standard
- Hotel Systems and Processes from Hotel Workforce
- Hotel Systems and Processes from hotel Brand Standard
- Hotel Brand Standard from Hotel Workforce
- Hotel Brand Standard from Hotel Systems and Processes

Are there any other elements that interrelate with any of the above 3 elements to influence Hotel Infrastructure Management? If so please specify below:
Hotel Supply Chain Management (Group and hotel management of contracts and relationships with the hotel's suppliers, both local, national and international)

<table>
<thead>
<tr>
<th>Causative elements</th>
<th>% influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hotel Workforce</td>
<td></td>
</tr>
<tr>
<td>Hotel Purchasing Power</td>
<td></td>
</tr>
<tr>
<td>Hotel Systems and Processes</td>
<td></td>
</tr>
<tr>
<td>Hotel Brand Standard</td>
<td></td>
</tr>
<tr>
<td>Other- please specify</td>
<td></td>
</tr>
</tbody>
</table>

Supply Chain Management: Interactions between elements: Please note each of these interaction questions is independent of the others and the results are not additive i.e. the total in the right hand column is not intended to add to 100%

<table>
<thead>
<tr>
<th>With reference to the table above please indicate the extent to which each element's contribution to Supply Chain Management is distinct from (i.e. does not interrelate to or work with) the other elements as shown below...</th>
<th>% Distinction</th>
</tr>
</thead>
<tbody>
<tr>
<td>...Hotel Workforce from Hotel Systems and Processes</td>
<td></td>
</tr>
<tr>
<td>...Hotel Workforce from hotel Brand Standard</td>
<td></td>
</tr>
<tr>
<td>...Hotel Systems and Processes from Hotel Workforce</td>
<td></td>
</tr>
<tr>
<td>...Hotel Systems and Processes from hotel Brand Standard</td>
<td></td>
</tr>
<tr>
<td>...hotel Brand Standard from Hotel Workforce</td>
<td></td>
</tr>
<tr>
<td>...Hotel Brand Standard from Hotel Systems and Processes</td>
<td></td>
</tr>
</tbody>
</table>

Are there any other elements that interrelate with any of the above 3 elements to influence Hotel Infrastructure Management? If so please specify below:
### Guest Satisfaction (Satisfaction as tracked by GSTS)

<table>
<thead>
<tr>
<th>Causative elements</th>
<th>% influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hotel Operations Management</td>
<td></td>
</tr>
<tr>
<td>Hotel Infrastructure Management</td>
<td></td>
</tr>
<tr>
<td>Hotel Workforce</td>
<td></td>
</tr>
<tr>
<td>Hotel Systems and Processes</td>
<td></td>
</tr>
<tr>
<td>Hotel Property and Amenities</td>
<td></td>
</tr>
<tr>
<td>Hotel Pricing</td>
<td></td>
</tr>
<tr>
<td>Other - please specify</td>
<td></td>
</tr>
</tbody>
</table>

### Guest Satisfaction: Interactions between elements

Please note each of these Interaction questions is independent of the others and the results are not additive i.e. the total in the right hand column is not intended to add to 100%

<table>
<thead>
<tr>
<th>Interaction</th>
<th>% Distinction</th>
</tr>
</thead>
<tbody>
<tr>
<td>...Hotel Workforce from Hotel Systems and Processes</td>
<td></td>
</tr>
<tr>
<td>...Hotel Systems and Processes from Hotel Workforce</td>
<td></td>
</tr>
</tbody>
</table>

Are there any other elements that interrelate with either of the above 2 elements to influence Guest Satisfaction? If so please specify below:
Guest Volume (The total volume of guests using hotel services including accommodation and non accommodation services)

<table>
<thead>
<tr>
<th>Causative elements</th>
<th>% influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hotel Workforce</td>
<td></td>
</tr>
<tr>
<td>Hotel Systems and Processes</td>
<td></td>
</tr>
<tr>
<td>Hotel Property and Amenities</td>
<td></td>
</tr>
<tr>
<td>Hotel Pricing</td>
<td></td>
</tr>
<tr>
<td>Hotel Brand Standard</td>
<td></td>
</tr>
<tr>
<td>Brisbane Location Attractiveness</td>
<td></td>
</tr>
<tr>
<td>Brisbane Hotel Supply</td>
<td></td>
</tr>
<tr>
<td>Other- please specify</td>
<td></td>
</tr>
</tbody>
</table>

Guest Volume: Interactions between elements
Please note each of these interaction questions is independent of the others and the results are not additive i.e. the total in the right hand column is not intended to add to 100%.

With reference to the table above please indicate the extent to which each element’s contribution to Guest Volume is distinct from (i.e. does not interrelate to or work with) the other elements as shown below...

<table>
<thead>
<tr>
<th>Distinction</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hotel Workforce from Hotel Systems and Processes</td>
<td></td>
</tr>
<tr>
<td>Hotel Workforce from Hotel Brand Standard</td>
<td></td>
</tr>
<tr>
<td>Hotel Systems and Processes from Hotel Workforce</td>
<td></td>
</tr>
<tr>
<td>Hotel Systems and Processes from Hotel Brand Standard</td>
<td></td>
</tr>
<tr>
<td>Hotel Brand Standard from Hotel Workforce</td>
<td></td>
</tr>
<tr>
<td>Hotel Brand Standard from Hotel Systems and Processes</td>
<td></td>
</tr>
</tbody>
</table>

Are there any other elements that interrelate with any of the above 3 elements to influence Guest Volume? If so please specify below:
### Guest Yield (Actual guest accommodation revenue as a percentage of total potential accommodation revenue)

<table>
<thead>
<tr>
<th>Causative elements</th>
<th>% influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hotel Workforce</td>
<td></td>
</tr>
<tr>
<td>Hotel Systems and Processes</td>
<td></td>
</tr>
<tr>
<td>Hotel Property and Amenities</td>
<td></td>
</tr>
<tr>
<td>Hotel Pricing</td>
<td></td>
</tr>
<tr>
<td>Brisbane Hotel Supply</td>
<td></td>
</tr>
<tr>
<td>Other- please specify</td>
<td></td>
</tr>
</tbody>
</table>

### Guest Yield: Interactions between elements

Please note each of these interaction questions is independent of the others and the results are not additive i.e. the total in the right hand column is not intended to add to 100%.

With reference to the table above please indicate the extent to which each element’s contribution to Guest Yield is distinct from (i.e. does not interrelate to or work with) the other elements as shown below...

...Hotel Workforce from Hotel Systems and Processes

...Hotel Workforce from hotel Brand Standard

...Hotel Systems and Processes from Hotel Workforce

...Hotel Systems and Processes from hotel Brand Standard

... hotel Brand Standard from Hotel Workforce

...Hotel Brand Standard from Hotel Systems and Processes

Are there any other elements that interrelate with any of the above 3 elements to influence Guest Yield? If so please specify below:
Brisbane Hotel Competition (Level of competition between Hotels of same standard as Holiday Inn Brisbane)

<table>
<thead>
<tr>
<th>Causative elements</th>
<th>% influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hotel Pricing</td>
<td></td>
</tr>
<tr>
<td>Brisbane Hotel Supply</td>
<td></td>
</tr>
<tr>
<td>Other- please specify</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hotel Pricing (Hotel Pricing Policies and Strategies)</th>
<th>% influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Causative elements</td>
<td></td>
</tr>
<tr>
<td>Hotel Workforce</td>
<td></td>
</tr>
<tr>
<td>Hotel Systems and Processes</td>
<td></td>
</tr>
<tr>
<td>Hotel Property and Amenities</td>
<td></td>
</tr>
<tr>
<td>Hotel Brand Standard</td>
<td></td>
</tr>
<tr>
<td>Brisbane Hotel Competition</td>
<td></td>
</tr>
<tr>
<td>Other- please specify</td>
<td></td>
</tr>
</tbody>
</table>

Hotel Pricing : Interactions between elements
Please note each of these Interaction questions is independent of the others and the results are not additive i.e. the total in the right hand column is not intended to add to 100%

With reference to the table above please indicate the extent to which each element’s contribution to Hotel Pricing is distinct from (i.e. does not interrelate to or work with) the other elements as shown below ...

- Hotel Workforce from Hotel Systems and Processes
- Hotel Workforce from Hotel Brand Standard
- Hotel Systems and Processes from Hotel Workforce
- Hotel Systems and Processes from hotel Brand Standard
- Hotel Brand Standard from Hotel Workforce
- Hotel Brand Standard from Hotel Systems and Processes

Are there any other elements that interrelate with any of the above 3 elements to influence Guest Volume? If so please specify below:
Causal mapping procedure

The procedure used for identifying performance elements and mapping their influence on hotel performance is described below. (Note this information is also contained in Chapter 4 (section 4.5.5.1) but is repeated here as it helps contextualize the use of Questionnaire 20 above).

(1) Following discussions with the hotel GMs a consultative expert panel of four people was established in each hotel to participate in the mapping process. In hotel A the panel comprised the hotel GM; group GM; group HR Manager and group Financial Controller and in hotel B the hotel GM; Financial Controller; head of HR and head of Business Development.

(2) Following establishment of the consultative panels a series of unstructured one on one interviews were held, initially with each hotel GM to develop an initial set of key performance outcomes, and subsequently with the GMs and each of the other panel members separately to identify performance elements and map causal relationships. Given the number of elements identified relationships were expressed as ‘one way’ rather than reciprocal, so as to reduce complexity while identifying main effects (per Miles and Huberman, 1994). These interviews led to the development of a series of initial draft qualitative performance maps which were then refined through discussions with each panel member until consensus was obtained in each hotel on a final version of the qualitative causal map for the hotel.

(3) The next step was to develop and administer the questionnaire shown above (see Questionnaire 20) in order to quantify relationships between constructs identified in the qualitative mapping investigation and also to identify and quantify interdependencies between three intellectual resource elements viz: the workforce, hotel systems and processes and the hotel brand standard in their causal influence on other elements and KPOs. Causal relationships were quantified by asking informants to estimate the percentage influence of each element on other elements in the causal maps and computing the results based on the mean average totals of their responses.

(4) Draft quantitative causal maps produced from the above activities were discussed with panel members individually and subsequently collectively until a consensus was achieved on a final quantitative causal map for each hotel. The causal map for each hotel was very detailed due to the number of elements and relationships between elements.

(5) Given the exhaustive detail contained in the hotel causal maps a high level model was produced for each hotel representing the aggregate findings of the mapping process (excluding the findings of interdependent effects) in the form of groupings of performance elements and KPOs and the relative influence of each element and KPO on hotel performance as a percentage of its group. Since the high level models are still quite detailed only these models are shown in Appendix B, rather than the more exhaustively detailed causal maps.

(6) High level models were similarly produced showing the interdependencies between three intellectual resource elements viz: the workforce, hotel systems and processes and the hotel brand standard in their causal influence on other elements and KPOs in the context of Hotel Operations Management. Following the initial mapping of interdependencies between the three intellectual resources in their effects on operations management it was decided to expand the range of causal contexts in which the three intellectual resources were thought to have a significant influence on other elements, in order to identify the extent to which patterns of interdependencies varied. Based on discussions with the consultative panels set up to oversee the causal mapping processes in each hotel six causal contexts common to each hotel were identified:

7) Operations management
8) Infrastructure management
9) Supply chain management
10) Pricing
11) Guest satisfaction
12) Guest volume

The first four of the causal contexts represented those where the three intellectual resources were considered to act in unison in influencing management activities and the last two where they were considered to interoperate in influencing outcome elements.

Causal influences were quantified by asking informants to estimate the extent in percentage terms to which the hotel workforce, systems and processes and brand standards were distinguished from each other in their individual effects in each of the six causal contexts. Estimates of causal influence were based on the mean average totals of the scores from their responses.

Details of the findings, showing the models of interdependent effects in the context of Hotel Operations Management and the tables containing the results of the quantification of causal effects in the six causal contexts described above are provided in Appendix B (Section 5). An overview of the findings is provided in Chapter 5.